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FACTORS INFLUENCING ACCESS TO HEALTH-CARE SERVICES: PERCEPTIONS OF FRAIL, ELDERLY ENROLLEES OF HEALTH-MAINTENANCE ORGANIZATIONS

by

Diana L. Jennings, RN, Ph.D.

DISSERTATION

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DOCTOR OF PHILOSOPHY

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To my loving parents,

Nita Enriqueta (1912–1986) and

Joseph H. Abrew (1912–1995) and

my dear Uncle Kenneth (1909–2000),

but a most special dedication to

my beloved husband, Jim,

whose loving support and belief in my abilities

enabled the trajectory from diploma to doctoral scholar.

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Abstract

FACTORS INFLUENCING ACCESS TO HEALTH-CARE SERVICES: PERCEPTIONS OF FRAIL, ELDERLY ENROLLEES OF HEALTH-MAINTENANCE ORGANIZATIONS

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University of California, San Francisco, 2000

Over 6 million people, aged 65 and older, are enrolled in managed-care organizations. The fastest growing subgroup within this population is comprised of those 85 years of age and older, totaling 4.0 million in 1998—a figure 33 times greater than in 1900. This study describes experiences of elderly enrollees of health-maintenance organizations during the process of trying to obtain needed health-care services. The data were collected through individual audiotaped interviews followed by two focus-group sessions of 50 community-dwelling enrollees, aged 75 years and older. Each participant was interviewed twice and 16 were self-selected for inclusion in two follow-up focus groups. The following four instruments were used to collect data: (a) an interview and focus-group guide, (b) a demographic profile, (c) the Mental Status Questionnaire, and (d) the Medical Outcomes Study 36-Item Short-Form Health Survey. Ethnographic inquiry was incorporated to elicit a clear understanding of what occurs during this process, as perceived by older people seeking care. Andersen's Model of Health Services Use served as the conceptual framework of the research, defining the assumptions and philosophical stance of the study.

Data were analyzed using descriptive statistics and content analysis to identify common themes. The findings indicate that factors influencing the ability of elderly people to access health-care services are complex, multidimensional, and may manifest both individually and cumulatively. The following four broad categories of factors emerged from the data: clinical (i.e., vague symptomatology, age-associated thermoregulatory changes, sensory deficits, and cognitive and functional impairment); cultural (i.e., language barriers); social (i.e., ageism, female gender bias, family advocacy); and environmental (i.e.,

automated telephone-answering devices, transportation, knowledge and training among care providers, delayed referrals to specialized services). The most predominant factor was the inability of the participants to negotiate automated telephone-answering devices (n = 50, 100%). The cumulative, overlapping effect of these multiple factors negatively affects the ability of frail, older HMO enrollees to access needed health-care services. Consequently, this affects the utilization of preventive, urgent, and crisis health-care services, as well as referrals to specialized services. These services are useless to older consumers if they are unable to negotiate the *process* of access.

Jeanie Kayser-Jones

Jeanie Kayser-Jones, RN, PhD, FAAN
Committee Chair

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CHAPTER I

INTRODUCTION

This research seeks to describe the experiences of frail, elderly people as they attempt to access health-care services through health-maintenance organizations (HMOs). Easy access to health care is essential to achieving the goal of "health for all," instituted in the late 1970s by the World Health Assembly (Gulzar, 1999). Despite the contention of the World Health Organization (WHO) that health is a human right for all people, many older Americans encounter difficulties during their attempts to obtain preventive, urgent, and crisis health care as well as referrals to specialized services. As the proportion of elderly people within the population at large continues to increase, along with the average life span, the need for age-specific health-care service delivery is crucial to the promotion and maintenance of optimal health.

A significant and growing percentage of the aged—over 6 million people 65 years of age and older—are enrolled in managed-care organizations (Feder & Moon, 1998). The increase in managed care, as well as the focus on well-patient populations and decreased attention to those with greater or special needs, has created significant barriers to health-care access for certain patient populations. This is a particular problem for the poor and ethnic minorities, as well as other vulnerable patient populations such as the aged (Bashshur, Homan, & Smith, 1994; Newacheck, 1988; Perez-Stable, Marin, & Marin, 1994). The ease of access to health care has a significant influence on both utilization and health outcomes (Agency for Health Care Policy and Research, 1997). Pivotal to the ability of older people to maintain their health and independence is the initiation of health-promotion planning and intervention strategies directly linked to a broad spectrum of community and health-care services (Radler & Vaughen, 1994).

Statement of the Problem

According to Khan and Bhardwaj (1994), the Bureau of Health Planning defines *access* as "the ability of a population or a segment of the population to obtain health services. This ability is determined by economic, temporal, locational, architectural, cultural, organizational, and informational factors which may be barriers or facilitators to obtaining services" (p. 63). The Institute of Medicine (IOM) (1993) defines access as "the timely use of personal health services to achieve the best possible health outcomes" (p. 4). Consequently, access focuses on the extent to which an individual is able to obtain health care. *Accessibility* is defined by Timmreck (1987) as

> the degree to which [the] system inhibits or facilitates the ability of an individual to gain entry and to receive services. Thus accessibility includes geographic, architectural, transportational, social, temporal, and financial considerations. Access is also a function of availability of health services and their acceptability. (p. 4)

Access equability is tested by the identification of systematic differences in utilization patterns, health-care outcomes among various populations, and the factors that influence these disparities (IOM, 1993). Careful consideration of those health-care services believed to influence health status precipitates queries pertaining to vulnerable, marginalized individuals or populations at risk for poor health outcomes. A pivotal question is this: Can differences in health outcomes be attributed to difficulties associated with care access? Furthermore, do all consumers have an equal opportunity for positive outcomes, or are some patient populations systematically denied health-care services via barriers too difficult for them to overcome?

Health-care access is often erroneously equated with health-insurance coverage and the availability of, and proximity to, provider agencies. However, it is important to note that many insured clients fail to obtain needed health care, while many of the uninsured are indeed recipients of medical services (IOM, 1993). Consequently, the procurement of medical insurance does not necessarily guarantee the receipt of timely, efficient,

state-of-the-art health care (Fraser, 1997). Moreover, two basic elements must be present to translate coverage into access—consumer knowledge of the type(s) of services they need, and their knowledge of the extent to which needed services are covered by their health- insurance policy. Equally important in the process of care access is the ease with which consumers are able to negotiate the system toward ultimate receipt of needed health-care services.

Purpose and Significance of the Study

The purpose of this current study was twofold. The research sought to (a) identify, describe, and analyze the experiences of elderly HMO enrollees during the process of accessing health-care services, and (b) identify, describe, and analyze the perceptions of elderly HMO enrollees regarding factors that facilitate or inhibit their ability to obtain needed health-care services. According to Hall, Stevens, and Meleis (1994), the ability to meet the health needs of diverse, vulnerable populations is a challenge that must be met by nursing. From a clinical nursing perspective, the recent influx of managed-care strategies intended to streamline the delivery of health-care services in HMOs, particularly as they affect marginal patient populations such as frail, community-dwelling elderly people, is a professional concern. It is clearly evident within both emergency and gerontological services that recently initiated cost-efficient managed-care strategies have significantly inhibited the ability of elderly people to obtain needed health-care services. A national survey conducted by the Kaiser Foundation Family and Harvard University School of Public Health (1998) illustrates the concerns of many nurses and physicians. This study surveyed 768 nurses and over 1,000 physicians and revealed widespread dissatisfaction with managed-care systems and the general consensus that managed care had lowered the quality of care for its enrollees.

Despite the projected increase in the population proportion of older people and life expectancy, as well as the recent influx of elderly HMO enrollees, the accessibility and delivery of health-care services in managed-care organizations is primarily directed toward

the acute episodic illness of a well-patient population. While many researchers have investigated the accessibility and quality of care for robust HMO patient populations, few have focused on these issues from the perspectives of frail, elderly enrollees. Moreover, there is a clear gap in the literature regarding the practical experiences of older people as they attempt to access health-care services from HMOs. This current study serves as a unique contribution toward the advancement of gerontological nursing through widening the base of related knowledge. The perceptions of frail, elderly HMO enrollees surrounding the problems encountered during the process of accessing health-care will be clearly and thoroughly described.

The Influence of Health Insurance on Access

Many Americans equate health-care insurance with access to care. There appears to be an underlying assumption that the financial resources of the consumer or third-party, private, or government health-insurance provider guarantees access to all health-care services including medical equipment and prescription drugs (Joranson, 1994). However, the harsh reality is that availability of such services in this country is dependent upon more than just insurance coverage (Fraser, 1997). Structural factors within health-care delivery systems, such as the supply of providers, utilization-review procedures, eligibility determinants, and the organization of services, also influence the availability of consumer services.

According to Joranson (1994), the U.S. population can be categorized into the following groups: the uninsured, the underinsured, the uninsurable, and the insured. Large numbers of Americans either lack health-care insurance or depend on inadequate coverage. It is estimated that approximately 20% of the American population (i.e., 44 million) are uninsured (Blanchette & Valcour, 1998); of these, 40% are Hispanic American (Berk, Albers, & Schur, 1996). The "medically indigent," composed of 31–37 million Americans under the age of 65, carry no health insurance at all. The underinsured are estimated to number 80 million with disproportionate minority representation (Ernest, 1990). As the

rising cost of health care exceeds incomes, it becomes increasingly more difficult for consumers to maintain the scope of coverage to which they are accustomed (IOM, 1993). Moreover, insured Americans are experiencing a reduction in the health-care services covered by their policies because of reduced benefits to compensate for these escalating costs (Ernest, 1990). Data from the Medical Expenditure Panel Survey (Agency for Health Care Policy and Research, 1997) revealed that 60% of elderly Americans were covered by private insurance usually supplemented by Medicare. The remaining 40% were limited to Medicare alone or in conjunction with Medicaid or other public sources.

Medicare and Medicaid

The majority of older Americans are covered by Medicare—a system dependent upon governmental support and requiring high enrollee copayments (Jamieson, 1992). According to Levit, Lazenby, Cowan, and Letsch (1994), Title XVIII of the Social Security Act, introduced in 1965, defines Medicare as

> a federal insurance program that was originally designed to protect people 65 years of age or over from the high cost of health care. In 1972, the program was expanded to cover permanently disabled workers eligible for old age, survivors, and disability insurance benefits and their dependents [*sic*], as well as people with end stage renal disease.
>
> Medicare has two parts, each with its own trust fund. The hospital insurance (HI) program pays for inpatient hospital services, post-hospital skilled nursing services, home health care services, and hospice care. The supplementary medical insurance (SMI) program covers physician services, outpatient services and therapy, and a few other services. (p. 23)

Due to limitations imposed by high recipient copayments and the Medicare focus on acute and episodic care, the long-term-care needs of older people are subsidized mostly by Medicaid, which is connected to the welfare system (Litman, 1997). Defined by the American Association of Health Plans (1998a, 1998b), Medicaid is

> a joint federal-state program under which states receive federal matching funds to defray part of the cost of providing medical assistance to targeted, low-income populations. The federal statute sets forth various requirements that states must meet in order to qualify for matching funds, and the Health Care Financing Association (HCFA), which administers the federal role in Medicaid, may either deny matching funds for specific non-complying activities or withdraw federal funding completely for major violations of federal standards. (p. 7)

As a means-tested health-care program, Medicaid allocates the provision of physician-prescribed services that are not limited to short-term disease episodes (Jamieson, 1992). Because eligibility is based upon financial need and is limited to a small number of people, the vulnerability of means-tested programs may increase during periods of budgetary constraint necessitating reduced funding (Wheeler & Kearney, 1996).

Managed Care

> Managed care is defined by the Health Insurance Association of America (1990) as
>
> health care systems that integrate the financing and delivery of appropriate health care services to covered individuals by arrangements with selected providers to furnish a comprehensive set of health care services, explicit standards for selection of health care providers, formal programs for ongoing quality assurance and utilization review and significant financial incentives for members to use providers and procedures associated with the plan. (p. 118)

The methods of provider risk sharing and capitated payment, position managed care as a cost-efficient strategy through which health-care organizations attempt to manage the provision of quality care to consumers at the lowest possible cost (Gold, 1991a). The growth of managed care is rapidly increasing in this country with enrollment reaching approximately 115 million individuals or 44% of the American population. An estimated 70% of health insurance is provided by employers (Managed Care Organization, 1996).

Capitation is a financing mechanism utilized by managed-care organizations. Under capitation, providers—hospitals and/or physicians—agree to accept a set advance payment in exchange for providing health-care services for a group of people, usually for 1 year. Payments are received on a per member, per month basis for a preestablished comprehensive set of services, or for a more specialized service such as cardiac care. Whether a member uses the health service once or a dozen times, a capitated provider receives the same payment (Integrated Healthcare Association, 1999). The fee allows for group demographic and health characteristic adjustments and is also based upon the adjusted average per capita cost. Rather than remitting for each episode of care, payments are made in advance according to a fixed time schedule. Medicare capitation reimbursement

to managed-care organizations is 95% of the adjusted average per capita cost for each member (Newcomer, Harrington, & Kane, 1996).

Types and individual characteristics. HMOs are defined by Gold (1991b) as "organizations that integrate the financing and delivery of health services by offering comprehensive care from an established panel of providers to an enrolled population on a capitated, prepaid basis" (p. 125). Varying in a scope that is dependent upon flexibility of use and the degree of service options, HMOs are categorized into the following types: staff-model, group-model, network-model, individual-practice association, mixed-model, point of service, preferred-provider organization, provider-sponsored organization, provider-sponsored network, physician hospital organization, and social HMO (Gold, 1991a). Table 1 provides brief descriptions of all the listed HMO types.

The traditional HMO system of health care was based upon a curative model more attuned to health-care prevention and the episodic, acute-care needs of younger populations. Over the last decade, the American health-care industry has witnessed a dramatic transformation as the majority of people over the age of 65 have moved into managed-care environments (Feder & Moon, 1998). In 1998, over 6 million elderly Americans were enrolled in managed-care programs run by Medicare—double the enrollment of 1993. According to Feder and Moon, cost-efficient techniques, employed to promote efficient utilization of care for younger populations, hold the potential to diminish access to quality care for elderly populations who are vulnerable to chronic disease and multiple health problems requiring careful monitoring.

Operational features. Primary-care physicians are the traditional gatekeepers of ancillary and specialty care in managed-care organizations. Models with high proportions of Medicare enrollees require 1.5 to 2 times more physicians to meet their health-care needs. One method of reducing costs associated with larger pools of physicians is to more highly utilize nonphysician personnel such as nurse practitioners and physician assistants.

Table 1

Types of Managed-Care Organizations

Type	Description
Staff-Model health-maintenance organization	Services are delivered exclusively to enrollees by salaried physician employees. While offering "one-stop shopping" with the tightest management, this model affords limited options to consumers, is both costly and problematic to establish, and is characterized by its direct employment of physicians (Newcomer et al., 1996). An example of a staff-model HMO is the Group Health Corporation of Pudget Sound.
Group-Model health-maintenance organization	All MD services are contracted via a single group of physicians compensated by the health plan at a negotiated fee. The physician group is responsible for such compensation and for contractual arrangements with hospitals relative to care. Advantages to this model include tight management, one-stop shopping, and lower capital and overhead expenses than the staff model. Offering limited options to consumers, the difficulty and cost involved in initial establishment are the negative features of this plan (Miller & Luft, 1994). The Kaiser Foundation Health Plan (i.e., the administrative group), in association with the Kaiser Permanente Medical Group (i.e., the physician group), is an example of a group-model HMO (Newcomer et al., 1996).
Network-Model health-maintenance organization	MD services are contracted via single or multispecialty groups by exclusive or nonexclusive agreements in which physicians accede to utilization review and oversight processes from the HMO. An example of a network-model HMO is PacifiCare Health Systems (Newcomer et al., 1996). Advantages to the model include a more extensive physician conglomerate, counterbalanced with decreased cost controls that are secondary to a reduction in physician and resource management (Miller & Luft, 1994).

(*table continues*)

Type	Description
Individual-Practice association	A corporation of individual medical practices who contract with the HMO for receipt of a single capitated fee in exchange for provider reimbursement by the IPA. As a variation of the staff-model HMO, it offers an extensive choice of physicians and is less complicated and expensive to establish. An example of an IPA HMO is US Healthcare Inc. (Newcomer et al., 1996). Although cost control is reduced due to minimal physician management, the disadvantage is that an established corporate group of doctors may be more assertive in their contractual interactions (Miller & Luft, 1994).
Mixed-Model health-maintenance organization	The administrative body has the flexibility to "contract exclusively with medical groups and nonexclusively with solo-practice physicians in the same area" (Newcomer et al., 1996, p. 2).
Point of service	An open-ended HMO model preferring that enrollees use their network physicians whose services are covered by the negotiated, prepaid premium. POS is a variant of the "lock-in" coverage provided by HMOs and PPOs (Newcomer et al., 1996). POS refers to the specific time at which service is sought by the client. Enrollee coverage for services outside the HMO or PPO network is the distinguishing feature of this model. However, if consumers elect to consult with an outside doctor, the copayments and deductibles are greater. Despite being more expensive, this model facilitates management of most medical care as well as having the flexibility of more established types of insurance (Miller & Luft, 1994).
Provider-Sponsored organization and provider-sponsored network	Among the more recently evolved types of MCOs, PSOs, and PSNs are health-care delivery systems that are provider owned or governed, operated, managed, or supervised by providers (Feder & Moon, 1998).

(*table continues*)

Type	Description
Preferred-Provider organization	As implied by their name, these organizations provide health-care services via FFS and combine a financial intermediary group with a contracted network of providers (Newcomer et al., 1996). In exchange for a preferred status by insurers, providers offer services at a reduced rate, and consumers who utilize their care, pay reduced copays and deductibles. Coverage has been historically restricted to primary care with some specialty services associated with network providers. This model is characterized by the absence of provider risk sharing, shifting the incentive for utilization review from the provider to the PPO. Although the majority of providers consent to utilization review, their behavior is not monitored as stringently as within an HMO. Despite its flexibility, reimbursement is likely to resemble that of fee for service, and PPOs offer less physician management than the POS model (Miller & Luft, 1994).
Physician hospital organization	Created by physicians and hospitals, these organizations may negotiate via purchaser or employer and are generally licensed as an HMO if capitated payments are received for the provision of services (Physician Payment Review Commission, 1997). However, they may also contract with HMOs and be compensated with a portion of the premium (Feder & Moon, 1998).
Social health-maintenance organization	Aimed at improving the integration of acute and long-term care within capitated managed-care systems, Social HMOs were initiated via a four-site demonstration program in the mid 1980s. Prior to the completion of the evaluatory process, continued congressional support was reassured in 1991, specifying the creation of new S/HMOs. The first group is refereed to as S/HMO I. Four years later, planning grants were issued to six potential second-generation S/HMOs by the Health Care Financing Administration and referred to as S/HMO II (Kane et al., 1997).

Note. HMO = health-maintenance organization; MD = medical doctor; IPA = individual-practice association; POS = point of service; PPO = preferred-provider organization; MCO = managed-care organization; PSO = provider-sponsored organization; PSN = provider-sponsored network; FFS = fee for service; S/HMO = social health-maintenance organization.

Such nonphysician clinicians can often be used to effectively deliver direct patient care to consumers with chronic illness in urgent-care clinics (Newcomer et al., 1996).

Reduced service utilization and/or substitution of less expensive services are cost-efficient strategies employed by HMOs (Newcomer et al., 1996). A metaanalysis of nine studies conducted by Miller and Luft (1994) revealed that HMO enrollees received approximately 22% less procedures, treatments, and tests than did plan users under a fee-for-service (FFS) model. However, a comparison of 39 treatments in 6 studies revealed that HMO enrollees received more preventive treatment than the FFS group.

The pharmaceutical formularies of many HMOs do not stock the newer and more costly sedative and narcotic analgesic medications reputed to cause the least amount of delirium in older people and recommended by the Food and Drug Administration. Despite comprehensive pharmaceutical coverage for more than 80% of HMO enrollees, these organizations control the disbursement of prescription drugs via generic substitution and restrictive formularies and closely monitor drug intervention through utilization-review programs (Anderson & Dunn, 1991; Weiner, Lyles, Steinwachs, & Hall, 1991).

Payment incentives. Designed to control the rising costs of health care, financial incentives to HMO providers pose a serious threat to the delivery of quality health care to vulnerable patient populations such as the frail elderly with multiple chronic health problems. Strategies employed to reduce the cost of health care include reduced or delayed referrals to specialty care, laboratory services, and inpatient or outpatient health services (Bachman & Freeborn, 1998). Haack (1997) cautions nurses to be aware of the potential for conflict of interest among physicians that may influence clinical decisions related to the care of patients viewed as overutilizers and/or otherwise economical liabilities.

Many primary-care physicians practice under risk contract arrangements by HMOs to discourage referrals to specialized services. They may also receive cost-saving compensation for decreasing hospital utilization (Newcomer et al., 1996). Payment incentives may take the form of stock options, capitation, bonuses, *stop-loss protection,*

and *withholds.* Additionally, decreased inpatient services may be equated with an increase in outpatient services.

Elderly Patient Populations and Health-Maintenance Organizations

During the late 1800s, Kaiser Wilhelm was attributed with coining the phrase "65 years and older" to depict the elderly population (cited in Butler, 1975). The general population within the United States has multiplied five times in the last 100 years (American Medical Association Council on Scientific Affairs, 1990) with a greater than threefold increase among the elderly segment (i.e., from 4.1% in 1900 to 12.7% in 1998), which is comprised of 34.4 million individuals (American Association of Retired Persons [AARP], 1999). There are three cohorts of elderly—the young elderly (i.e., aged 65–74), the middle-aged elderly (i.e., aged 75–84), and the oldest old (i.e., aged 85 and older) (Restrepo & Rozenthal, 1994). Moreover, this overall population is growing older. For example, the 65–74 age-group was 18.4 million strong in 1998—an eightfold increase since 1900. Those 75–84 years of age numbered 12 million in 1998, nearly 16 times their count in 1900. Predicted to number between 6 and 7 million at the dawn of the new millennium (American Medical Association Council on Scientific Affairs, 1990), the fastest growing segment within this population is composed of those 85 years of age and older, numbering 4.0 million in 1998—a figure 33 times greater than in 1900 (AARP, 1999).

While approximately 5% of the American elderly population reside in long-term-care institutions, the remaining 95% are community dwellers. Twenty-five percent of the geriatric population live in rural areas (U.S. Congress, Office of Technology Assessment, 1991). Currently totaling 20.2 million, women predominate the geriatric population residing throughout the United States (AARP, 1999) and tend to survive males by 8.6 years (Cohen & Cahan, 1993; Hazzard, 1994). In 1995, there were 145 older women (i.e., 19.8 million) for every 100 older men (i.e., 13.7 million); increasing with age, the sex ratio varied from 120 for the 65–69 age-group to 257 for those 85 years of age

and older (AARP, 1995). Cohen and Cahan project that the proportion of elderly females will double by the year 2030.

As we enter the 21st century, with its rapidly graying population explosion of "baby boomers," the magnitude of impending ethical and economical dilemmas is of grave concern (Callahan, Meulen, & Topkinkova, 1997). This post-World War II generation will turn 65 in 2010, increasing the burden of American health-care delivery services to provide competent care to all elderly people (American Medical Association Council on Scientific Affairs, 1990). By the year 2030, elderly people will comprise 20% of the U.S. population—approximately 70 million individuals—more than doubling their number in 1990 (U.S. Bureau of the Census, 1993).

A comparison between today's baby boomers and preceding generations of older people reveals a more highly educated, intellectually-stimulated population, many of whom are predicted to continue their professional endeavors well past the traditionally accepted age of retirement (Blanchette & Valcour, 1998). In general, baby boomers are healthier and more affluent than the generation of elders to which their parents are accustomed. Frustrated with the difficulties encountered by their parents, in terms of inadequate health and social-support services, they are less likely to accept fragmented health-care insurance offering an inadequate selection of preventive, promotive, and diagnostic health services. Their political activism during the civil rights, antiwar, and women's rights movements of the 1960s and 1970s rendered baby boomers highly assertive and unlikely to adhere to the viewpoint of their predecessors—the "physician as God" (i.e., "the God complex" stance in which physicians are viewed as the ultimate source of all wisdom). Concerns regarding their future health care within the elderly age-group will spur a demand for providers to release extensive information on a wide range of options before consumers will commit to enrollment. Additionally, as health-care consumers, the baby boomers will demand expertise and humanistic care from providers, as well as a wide range of both illness and wellness options (Lumsden, 1995).

Frailty and Disability

The next century is predicted to be heralded by an onslaught of chronic and disabling illnesses in epidemic proportions among the oldest old—those individuals at greatest risk for frailty. Currently, 25% of community-dwelling elderly individuals are afflicted with mild to severe cognitive deficits (Krause, 1996) exhibiting manifestations of "age-associated deficits in neuromuscular function, balance, cardiovascular and other factors affecting physical performance" (Hadley, Ory, Suzman, & Fried, 1993, p. vii). Based upon data from the 1984 Longitudinal Study on Aging, Beck (1993) projects 6.7 million functionally dependent elders over the age of 85 in the year 2000, with an increase to 8.4 million by 2020. Moreover, this group of elders will require a greater number of physician visits (National Center for Health Statistics, 1984) and additional social and health-care services than their younger counterparts (Beck, 1993). In 2050, the oldest old will account for approximately 19 million of the total U.S. population (U.S. Bureau of the Census, 1993).

What is frailty and how does it affect those who experience it? Perspectives of frailty may vary according to personal ability to adjust to internal and external environmental stimuli. Many older people are physically robust and able to enjoy active, independent lifestyles. Others experience adverse health conditions limiting their capacity for independence. One viewpoint of aging and frailty is depicted by Shakespeare (1989) in the following quotation: "Last scene of all, That ends this strange eventful history, Is second childishness and mere oblivion, Sans teeth, sans eyes, sans taste, sans everything" (p. 261). According to Woodhouse and O'Mahony (1997), the concept of frailty has not been clearly defined in the literature. Considerable variation exists among the health-care disciplines as to the meaning of frailty and its quantification. Credited with describing frailty in a manner distinguishing *frail* from *disabled*, Campbell and Buchner (1997) defined the term as

> a condition or syndrome which results from a multi-system reduction in reserve capacity to the extent that a number of physiological systems are close to, or past,

> the threshold of symptomatic clinical failure. As a consequence the frail person is at increased risk of disability and death from minor external stresses. (p. 315)

The assessment parameters used to identify and quantify the concept of frailty include musculoskeletal function, aerobic capacity, cognitive and integrative neurological function, and nutritional status (Campbell & Buchner, 1997). Other parameters used to define the concept are dependency on support with activities of daily living (ADLs) (Rockwood, Fox, Stolee, Robertson, & Beattie, 1994), inactivity, and weight loss (Paw, Dekker, Feskens, Schouten, & Kromhout; 1999). Once established, these parameters can subsequently be measured by instruments that are valid and reliable in detecting frailty. A systematic definition and quantification of frailty will assist health-care professionals in the identification of elderly people at risk for disability. Approximately 38% of the substantially disabled population in this country are over the age of 64 (Dawson, Hendershot, & Fulton, 1987). The majority of health conditions causing their disabilities are chronic and degenerative in nature and include cardiovascular, cognitive, metabolic, musculoskeletal, and pulmonary disorders (Bachelder & Hinton, 1994; Vetter, Lewis, & Ford, 1990). Afflicting 78.7% of those over the age of 65, chronic illness is a major source of morbidity and mortality to the aged, many of whom are afflicted with multiple disease processes (Gunter, 1994; Toombs, Barnard, & Carson, 1995).

Chronic Disease

According to Toombs et al. (1995), the distinction between acute and chronic disease is one of temporality, in that chronic illness persists over time, while an acute exacerbation is characterized as a "discrete episode" during the course of a life span. In the absence of an acute illness, many frail elderly individuals may be able to function independently within the community. Others valiantly "cling" to marginal independent living, fearing the impending need for nursing-home placement (D. L. Jennings, 1998). For those within vulnerable populations at high risk for functional dependency, frailty

combined with illness or environmental stressors creates crisis, and these same individuals may move from a state of frailty to one of disability. It is therefore imperative that health- care professionals recognize this distinction and are cognizant of the potential influence that an exacerbation of a chronic illness can potentially have on the ability of elderly people to maintain their independence. The "fine line" that separates frailty and disability can easily disappear with the onset of an acute illness episode and render community-dwelling elders feeling threatened by the potential need for impending nursing-home placement. Moreover, it is of particular importance that health-care providers, who are the initial contact for medical advice as clients attempt to access health care, have an acute awareness of the altered guise of disease presentation with geriatric populations and the rapidity with which an untreated illness can deteriorate to a life-threatening event.

The predominance and subsequent influence of managed care on the quality and delivery of health-care services, particularly to vulnerable patient populations such as frail elderly enrollees within HMOs, warrants further exploration. While many studies have investigated the perceptions of health-care professionals regarding factors influencing access to care services, few have explored the phenomenon from the direct perspective of the frail, elderly HMO enrollees themselves.

Organization of the Dissertation

The following chapters contain a description of the development of this study and its subsequent findings. Chapter II describes the conceptual framework for investigating the phenomenon of the *process* of accessing health-care services, as experienced and perceived by frail, elderly HMO enrollees. Andersen's (1968) Model of Health Services Use served as the conceptual framework of the research and defined the assumptions and philosophical stance of the study. The Andersen model describes barriers as objectively defined factors that are external to the individual; he adds separate indicators to measure access and characteristics of the health-care delivery system. Chapter II includes a review

of the literature describing the phenomenon of access, as well as that relating to the quality of health-care delivery in managed-care organizations. It also describes the operational definitions and assumptions of the study. Chapter III describes the research design and procedure used in the data collection. Chapter IV presents the findings of the individual and focus-group interview sessions. It also delineates the demographic characteristics of the population sample, incidence of chronic illness, and the cognitive and functional status of the study participants. Chapter V contains a discussion of the findings and their significance, and Chapter VI concludes the research by elucidating on the contributions of this study to the advancement of nursing knowledge and the subsequent implications for nursing practice. Recommendations for future research directed toward further improvement of the accessibility of health-care services for elderly individuals are also presented.

CHAPTER II

REVIEW OF THE LITERATURE

Overview

Integral to all aspects of the research process, theoretical conceptualization is the "bridge" that links a particular phenomenon with others, resulting in a larger scope of knowledge and positive change. Selection of a theoretical model within which to frame research questions is a pivotal facet of any study. Final selection should be guided by the explanatory ability of the model, within boundaries that are relevant to the nature of the phenomenon and the "maximum number of observable relationships among the variables" (Meleis, 1997, p. 20). An appropriate fit between theory and the phenomenon is crucial to the integrity of scientific investigations. Congruency between the theoretical assumptions or propositions and their interpretive aptitude in expanding knowledge surrounding the research questions is equally important.

Described by Hardy (cited in Walker & Avant, 1995, p. 4) as the "building blocks of theory," concepts are cognitive or mental images of a particular phenomenon or, according to Meleis (1997), a group of phenomena. Meleis (1985) also documented the following explanation:

> Concepts evolve out of a complex constellation of impressions, perceptions, and experiences. . . . Concepts are a mental image of reality tinted with the theorist's perception, experience, and philosophical bent. They function as a reservoir and an organizational entity and bring order to observations and perceptions. They help to flag related ideas and perceptions without going into detailed descriptions. (p. 127)

Concepts can be primitive, concrete, or abstract. Primitive concepts are identified by Meleis as those newly defined and introduced within a theory. The level of abstractness is directly proportional to the generality of the concept; a higher level of abstraction is considered more general. An example of an abstract term would be the word *truth,* whereas the term *cat* is considered concrete.

Theory is defined by Meleis (1997) as

> an organized, coherent, and systematic articulation of a set of statements related to significant questions in a discipline that are communicated in a meaningful whole. It

> is a symbolic depiction of aspects of reality that are discovered or invented for describing, explaining, predicting, or prescribing responses, events, situations, conditions, or relationships. Theories have concepts that are related to the discipline's phenomenon. These concepts relate to each other to form theoretical statements. (p. 12)

Meleis defines nursing theory as "a conceptualization of some aspect of nursing reality communicated for the purpose of describing phenomena, explaining relationships between phenomena, predicting consequences, or prescribing nursing care" (p. 12).

In preparation for this current research, a pilot study was conducted to explore the perceptions of frail elders enrolled in HMOs regarding factors influencing their access to health care (Jennings & Clarke, 1997). Two major themes or categories of access factors emerged from the data—facilitating factors and inhibiting or *barrier* factors. Each of the themes was further condensed and subcategorized into factors either internal or external to the target population. Internal factors were identified as health-care-seeking behaviors and as personal and clinical characteristics of the population such as attitudes and beliefs about health and illness. External factors referred to features associated with (a) the community in which the study participants lived and (b) the health-care delivery system within which they received care (see Appendix A).

To broaden understanding of the phenomenon, an analysis and description of the concepts of both health-care access and barriers, as they pertain to health-care access for frail elders enrolled in HMOs, was also conducted prior to this current research (Jennings, 1999). The findings are presented in this chapter along with a review of the empirical and nonempirical literature, ascertaining ways in which older individuals perceive and utilize health-care services, their patterns of health-seeking behaviors, the factors that tend to act as facilitators or barriers in their attempt to access care, and the quality of care they receive in HMOs. Health and illness behavioral determinants and their potential influence on the utilization of health-care services are also explored, as well as factors associated with the health-care delivery systems themselves. Additionally, the theoretical bases used in past studies to explain the concepts of barriers and health-care access are described and the

conceptual base supporting this current investigation of the phenomenon, as perceived by frail elders enrolled in HMOs, is clearly defined.

Behavioral Determinants of Health

Lack of a universal definition for *health* and *illness* has presented an ongoing research problem, as evidenced by the abundance and variety of distinctions in medical, nursing, and social-science literature. For example, while health may be perceived by some individuals as an absence of disease (Roy, 1976; Smith, 1981), others view it as maintaining equilibrium or a state of physical, spiritual, and psychosocial well-being (Parse, 1987). An attempt to standardize the definition of health was made by the WHO and is exemplified in this excerpt from a 1978 report:

> Health is a state of complete physical, mental, and social well-being---and not merely the absence of disease or infirmity, [health] is a fundamental human right and . . . the attainment of the highest possible level of health is a most important worldwide sociological goal, whose realization requires the action of many other social and economic sectors in addition to the health sector. (p. 2)

Six years after this report, a revised definition of health was proposed by the WHO (1984) as "existing when an individual or group is able to realize aspirations and safety needs, and to change or cope with the environment" (p. 206). Another health perspective provided by the Ottawa Charter for Health Promotion is viewing health "as a resource for everyday life, not the objective of living" (Cited in First International Conference on Health Promotion, 1986, p. iii). These two later definitions reflect a functional stance, evaluating health according to the ability to achieve social and environmental adaptation (Green, 1990).

In contrast, illness has been characterized as the absence of health or a condition or state of disease. Two avenues of thought prevalent in today's scientific community are an ontological view of disease in which illness strikes a healthy person, and a physiological stance that considers disease a deviation from the norm (Jensen & Allen, 1993). Regardless of which "camp" one selects, of utmost importance is the manner in which the frail elderly population interpret the meaning of health and illness; their internal perception of the seriousness of an alteration in their health status will determine their behavioral response.

Behavioral determinants of health and illness have intrigued social scientists and health-care providers for several decades (Melnyk, 1988). Health behavior has been described as action initiated by those who perceive themselves to be healthy in order to prevent or detect early manifestations of disease (Kasl & Cobb, 1966). Problematic to research scientists is the ability to determine health-associated behaviors amidst a composite of labels. Encompassed within these descriptors are (a) health-related behaviors, (b) preventive health behaviors, (c) secondary preventive behaviors, and (d) illness behaviors.

Health-related behavior is defined by Melnyk (1988) as "any behavior having a health-related issue as its object" (p. 196). Focus-specific in nature, preventive health behavior is a term used to specify the direction or "focus of health behavior," as defined by Kasl and Cobb (1966, p. 246). Secondary preventive behavior—a term coined by Wheeler and Rundall (1980)—is identified as "the use of preventive services which require the intervention of a professional health care provider" (cited in Melnyk, 1988, p. 196). Illness behavior is described as action or activity initiated upon feeling ill to seek diagnosis or confirmation of health status and to identify appropriate treatment intervention (Kasl & Cobb, 1966). These latter two behaviors are suggestive of an interface between the consumer and agency providing health care (Melnyk, 1988). Consequently, barriers might be conceptualized as subjective phenomena, perceived via the "lens" of the client, and relevant to decisional determinants of health-care access (Melnyk, 1990).

The Concept of Barriers

The term *barriers* is commonly defined as "an obstacle or anything that obstructs access," and was originally used to depict "the palisade or railing surrounding the ground where medieval tournaments and joists were held" during the latter part of the 13th century (Costello, 1991, p. 113). The epistemological origin of the barrier concept in the field of health can be traced back to the mid 1950s and the inception of the Health Belief Model (HBM) by a group of academic social psychologists affiliated with the U.S. Public Health

Service (Rosenstock, 1966). Formulated and presented by Rosenstock as a component of the HBM, the concept of barriers was defined as "costs inherent in health action" (cited in Melnyk, 1988, p. 196). This viewpoint is consistent with the definition documented by the majority of health behavioral theorists, as exemplified by Cummins, Becker, and Maile who identify barriers as consumer perceptions or "beliefs concerning the cost of taking health action" (cited in Melnyk, 1988, p. 196).

Research conducted by Becker et al. (1974) incorporated a revised version of the HBM, which omitted the barrier concept. While the work of Pender (1987) explored health habits, it omitted the interaction between the consumer and health-care delivery systems. Although the majority of utilization-behavior research defines predictive behavioral determinants, it was not found to be grounded in either the HBM or the Andersen model (Melnyk, 1988). Andersen's (1968) Model of Health Services Use depicts barriers as identifiable, objective phenomena; external in nature; and associated with characteristics of the client as well as of the respective health-care delivery systems (Melnyk, 1990). Barriers illustrated in the PRECEDE-PROCEED model are categorized among predisposing factors defined as "personal preference and prior motives that people bring to an educational experience, including knowledge, attitudes, beliefs, values, and perceptions that either support or inhibit behavior" (Mullen, Hersey, & Iverson, 1987, p. 974).

Categories, Dimensions, and Theoretical Issues

A metaanalysis of the barrier literature authored by Melnyk (1988) revealed two general categories of barriers—structural and individual. Structural barriers are identified as factors associated with health-care delivery systems and the provision of services that impede or inhibit access to health care. Provider-consumer barriers were found to comprise an important subsection of the structural-barrier component. Individual barriers are factors associated with the consumer such as attitudes, beliefs, and values—all of which may inhibit access to health-care services.

Both subjective and objective in nature, system barriers can be viewed as either consumer perceptions or visible features of the health-care delivery system (Melnyk, 1988). While most investigators have defined barriers as characteristics of the delivery system itself, a few have explored the related role of consumer perceptions. For example, the consumer perspective of lack of hypertensive follow-up care was attributed to poor patient-physician interaction, as well as excessive waiting time prior to scheduled office visits (Finnerty, Mattie, & Finnerty, 1973). Another example of consumer perspectives of the concept of barriers is delineated in Melynk's (1990) work related to the operationalization of the variable.

A critical review of the empirical and nonempirical literature regarding the concept of barriers to health-care was conducted by Melnyk (1988) to elicit information pertaining to the use of methodological rigor relative to definitions and operationalization. Focusing on barriers relating to both consumers and health-care delivery systems, Melnyk discovered extensive confusion surrounding the concept at the theoretical and empirical levels. Despite the provision of an acceptable barrier definition by the HBM (i.e., consumer perspective of the cost of seeking care), the model omits structural, health-system-related barriers and fails to specify the manner in which it should be operationalized with these characteristics in play. In contrast, the Andersen (1968) model describes barriers as objectively defined factors that are external to the individual. Andersen adds separate indicators to measure access and characteristics of the health-care delivery system. Consequently, many studies using the HBM as a theoretical framework have operationalized their variables by implementing the indicators of the Andersen model, and vice versa. Additionally, the majority of these studies failed to identify a theoretical grounding. The resulting confusion is attributed by Melnyk to a "lack of methodological rigor in defining and operationalizing the concept of barriers" (p. 196). Many of the studies using the Andersen model (Aday, 1975; Berki & Ashcraft, 1979; Gift, 1978; Hershey, Luft, & Gianaris, 1975; Wan &

Yates, 1975) contained variables reminiscent of the HBM barrier definition (i.e., consumer perception of cost).

Melnyk (1988) identified the implications of her study for future exploration of the barrier concept as subjective in nature, enticing inquisitions regarding the relationship between perceived barriers and health-related behaviors and their influence on client-provider interaction. Two years later, she developed and tested an instrument to operationalize the concept of barriers to care. Implementing a three-stage Delphi procedure, a 12-member panel of experts classified the variables and operationalized and administered them via a survey distributed to a well population of working adults over the age of 40 (n = 536). An exploratory analysis revealed the following five related factors: provider-consumer relationship, cost, site-related issues, inconvenience, and fear (Melnyk, 1990).

It is important to note that perceptions surrounding cost commonly differ between younger adults and elderly individuals. Similarly, expert or provider opinions often differ from consumer perspectives. For example, the population sample participating in the Melnyk (1990) study consisted of working adults over the age of 40 who might perceive the cost of seeking medical services in terms of lost wages resulting from the time away from work. Conversely, the perspectives of unemployed elderly individuals would tend to consider both the practical cost of transportation to the medical center and the emotional cost associated with the threat of impending nursing-home placement due to external knowledge of their increased frailty (D. Jennings, 1998). Furthermore, the perspectives of the panel of experts who classified and operationalized the barrier variables may differ considerably from those of the elderly HMO enrollees. For example, providers may perceive a lack of health-related knowledge as a barrier to care for consumers, whereas the consumer may perceive system or structural features, such as negative attitudes or lack of effective communication with providers, as deterrents to health-care access. Another example of differing perspectives can be found in the use of automated

telephone-answering devices as a means of rendering medical advice by health-care delivery systems. While providers may view such automated systems as cost efficient, elderly consumers identify them as a major obstacle or barrier in accessing health-care services. Table 2 presents other investigations regarding the concept of barriers.

Review of the Dental Literature

Although many research investigations have explored utilization patterns, symptomatic presentations, and cost-related factors as determinants of seeking dental care (Dolan & Atchison, 1993; Ettinger & Beck, 1980; Ettinger, Beck, & Glenn, 1979; Gilbert, 1995; Hayward, Meetz, Shapiro, & Freeman, 1989; Henry, 1995; Henry & Ceridan, 1994; Jardine, Basker, & Ralph, 1995; Marcus, Kaste, Monopoli, Allukian, & Douglass, 1989; Nash, 1985; Sriyono, 1997; Tepper, 1984; Tobias, & Smith, 1987; Wan & Yates, 1975), few have addressed the issue of access inhibitors as perceived by elderly consumers residing within their communities. An exception is the work of Antczak and Branch (1985) who investigated perceived barriers to seeking dental care in a statewide probability sample of community-dwelling elders (n = 776), aged 65 and older, in 1974. Data were obtained from a research report authored by Branch and Jette (1983), as well as from personal interviews regarding population demographics, socioeconomic factors, health and functional status, and utilization of health and social services. Perceived barriers—the dependent variable—was examined in relation to the following six consolidated categories of independent variables also representing 16 potential predictors: demographic characteristics, nutritional status, functional status, health perceptions, potential barriers, and knowledge and use of services.

The findings of the Antczak and Branch (1985) study implied that frail populations "who perceive barriers to other aspects of the health care system" are commonly those who also perceive deterrents to seeking dental care (p. 196). Due to legislation enacted in 1965, the assistance provided by Medicare and Medicaid to obtain health care for aged, disabled, and poor populations has reduced the financial access barriers. Conversely, Medicare does

Table 2

Barriers to Care

Barrier	Researchers
Lack of preventive and primary health-care services	Abrams, 1987
Type of provider not matching patient needs	Kelman & Thomas, 1988
Medicare policies and processes	Hays, Willborn, & Lopez, 1997; Moon, 1987
Negative perceptions based upon prior experiences of controlling care	Baker & Pallett-Hehn, 1995
Age	Antczak & Branch, 1985; Baum & Rubenstein, 1987; Mercier & Shelley, 1997
Inadequate provider policy and management	Abrams, 1987
Lack of geriatric knowledge	Lawlor, 1995
Ageism	Jennings, 1998; Lookinland & Anson, 1995
Cultural factors related to limited access for Mexican Americans	Parra & Espino, 1992; Stotts, 1984
Cultural factors related to limited access for disabled Latino elders	Wallace, Campbell, & Lew-Ting, 1994; Wallace, Levy-Storms, & Ferguson, 1995
Cultural factors related to limited access for Cambodian refugees	Lew, 1991
Cultural factors related to limited access for American Indians	Hong & Hong, 1997

(*table continues*)

Barrier	Researchers
Cultural factors related to limited access for African-Americans and Hispanics	Gordon, 1995; James-Boykins, 1992; Mitchell, 1996; Molnar & Carroll, 1985; Petchers & Milligan, 1988; Wallace, 1995
Racial differences	Bernard, 1997
Inadequate consumer knowledge	Greenfield, 1986
Disabilities	Gaitz, 1974
Cross-cultural language and communication	Evans & Cunningham, 1996; Gaitz, 1974; Hall, 1973; Lindblade & McDonald, 1995; Santora, 1986
Uncompromising consumer attitudes	Siddharthan & Sowers-Hoag, 1989
Visual impairment	Biegel, Petchers, Snyder, & Beisgen, 1989

not provide for dental services and Medicaid has optional benefits that are limited and vary according to state. Of particular concern is the fact that, among elderly populations, 96% of dental-care costs are paid "out-of-pocket" (Gift, 1978). With the exception of children under 6 years of age, it should not be surprising that individuals aged 65 and older are the lowest dental-service utilizers; although 30% have annual checkups, 42% have not visited a dentist in over 5 years. Significant relationships between perceived barriers to medical care and perceived barriers to dental care include (a) the inability to procure an appointment, (b) financial concerns, (c) age-related physical factors, and (d) transportation difficulties. Another factor potentially influencing perceived barriers is the fear of lengthy, painful procedures (Antczak & Branch, 1985).

Some of the findings from the Antczak and Branch (1985) study coincide with results documented by Melnyk (1988) such as the fear and cost factors. However, limitations include notable absence of a theoretical framework, as well as a lack of specificity surrounding the collection of indicators (i.e., ad hoc collection versus perceptions elicited from the study participants). Another limiting factor was the absence of a diverse sample population; 99% of the sample participants were Euro-American.

Quality of Health Care in Health-Maintenance Organizations

Three literature reviews of research conducted on managed-care performance are presented in this current study. Two were conducted by Miller and Luft (1994, 1997); a third by Phillips, Fernyak, Potosky, Schauffler, and Egorin (2000) offered an updated perspective on the use of preventive services by HMO enrollees. All three reviews used similar inclusion criteria and examined differences in cost, quality, and utilization between managed care and FFS plans (Sullivan, 1999). The first review of the literature, conducted from 1980 through 1994, revealed that the quality of care in HMOs was equivalent to or better than health care provided in other agencies (Miller & Luft, 1994). Of the 16 studies reviewed, 14 out of 17 quality-of-care indicators found that patients with a wide range of diseases, conditions, and interventions received similar or better care in HMOs than FFS

environments. The studies reviewed, analyzed screening interventions (Bernstein, Thompson, & Harlan, 1991; Nelson, Brown, Gold, Ciemnecki, & Docteur, 1996) and disease entities such as appendicitis (Braveman, 1994), breast cancer (Potosky, 1998), congestive heart failure (Carlisle et al., 1992; Langa & Sussman, 1993), colorectal cancer (Greenwald & Henke, 1992; Riley, Potosky, Lubitz, & Brown, 1994; Vernon, Hughes, Heckel, & Jackson, 1992), cerebrovascular accident, chronic illness, arthritis, diabetes, and hypertension (Preston & Retchin, 1991). Moreover, the findings were applicable to a diversity of patient populations, both elderly (Carlisle et al., 1992; Lurie, Christianson, Finch, & Moscovice, 1994) and younger people (Brook et al., 1990).

Building upon their previous investigation comparing quality of care in HMOs versus FFS organizations, Miller and Luft (1997) conducted a literature analysis of managed-care performance—primarily HMOs. Fifteen of the 37 studies reviewed, revealed "an equal number of significantly better and worse HMO outcomes, compared with non-HMO plans" (p. 8). While the majority of studies found that the overall quality of care in HMOs for most enrollees was equivalent to FFS care, the health-care outcomes for chronically-ill, Medicare HMO enrollees were worse.

A third synthesis of the literature was conducted to verify if the delivery of preventive care to Medicaid enrollees in managed-care plans was as superior as claimed, compared to FFS plans. Eighteen studies, published between 1990 and 1998, were reviewed. The analysis revealed that 37% of the participating managed-care enrollees received preventive services and 3% did not. Sixty percent reported no differences in preventive services from those received by non–managed-care enrollees (Phillips et al., 2000). Members of managed-care agencies were more likely to receive preventive services, specifically those who belonged to group or staff-model HMOs.

Inclusion Criteria for the Three Literature Reviews

The following inclusion criteria was adopted by Miller and Luft:

> (1) data collection ended after 1980; (2) subjects were insured by private-sector insurers or by Medicare, but not by Medicaid; (3) a comparison group was used; (4) the study controlled for differences in health status between managed care and FFS patients; and (5) the study was peer reviewed. (cited in Sullivan, 1999, p. 1003).

In their 1997 review, Miller and Luft included selected Medicaid studies. However, as Sullivan pointed out, these are comparison studies of quality of care with uninsured FFS patients versus insured enrollees of managed-care organizations (MCOs). Consequently, the majority of studies reviewed in the Miller and Luft (1997) study did not control for coverage-induced differences in health-care-seeking behaviors between FFS and MCO enrollees. The question then arises as to the etiology of the differences in quality of care between FFS providers and MCOs, as well as whether the disparities are attributable to characteristics of the providers or patient incentives. This is of particular importance if utilization rates for primary and preventive care is the measure of quality (Sullivan, 1999).

The confounding effects of coverage differences are explained by Luft (1980) who states,

> Studies that involve a comparison between HMO enrollees and people with conventional insurance coverage . . . are actually testing two variables: (1) an HMO health maintenance effect, and (2) the differential financial coverages for preventive care. In the few instances in which the third party [i.e., the indemnity insurer] covers preventive visits . . . the second (insurance variable) is held constant and there appears to be little or no HMO health maintenance effect. (p. 510)

Compromised coverage criterion was applied by Sullivan (1999) to the studies reviewed by Miller and Luft (1994, 1997). Non-Medicaid studies were excluded if they

> (1) reported that the MCP and FFS groups had different levels of coverage, (2) used utilization rates or some other measure of quality that has been shown to be influenced by differences in insurance coverage, and (3) did not adjust the results for differences in coverage. (Sullivan, 1999, p. 1004)

Inclusion criteria for Medicaid studies were described as

> (1) a study must have stated that coverage for the MCP and FFS enrollees was or was not comparable, and if coverage was not comparable, it must have presented evidence that the differences in coverage did not affect the results. (p. 1004).

General Population Studies

Better or Equivalent Outcomes

Angus et al. (1996) conducted a study analyzing the influence of insurance status and managed care on mortality and length of stay in intensive-care hospital units for populations both under and over the age of 65. The research revealed lower mortality rates for HMO patients than for FFS patients in both age-groups utilizing intensive-care units. Moreover, mortality rates were lower across both medical and surgical admissions for managed-care enrollees.

Worse Outcomes

The chronically-ill, Medicare patient populations enrolled in HMOs suffered worse physical health outcomes than did those covered under FFS plans. For example, Ware, Bayliss, Rogers, Kosinski, and Tarlov (1996) conducted a study comparing physical and mental-health outcomes of adults with chronic illness ($n = 2235$), including elderly populations and economically poor subgroups enrolled in HMO and FFS plans from 1986 to 1990. Disease states experienced by the sample included hypertension, non–insulin-dependent diabetes mellitus, recent acute mycardial infarction (MI), congestive heart failure, and depression. Although the average patient did not differ in physical or mental outcome, a variance in characteristics and site was detected among mental-health patients. The findings indicated statistically significant data demonstrating that Medicare HMO elderly patients with chronic illness self-reported worse physical outcomes than FFS patients (54% vs. 28%; $p < .001$). Data from the Medical Outcomes Study (MOS) of elderly or poor patients in HMOs with chronic illnesses indicated significantly worse declines in physical status ($p < .001$) than did those covered under FFS plans.

The 1993 National Health Interview Survey (Cunningham et al., 1995) found an aggregate impact of cumulative, overlapping barriers to care for individuals aged 75 and older. According to Cohen, Bloom, Simpson, and Parsons (1997), the results indicated that approximately 2% were unable to access needed health-care services, while 5%

experienced cost-related delays in care, and over 9% encountered unmet health-care needs when multiple access factors were present. Bierman, Magari, Jette, Splaine, and Wasson (1998) conducted both a telephone survey of individuals aged 80 and older (n = 834) and a mail survey (n = 636) to evaluate functional health status and geriatric health factors related to access, utilization of health-care services, and patient satisfaction. Their findings revealed that elderly people lacking a consistent source of care, with financial problems and ADL limitations, were more likely to encounter barriers to health-care access.

In research conducted by Lynch, Harrington, and Newcomer (1999), ADL dependency was found to be an important predictor of chronic-care services utilization by functionally impaired enrollees (n = 1,868) during the first social HMO demonstration project. There were significant variances in health-plan benefits and market conditions related to the study site. Less than 70% of the impaired enrollees were recipients of formal home-health-care services, and members with low income levels were more inclined to be admitted to long-term care facilities than were members with greater financial resources.

Other studies documented by Sullivan (1999) as finding poor care by managed-care providers were research conducted by Miller analyzing substance abuse, by Wells et al. studying depression, and by Lee-Feldstein, Anton-Culver, and Feldstein studying cancer. Experton, Ozminkowski, Perarlman, Li, and Thompson (1999) conducted a study comparing readmissions and preventable readmissions to determine variance among frail, elderly enrollees (n = 450) enrolled in HMOs versus those covered by FFS plans. The results revealed that elderly, HMO Medicare beneficiaries were more likely to experience preventable hospital readmissions than their FFS counterparts.

Medicare Studies

Better or Equivalent Outcomes

Riley et al. (1994) conducted a 10-year investigation among women 65 years of age and older (n = 13,358), exploring breast-cancer survival and treatment rates. The population sample was drawn from two large Medicare HMOs—one in California and one

in the state of Washington. The findings suggested that Medicare HMO patient survival outcomes were equal to or better than those recorded within FFS plans. Breast reconstructive surgery was more frequent in HMOs, as was radiotherapy. Overall, mortality rates were found to be lower for HMO enrollees than FFS users, partially attributed to regular breast screening exams. Riley et al. found that, among elderly, female Medicare beneficiaries with breast cancer (n = 6,784), 72.3% of HMO enrollees were diagnosed at the two earliest stages, in contrast to 66% for FFS patients.

A study of hospitalized patients with acute MI (n = 1,488), aged 65 years and older, was conducted by Carlisle et al. (1992) to compare outcomes and quality of care experienced between HMO and FFS patients. Severity of illness was assessed upon admission, along with the process of care and mortality. The following five measurement scales were implemented: diagnostic testing, cardiac monitoring, nurse and physician history documentation, the physical exam, and possible interventions. Adjusting for illness at admission, there were no significant mortality differences between the HMO and FFS groups at 1- and 6-month intervals. HMOs demonstrated greater compliance with four out of five of the scales.

In a study conducted by Preston and Retchin (1991), elderly, hypertensive Medicare HMO enrollees were found to receive care equal to or better than FFS consumers. HMOs were more likely to refer patients for cardiac, ophthalmologic, and funduscopic exams; document medications and substance-abuse histories; and record orthostatic blood pressures during their assessments. This study was part of the National Medicare Competition Evaluation funded by the Health Care Financing Association.

A 12-month study conducted by Lurie et al. (1994) compared elderly Medicaid beneficiaries with FFS patients (n = 800). The results revealed no differences in quality of care, satisfaction, and access to health-care services. During the year of the study, HMO enrollees were found to use fewer services than FFS patients, 16% were less likely to schedule office visits, and 21.2% were less likely to present to the emergency room. A

comparison of overall health status between the HMO and FFS patients proved to be similar.

Worse Outcomes

To determine any existing differences in health-care access and medical outcomes between Medicare HMO enrollees (n = 6,476) and FFS plan users (n = 6,381) with acute or chronic symptoms, a 1990 telephone survey was conducted (Clement, Retchin, Brown, & Stegall, 1994). The results revealed that HMO patients with angina pain were less likely to schedule office visits and have medication prescribed than when they were experiencing joint pain. In HMOs with Medicare risk contracts, patients with specific ambulatory conditions utilized health-care services less and experienced less symptomatic improvement in joint pain in 25% of the outcomes under investigation in the Clement et al. study.

Medicare HMO enrollees have utilized less home-health services and sustained worse outcomes than patients enrolled in FFS health plans (Schlenker, Shaughnessy, & Hittle, 1995; Shaughnessy, Schlenker, & Hittle, 1994). Moreover, Hill, Brown, Chu, and Bergeron (1992) found that enrollees in poorer health have been subjected to the highest utilization reductions. Other investigations that found worse health-care outcomes in patients enrolled in MCOs versus FFS plans involved patients with stroke dysfunction and lower incidence of community residency (Kramer et al., 2000), patients with colon cancer (Retchin, Brown, et al., 1992), studies of life expectancy among elderly Medicare HMO enrollees (Manton, Newcomer, Lowrimore, Vertrees, & Harrington, 1993), and studies focused on stroke rehabilitation (Retchin, Brown, Yeh, Chu, & Moreno; 1997). A telephone survey of HMO Medicare enrollees aged 85 and older revealed that low-income individuals of African-American decent who were disabled and in fair to poor health were more likely to encounter barriers to health-care access (Nelson, Brown, & Docteur, 1997).

Consumer-Satisfaction Surveys

The data collected in 1986 and 1987 for the MOS revealed that patients with chronic illnesses such as hypertension, diabetes, or congestive heart failure, or those who had suffered a recent heart attack, were less likely to achieve access to health care if they were recipients of care through a group or staff-model HMO. Patients with such conditions reported significantly lower ratings on organizational-access measures (6 out of 12, 50%) than did those enrolled in traditional insurance plans (Safran, Tarlov, & Rogers, 1994). Funded by the Robert Wood Johnson Foundation during the early to late 1980s, a demonstration project was initiated by the University of Pennsylvania to assess the feasibility of improving the quality of care in nursing homes (Shaughnessy, Kramer, Hittle, & Steiner, 1995). Affiliations with 11 nursing homes and schools of nursing were established throughout the District of Columbia and in eight other states. Comparing the quality of long-term care in teaching nursing homes with that in nonteaching nursing homes, analysis revealed that frail, elderly HMO enrollees experienced less improvement in ADLs and independent ADLs (IADLs) than those enrolled in FFS plans.

Holtzman, Chen, and Kane (1998) investigated Medicare HMO and FFS home-care patients (n = 970) posthospitalization and found that the length of hospital stay for the HMO enrollees was an average of 1.1 days shorter than those within the FFS group. However, HMO patients were more likely to require nursing-home placement upon hospital discharge, relinquishing their prehospitalization home-care status.

An analysis of managed-care and primary-care services for the elderly and chronically ill in HMOs was conducted by Wholey, Burns, and Lavizzo-Mourey (1998). Using the InterStudy HMO census data from 1991 through 1995, consisting of primary-care physician staffing (n = 1,956) and specialist staffing (n = 1,777), these researchers found that, while access to primary-care physicians was greater for patients in HMOs than for those covered by FFS plans, specialist care and hospitalization was less

frequent. However, in group-and staff-model HMOs, there were fewer primary-care and specialist physicians per 100,000 enrollees.

A multisite, cross-sectional survey of group-model HMO enrollees between the ages of 35 and 85 (n = 10,608) revealed no significant differences in patient satisfaction across physician specialty groups. Enrollees were asked to base their evaluation of the quality of health-care services among practice settings and specialties, accessibility of services, and preventive health care (Grumbach, Selby, Schmittdiel, & Quesenberry, 1999).

Cultural and Theoretical Linkages

What is *culture* and how is it defined? Can a community or a subdivision of a community be differentiated by culture? *Community* is defined by Green and Kreuter (1991) as "a collective of people identified by common values and mutual concern for the development and well-being of their group or geographical area" (p. 24). Kleinman (1980) extends the notions of culture and community into the concept of a *health-care system.* Given the philosophy that health-related behaviors, in general, are interrelated across societies, they can be viewed as socially constructed responses to illness. As such, they form a unique cultural system referred to as the health-care system (Kleinman, 1973). Within the health-care system, as with other cultural systems, the "health-related components of society" are interrelated and regulated (p. 24). Encompassed within the construct of societal health factors are (a) belief patterns surrounding illness; (b) standards of care; (c) treatment options; (d) issues of status, power, and roles associated with consumer-provider interactions; and (e) the environment within which the health-care system is located (Kleinman, 1980). Therefore, a variety of social and cultural factors exist within the unique nature of health-care delivery systems. According to Kleinman,

> The health care system is created by a collective view and shared pattern of usage operating on a local level, but seen and used somewhat differently by different social groups, families, and individuals. Social factors, such as class, education, religious affiliation, ethnicity, occupation, and social network, all influence the

> perception and use of health resources in the same locality and thereby influence the construction of distinctive clinical realities within the same health care system. (p. 39)

Conceptual Framework

In pondering the notion of health-care access and the promotion of health for the aged within the context of the culture of the health-care delivery system, and from the perspective of frail elderly people who themselves comprise a subculture of the greater American population, a social diagnosis is indicated to capture the essence of the phenomenon as visualized through the lens of the beholder. The conceptual framework for this current research was derived from the Andersen Model of Health Services Use.

The Andersen Model of Health Services Use

The Andersen Model of Health Services Use is "a behavioral model originally formulated in the late 1960s to predict the utilization of health care services according to measurements of physician ambulatory care, hospital inpatient services, and dental care consumed during a given year" (Andersen & Davidson, 1996, p. 16), It also sought to accomplish the following tasks (Andersen, 1968; Andersen & Anderson, 1967):

1. Elicit an understanding of, and predict the use of, formal health-care services by families within given communities.
2. Define, measure, and assist in policy development to facilitate equitable access.
3. Complete a Purdue doctoral dissertation.
4. Assist in the data analysis of a national survey conducted by the University of Chicago.

In the original Andersen model (see Figure 1), the foundational unit of analysis was the family. Over time, focus was transferred to the individual due to the inefficiency and difficulties encountered in the measurement of family health status (Andersen, 1995). Andersen (1968) conceptualized that each component was capable of contributing independently toward the prediction of services use, while simultaneously suggesting a

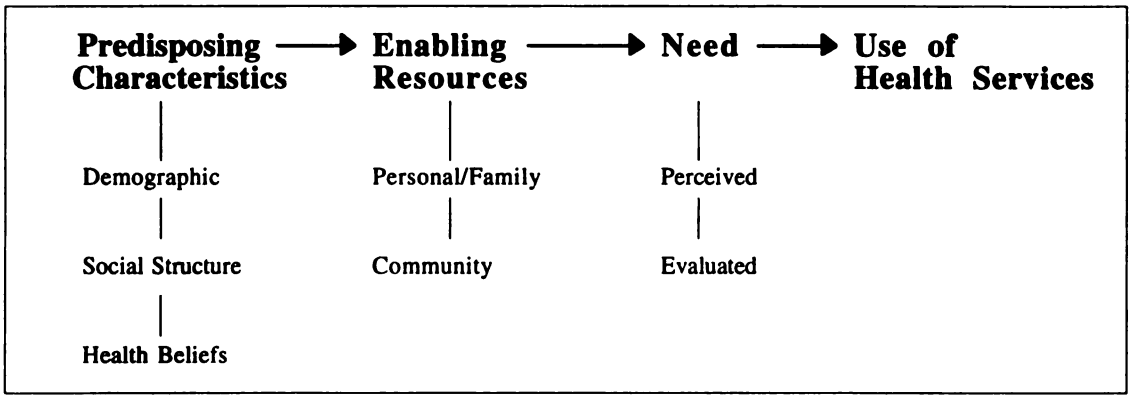


Figure 1. Formulated in the 1960s, this is the original Andersen's Model of Family Health Services Use Behavior. The unit of analysis in the initial model was the family. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by R. M. Andersen, 1995, *Journal of Health and Behavior, 36,* p. 2. Copyright by R. M. Andersen. Adapted with permission.

causal, explanatory process whereby the predisposing factors may be exogenous. In other words, enabling forces may or may not precipitate use, and that need must be identified before use can occur. However, the primary aim of the model of the 1960s was to identify factors that either contributed to, or served to inhibit, utilization (Andersen, 1995). Predisposing characteristics include demographic, social, structural, and health-belief factors. Demographic factors that may predict the likelihood of utilization are biological characteristics such as age, gender, and ethnicity (Andersen, 1968). Social structure refers to the physical environment and its influence on the ability of an individual to obtain needed resources to cope with, and/or resolve, problems. Health beliefs are depicted as attitudes, values, and an understanding or awareness of the usefulness of health-care utilization and may influence future perceptions of need (Andersen, 1995).

Another goal of the Andersen (1968) model was to provide a comprehensive, definitive measurement of health-care access (see Figure 2). Using multidimensional descriptors to delineate between behavioral concepts, Andersen defined potential access as "the presence of enabling resources" (p. 4), postulating that their number would influence both the means and likelihood of utilization. The actual use of health-care services is defined as *realized access* and includes all factors that act as either barriers or facilitators (Andersen & Davidson, 1996). Definitions of equitable and inequitable access are dependent upon the dominant predictors of realized access and include subjective factors such as value judgments and perspectives. *Equitable access* has been traditionally defined by Andersen as occurring when the majority of utilization variance can be accounted for by demographic and need variables. *Inequitable access* occurs when the allocation of medical care is determined by enabling factors, social structure, and enabling resources.

Model Propositions

The following two fundamental propositions underpin Andersen's (1968) Model of Health Services Use:

1. The use of health services is the result of a complex, interrelated set of factors.

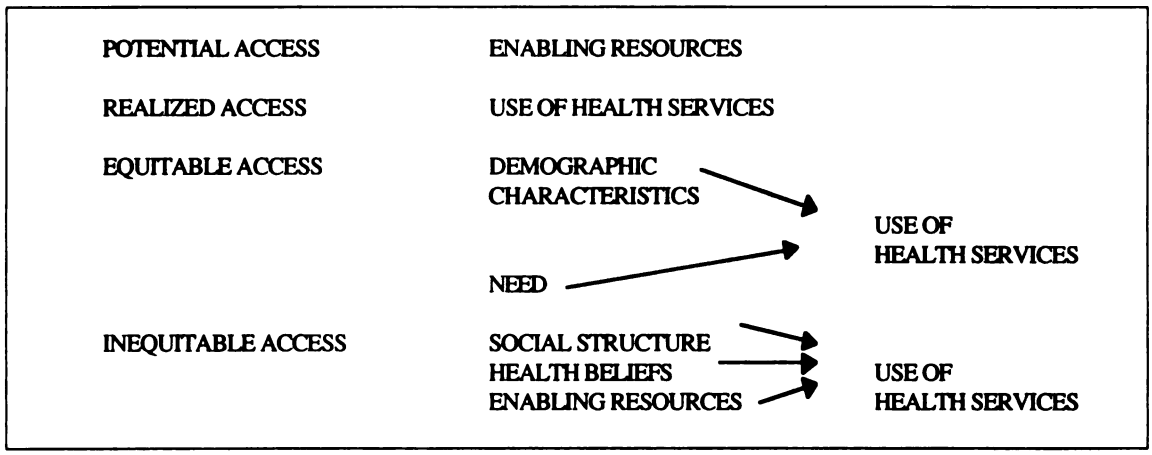


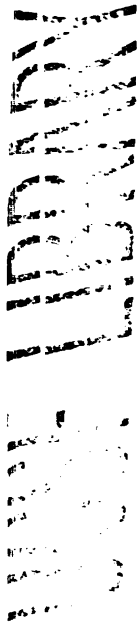
Figure 2. Another goal of Andersen's model was to provide a comprehensive, definitive measurement of health-care access. Multidimensional descriptors were used to delineate the following behavioral concepts: potential access, realized access, and equitable and inequitable access. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it matter?" by R. M. Andersen, 1995, *Journal of Health and Behavior, 36,* p. 4. Copyright by R. M. Andersen. Adapted with permission.

2. The use of health services is dependent upon three conditions—the predisposition of the family, later modified to the individual, to use services; their ability to secure services; and their need for such services.

The model assumes that the predisposing, enabling, and need factors independently render a contribution toward an explanation of service utilization.

Conceptual Components

According to Andersen (1968), a crucial factor in the promotion of equitable access is the concept of mutability (see Figure 3). Equitable access is dependent upon the mutability or ability of the variables to indicate the direction of policy initiatives to facilitate behavioral changes (Andersen, 1995). The degree or extent of mutability is influenced by the ability of the variable to effect a behavioral change. For example, the demographic variables of age and gender are ascribed with low mutability because they are not amenable to change. Social structures, such as ethnicity, education, and occupation, are attributed with a relatively low mutability due to an inability to change and/or the improbability of becoming viable, short-term policies promoting access.



Alterable, and somewhat capable of promoting change, health beliefs are classified with a medium degree of mutability. Enabling variables have the potential for a high degree of mutability and may reveal strong utilization relationships, as demonstrated in the Rand Health Insurance Study where structural changes in health-insurance benefits dramatically influenced the utilization of health-care services (Manning, Newhouse, Lebowitz, Duan, & Marquis, 1987). Although it was not considered a mutable policy variable in the original Andersen model, need was attributed to be the immediate causative factor in the activation or enactment of health-services use. Consumer perceptions of need may be influenced by a variety of strategies such as health-education seminars and the modification of financial incentives to access service utilization (Andersen, 1995). An example of this process is evidenced by the use of clinical guidelines in managed-care systems to influence provider judgment regarding consumer need for health care (IOM, 1992, 1993).

MODEL COMPONENT	DEGREE OF MUTABILITY
Demographic	Low
Social Structure	Low
Health Beliefs	Medium
Enabling	High
Need	(Low?)

Figure 3. The initial concepts of mutability were introduced to the Andersen model of the 1980s to 1990s. They recognize the importance of the physical, political, and economic components of the external environment in considering determinants of use. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by R. M. Andersen, 1995, *Journal of Health and Behavior, 36,* p. 5. Copyright by R. M. Andersen. Adapted with permission.

The health-care system was incorporated into Phase 2 of the Andersen model (see Figure 4) during the 1970s, lending credence to the importance of national health-care policy and resources and subsequent organization and integration into the various delivery systems as significant determinants of utilization (Andersen, 1995). Several researchers at the University of Chicago, Center for Health Administration Studies, are credited with developing this portion of the model (Aday & Andersen, 1974; Aday, Andersen, & Fleming, 1980; Aday, Andersen, Loevy, & Kremer, 1985; Andersen, Kravits, & Anderson, 1975; Andersen & Newman, 1973; Andersen, Smedby, & Anderson, 1970; Fleming & Andersen, 1986). Health-services utilization was expanded in the model to include type, site, purpose, and the period of time during which services were received for an illness episode. The last addition to Phase 2 of the Andersen model involved consumer satisfaction and an explicit outcome of the health services rendered. It analyzed convenience, availability, financing, provider characteristics, and the quality of care and services (Andersen, 1995).

Phase 3 of the Andersen model (see Figure 5) was created in response to the realization that delivery of health-care services should be driven by the goal of "maintaining and improving the health status of the population, both as perceived by the population and evaluated by professionals" (Andersen, Davidson, & Ganz, 1994, p. 366). Still focusing on health-services utilization, the model portrays the 1980s to the 1990s and clearly recognizes the importance of the physical, political, and economic components of the external environment in considering determinants of use. Additionally, health behaviors, such as personal health practices and the use of health services, are included in the model to enhance its ability to explain their influence on health outcomes. Components of the health-outcomes variable include perceived health status, evaluated health status, and consumer satisfaction (Andersen, 1995). By including the dimension of health-status outcomes, Andersen was able to extend access measures to include properties particularly salient to health policy and reform (see Figure 6). He stated that, "when the level of health

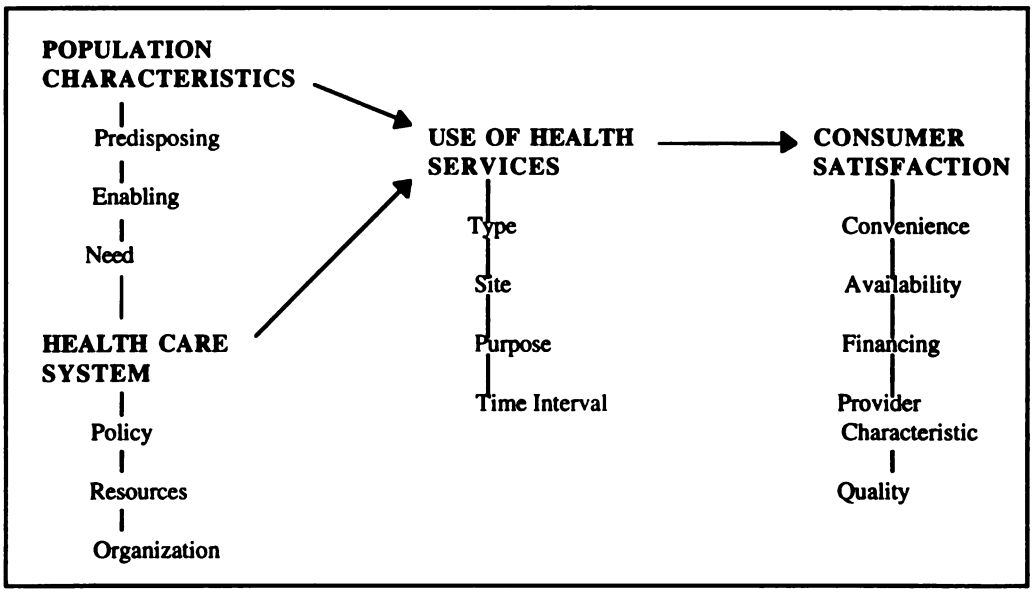


Figure 4. The health-care system was incorporated into Phase 2 of the Andersen model during the 1970s, including the initial measures of access. Health-services utilization was expanded to include type, site, purpose, and the interval during which time services were received for an illness episode. The last addition to this phase involved consumer satisfaction and an explicit outcome of health services. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by R. M. Andersen, 1995, *Journal of Health and Social Behavior, 36,* p. 6. Copyright by R. M. Andersen. Adapted with permission.

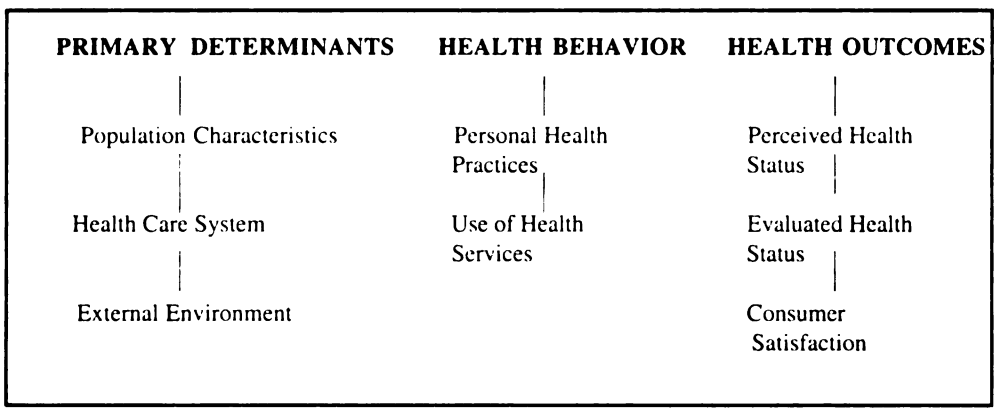


Figure 5. Still focusing on health-services use, Phase 3 of the Andersen model during the 1980s and 1990s recognizes the importance of the physical, political, and economic components of the external environment in considering determinants of use. Health behaviors, such as personal health practices and the use of health services, are added to the model to enhance its ability to explain their influence on health outcomes. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it matter?" by R. M. Andersen, 1995, *Journal of Health and Social Behavior, 36,* p. 7. Copyright by R. M. Andersen. Adapted with permission.

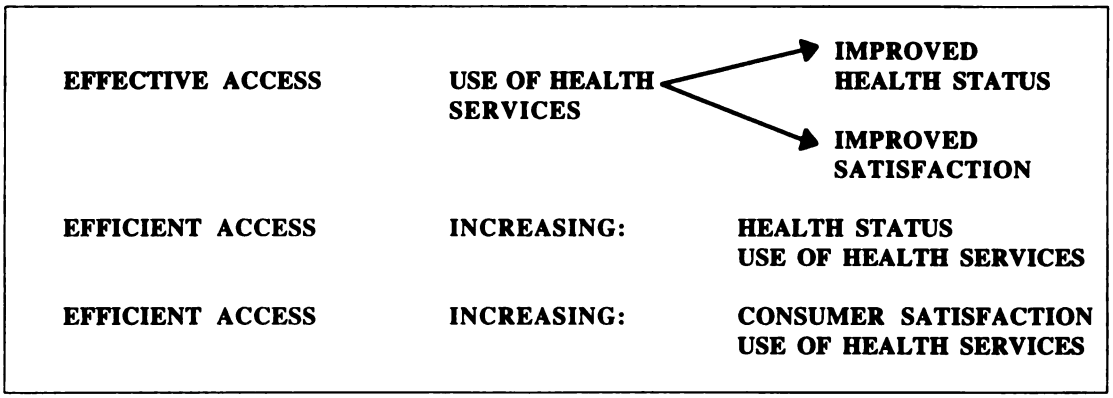


Figure 6. By including the dimension of health-status outcomes, Andersen was able to extend access measures to include properties particularly salient to health policy and reform. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by R. M. Andersen, 1995, *Journal of Health and Social Behavior, 36,* p. 7. Copyright by R. M. Andersen. Adapted with permission.

status or satisfaction increases relative to the amount of health care services consumed," efficient access is achieved (pp. 6–7).

Phase 4 of the Andersen model (see Figure 7) incorporates health-status outcomes, emphasizing the "dynamic and recursive nature of health services" utilization (Andersen, 1995, p. 7). Depicting the multiple influences on both utilization of services and health-status outcomes, the emerging model includes *feedback loops* revealing the influence of outcome on predisposing factors, perceived need for services, and health behavior. While acknowledging that implementation of the emerging model necessitates the use of advanced conceptualization and more sophisticated longitudinal and experimental research methods and statistical analysis, Andersen still believes it will contribute toward clearer understanding of health behavior and the advancement of health-services policy.

Model Critique

Andersen's model provides a rich description of the access variables (Andersen, 1995). Its complexity only adds to the strength of its ability to explain and describe the relationship between the structure and function of each component within the model. It is a clear and concise representation of the dynamic nature of today's health-care delivery system and the issues that affect access to care services. The schematic diagrams in Figures 2 through 8 provide a clear graphic presentation and reveal a logical progression of the model as it developed over time. The diagrams are concise and easy to follow.

While the Andersen model originally focused on the family, emphasis subsequently shifted to the individual as the unit of analysis. With the realization that delivery of health-care services should be driven by the goal of "maintaining and improving the health status of the population, both as perceived by the population and evaluated by professionals" (Andersen, Davidson, & Ganz, 1994, p. 366), Phase 3 of the model was born. This phase represented a particularly important feature to the suitability of the entire model in explaining the process of accessing needed health-care services for elderly enrollees of HMOs.

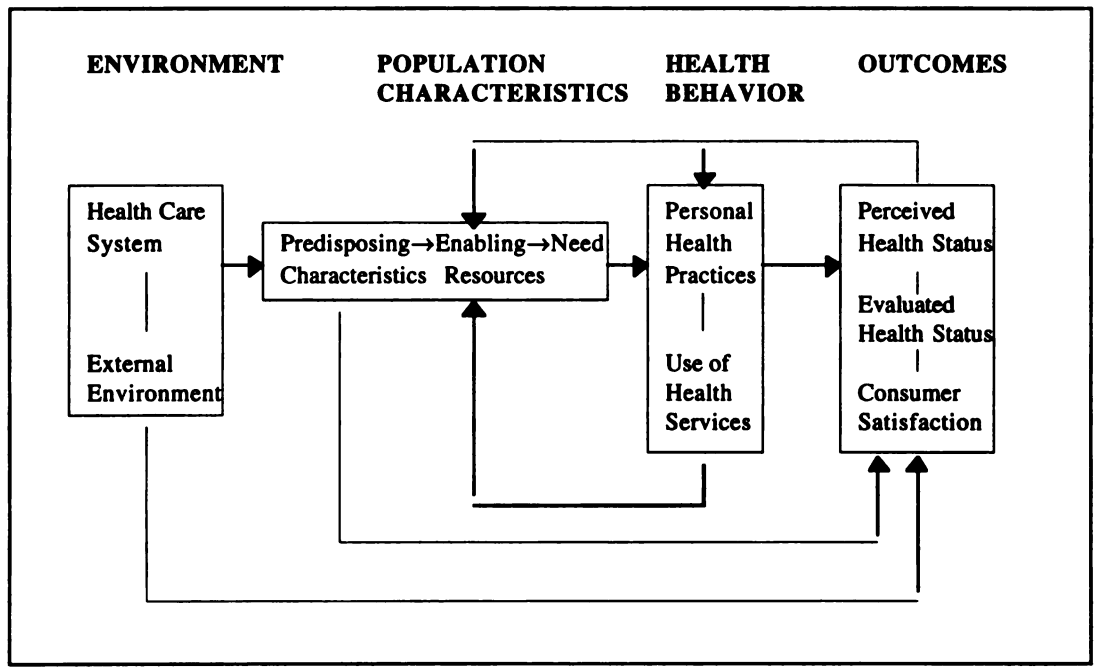


Figure 7. Phase 4 of the Andersen model incorporates health-status outcomes. Depicting the multiple influences on both utilization of services and health-status outcomes, the emerging model includes feedback loops revealing the influence of outcome on predisposing factors, perceived need for services, and health behavior. Adapted from "Revisiting the Behavioral Model and Access to Medical Care: Does it Matter?" by R. M. Andersen, 1995, *Journal of Health and Social Behavior, 36,* p. 8. Copyright by R. M. Andersen. Adapted with permission.

Still focusing on health-services utilization, the model portraying the 1980s to the 1990s recognizes the importance of the physical, political, and economic components of the external environment in considering determinants of use. Additionally, health behaviors such as personal health practices and the use of health services, are added to the model to enhance its ability to explain their influence on health outcomes. Depicting the multiple influences on both utilization of services and health-status outcomes, the emerging model includes feedback loops revealing the influence of outcome on predisposing factors, perceived need for services, and health behavior.

The ongoing growth of health-care services constitutes a portion of the largest sector of the U.S. economy (Andersen, 1995). The Andersen model has been used widely over the last 4 decades by health economists and psychologists in a wide variety of settings. The goals behind its use were to ascertain the etiology of health-care services utilization by families within given communities and to define and quantify equitable access to health care. The model is suitable as a theoretical framework for a study of the perceptions of frail elders seeking care within HMOs and factors influencing their access to health care.

Research Questions and Operational Definition of Terms

The research questions developed for this current study provide a beginning framework for the research. They are based upon many years of researcher experience within the critical-care setting of an HMO servicing frail elders, as well as upon pilot-study data indicating the importance of the study variables (D. Jennings, 1998) (see Appendix A). The questions were formulated in the following manner:

1. What are the clinical, cultural, social, and environmental factors influencing access to health-care services, as experienced and perceived by frail, elderly HMO enrollees?

2. How do elderly people experience the process of accessing health-care services in HMOs?

3. What are the perceptions of frail elderly enrollees of the HMO features (i.e., the independent study variables) influencing their ability to access health-care services (i.e., the dependent variable)?

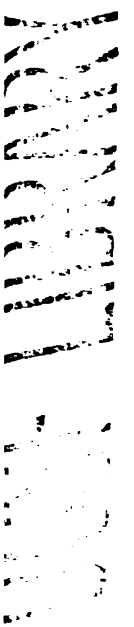
The characteristics of the research participants were elicited from a demographic questionnaire designed specifically for this study, the Mental Status Questionnaire (MSQ), and the MOS 36-Item Short-Form Health Survey (SF-36). The rationale for collecting descriptions of the level of cognitive functioning of the participants through the MSQ, perceived health through the MOS SF-36, and the demographic characteristics was that vulnerable populations, such as frail elderly people with chronic illnesses, generally have poorer health outcomes in HMOs than they do when covered by FFS plans. Personal and clinical characteristics of the sample population were also collected and documented.

For purposes of this study, *frailty* is operationalized as the presence of two or more chronic illnesses, as measured by Question 26 on the demographic questionnaire; cognitive or functional impairment, as measured by the MSQ and the MOS SF-36; and an emergency department (ED) or hospital admission within the prior 12 months, self-reported by the participants during the individual and focus-group interviews. The presence of chronic illness was also self-reported by the respondents via their responses to Question 26 on the demographic questionnaire. Perceived facilitating and barrier factors influencing access to health care were also elicited through the demographic questionnaire data (i.e., Questions 20–25), as well as through data collected in the individual and focus-group interviews. Influential factors associated with HMOs were drawn from responses to Questions 27–35 in the demographic questionnaire and the individual and focus-group interview data.

Summary

This chapter addressed the conceptual framework for this investigation of the process of accessing health care for frail, elderly HMO enrollees. A brief description of theoretical conceptualization and its importance to the process of research, concepts, and nursing theory was provided. Additionally, the methodology and findings of the

preliminary pilot study that explored the perceptions of elderly HMO enrollees regarding factors influencing access to health care was documented. The chapter includes a discussion of the patterns of health-care seeking, the behavioral determinants of health care, and their potential influence on the utilization of health-care services. An analysis and description of the concepts of health-care access and barriers to care as they pertain to frail, elderly HMO enrollees was also addressed. A review was presented of the empirical and nonempirical dental, medical, and nursing literature focused on health-care access in general; accessibility for frail, elderly enrollees HMO enrollees; and the concepts, categories, and dimensions of barriers to care. Cultural and theoretical linkages were discussed and the models used to study this phenomenon delineated to assist in describing the context and meaning ascribed to barriers from each conceptual framework. A description and critique of Andersen's Model of Health Services Use was presented. Included in the description was an identification of the conceptual components, central constructs, premises, and the origin and philosophical underpinnings of the theoretical framework. Lastly, the research questions for this study were presented along with the operational definitions of terms.



CHAPTER III

METHODOLOGY

The primary aim of qualitative research is the development of theory facilitating the description and explanation of the phenomenon under study (Burns, 1989). Szent-Györgyi (cited in Morse, 1994) describes the nature of qualitative research in the following manner: "If I go out into nature, into the unknown, to the fringes of knowledge, everything seems mixed up and contradictory, illogical and incoherent. This is what research does; it smoothes out contradiction and makes things simple, logical and coherent" (p. 1). When knowledge surrounding a phenomenon is limited, qualitative methodology is indicated as it endeavors to examine and describe the unique characteristics associated therein. Encompassed within this chapter are descriptions of the research design, setting, sample participants, data-collection methods, procedure, and process of data analysis.

Research Design

The purpose of this anthropological research was to examine the perceptions of elderly HMO enrollees regarding their experiences surrounding the process of accessing needed health-care services. The study also sought to identify factors that either facilitate or inhibit the ability of this population to obtain care. A triangulation of qualitative and quantitative methods was employed to describe the perceptions of frail, elderly HMO enrollees regarding the clinical, cultural, social, and environmental factors influencing their ability to access health-care services. Using a particularistic ethnographic method, this research explored perceptions of the study sample regarding the context and process of health-care access, as well as the particular features of managed-care organizations that either facilitate or inhibit the ability of this vulnerable population to access needed health-care services.

Particularistic ethnography refers to the study of a single social unit—an isolatable human group, small groups, or smaller segments of an entire culture (Boyle, 1994). Boyle

stated that the focus of particularistic ethnography is "on a social unit or processes within a small group and generally identified and helped us [*sic*] understand the cultural rules, norms, and values" and their relationship to health and illness behaviors (p. 172). In so doing, this method of sutdy has contributed to the knowledge of nursing and generated useful descriptive theories.

Ethnographic text is characterized by its holistic and contextual nature, its reflexivity, and its emic and etic perspectives (Boyle, 1994). To understand human behavior, it must be contextualized according to individual behavioral elements and their ascribed meanings and purposes. Encompassed within the boundaries of context is the physical environment and comprehension of the social meanings underlying human behavior (Hammersley & Atkinson, 1995). Consequently, ethnographers must be able to provide a description of behavior, as well as an understanding of the reasons and circumstances under which it occurs. According to Werner and Schoepfle (1987),

> As ethnographers, we try to do more than just describe the cultural knowledge of the native. We try to understand and, if possible, explain. We need to be able to explain how the natives could possibly view the world as they do. The paradox of this situation is that all description, understanding, and explanation of the natives' cultural knowledge is based fundamentally on two disparate, incompletely transmittable, presumptive systems of knowledge---the knowledge of the native and the knowledge of the ethnographer. (p. 60)

Consequently, ethnographic text is capable of rendering both description and theoretical explanation, the power and level of which is proportional to its scope and focus (Boyle, 1994).

At the very core of ethnographic investigation is the emic perspective, defined by Boyle (1994) as the view of reality from the perspective of the insider or informant. Their view of life, as they experience it, is crucial to a clear understanding and accurate description of specific situations and behaviors. Etic perspectives refer to the viewpoint of the "outsider," and the abstractions and scientific explanations that emerge from the perspective of the researcher of the reality experienced by the "insider" or participant. An etic perspective reflects the fieldwork observations of the outsider or researcher and, while

emic and etic viewpoints may not be congruent, both are important contributors in the development of conceptual or theoretical interpretations.

In the era of classic ethnography, anthropologists described the emic viewpoint as belonging to the "natives." With the advent of contemporary ethnography and the expansion of ethnographic focus to encompass more diverse social groups, anthropologists have substituted the terms *informant* or *participant* to describe the source of the emic perspective (Boyle, 1994). Use of the term informant refers to a member of a group or sample, while participant "reflects the nature of the discourse and relationship between the researcher and the individuals who participate in the kinds and types of studies that are being conducted in many qualitative studies" (p. 167).

The type of ethnographic method selected is dependent upon the emphasis of the study, the perspective of the anthropologist, or a combination of both. For example, an emphasis on the emic perspective would result in the use of cognitive methodology or ethnoscience; a focus on interview data (Boyle, 1994); and frequently culminate in taxonomies, cultural themes, or componential or domain analyses (Spradley, 1979). In contrast, an emphasis on the etic or scientific perspective would indicate a primary focus on data elicited from informal interviews and participant observation (Boyle, 1994). According to Boyle, the majority of ethnographers consider both perspectives to yield an interpretation understandable to each viewpoint. However, the epistemological stance of the investigation is the ultimate determinant in how the analysis is represented (i.e., emic or etic in perspective).

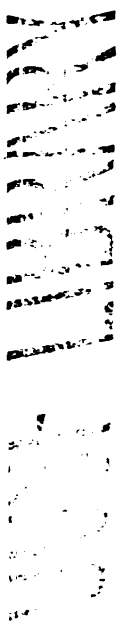
If the study characteristics are a combination of the aforementioned components (i.e., holistic, contextual, reflexive, emic, and etic perspectives), what then is ethnography? The following queries regarding ethnography were raised by Morse (1991). As an analytical method, can it be used within a variety of disciplines and, if so, does its use require the incorporation of anthropological theoretical assumptions and perspectives? Must

ethnography always yield culturally oriented descriptions and explanations? According to Spradley (1979),

> The essential core of ethnography is this concern with the meaning of actions and events to the people we seek to understand. . . . People make constant use of these complex meaning systems to organize their behavior, to understand themselves and others, and to make sense out of the world in which they live. These systems of meanings constitute their culture; ethnography always implies a theory of culture. (p. 5)

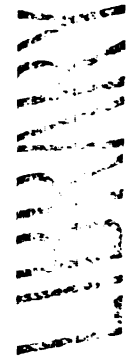
The Research Site and Population Sample

A sample of frail, elderly, community-dwelling group-model HMO enrollees who live in Northern California were recruited for participation in this study. The geographical location for the study was selected for its large, diverse population of elders who reside within the community and are recipients of health-care services within one of the nation's largest group-model HMOs. Approval for this study was received from the Committee of Human Research at the University of California, San Francisco (see Appendix B). Recruitment of the participants was conducted first through distribution of approximately 1,000 informational flyers (see Appendix C) and "word of mouth" at a variety of locations (e.g., churches, senior centers, adult day-care centers, beauty salons, barber shops, and coffee shops) including senior organizations, such as the Gray Panthers, and specialized residences for independent elders within Northern California. Initially, the recruitment process was a slow and tedious task. However, following the first six or seven participant interviews, additional potential subjects learned of the study and began telephoning to express their interest in participating. Because their introduction to the study was via friends who served as study participants, they trusted that participation was safe and subsequently referred still others. The enrollment process evolved over the course of approximately 3 months, beginning in late September 1999 and extending through the beginning of January 2000.



Two types of nonprobability sample designs were employed in the recruitment process—convenience (i.e., quota) and "snowball" sampling. Convenience sampling is

defined by Henry (1990) as "a group of individuals who are readily available to participate in a research study" (p. 18). Snowball sampling is characterized as a design in which additional potential research participants are identified by existing group members already selected for inclusion in the study. Criteria for participation in this research was a minimum age of 75 years and diagnoses of two or more chronic diseases and/or functional or cognitive impairments. At least 50% of the sample population was required to be elderly women. A culturally diverse sample, representative of the Northern California county where the study was conducted (e.g., African-American, Asian [Chinese, Filipino, and Japanese], Euro-American, and Latino) was sought. Participants were either English speaking or were accompanied by an English-speaking interpreter. Additionally, they resided in nonassisted living environments (e.g., apartments, private homes, retirement communities, or senior residences) within the Northern California county selected for the study and lived alone or with a spouse, partner, family member (e.g., son, daughter, niece, nephew, sibling, or cousin), or friend.



Although appropriate sample size is more difficult to determine in qualitative research, Morse (1994) recommends the enlistment of approximately 30 to 50 participants when using ethnography, grounded theory, and other ethnoscience methodologies. Given the reality of the number of hours required for recruitment, interviewing, transcription, and analysis, a total of 56 elderly people were interviewed, 6 of whom were ultimately excluded from the study because they did not meet the inclusion criteria. It was discovered that three perspective participants had not obtained health-care services from an HMO, two were under the age of 75, and one individual lived in a residential facility that provided assistance with all ADLs. Of the 50 participants interviewed, 28 demonstrated moderate cognitive impairment and 2 were severely impaired, as measured by the MSQ. Cognitively impaired participants who completed the MSQ with five or more errors were interviewed with their primary caregivers in attendance to allow for accuracy in the information

obtained. A small subset of informants (i.e., two groups of six participants) comprised the focus group subsequently interviewed in a series of sessions.

Key elements of informed consent involve the provision of information pertaining to "the research, comprehension of the information by potential subjects, voluntary participation, and the freedom to withdraw at any time without adverse consequences" (Marshall, 1996). The participants in this research were advised of the potential risks and/or discomfort they may experience during the course of the study and were subsequently asked for written consent. Once obtained, a copy of the consent form was returned to each respective respondent (see Appendix D). An "X" was accepted when necessary in place of a signature, and the consent form was witnessed and verified by a third party.

Data Collection and Analysis

Semistructured interview guides with open-ended questions formulated toward ultimately answering the three research questions were developed to facilitate the individual interviews and focus-group sessions (see Appendix E). The individual interview questions were designed to obtain information regarding routine, crisis, and institutional care for frail elderly people. For example, the participants were asked to describe their "last two experiences of telephoning the medical center for advice or assistance," and if they were "able to speak with a registered nurse or a physician" when they needed to speak to someone about a health problem. Information was also collected regarding their experience with ED or hospital admissions, discharge teaching, and follow-up care.

In addition to the individual and focus-group interviews, the clinical factors listed in Research Question 1 were assessed by the MSQ (Kahn, Goldfarb, & Pollack, 1960) and the MOS SF-36 (McDowell & Newell, 1996). As mentioned earlier, data were also collected via a demographic questionnaire designed specifically for this study. The individual interviews were conducted in a variety of environments ranging from spontaneous, informal discussions in public settings to formal, scheduled interviews held

in private locations. Following each interview and focus-group session, field notes recorded detailed information and impressions. The notes focused on the interaction, including both verbal and nonverbal communication, as well as pertinent information regarding the internal and external context of the home environment. Theoretical notes were constructed to document emerging themes.

Interview and Documentation Techniques

As mentioned earlier, the open-ended questions of the semistructured interview guides were formatted to focus on key factors applicable to the phenomenon, as elicited from the literature and the pilot-study data, while still allowing for flexibility in scope and depth (see Appendix D) (Polit & Hungler, 1991). With the permission of the participants, some of the interviews were audiotaped and subsequently transcribed in preparation for data analysis. The content of those not recorded was documented in the form of detailed notes and immediately word processed following the interview session. To ensure accuracy of the data, the content was reverified in a follow-up telephone call to the participants.

The two focus-group interview sessions were conducted to learn on a first-hand basis about the perceptions, attitudes, and experiences of frail elderly people during the process of accessing health-care services and their interactions with managed-care providers. The focus-group environment encourages and nurtures the disclosure of information (Kreuger, 1994) while providing a communication link among participants and between the participant and researcher (Morgan, 1998). The purpose of focus groups was threefold. They were intended to facilitate an understanding of the attitudes, experiences, beliefs, and perceptions of older people regarding access to health-care services; seek differences and similarities among the participants; and facilitate recall in all participants of similar experiences to those shared by peers within the group. The sequence, structure, and format of the questions posed in the focus-group setting were similar to those of the one-on-one interviews (see Appendix E).

Sixteen of the 50 study participants volunteered to join the focus-group sessions and were divided into two groups of eight members each. Transportation was provided and the interview sessions were held at private locations selected by the participants. The focus-group sessions were moderated by the researcher, the entire session was audiotaped, and a research assistant constructed field notes to document and describe all nonverbal communication. To minimize confusion as to the process, a simple, easy-to-follow list of procedural instructions was distributed to each participant and discussed during the introductory phase of the focus-group session. The audio recordings of the sessions were subsequently transcribed and analyzed. The triangulation of information elicited from the focus-group sessions augmented/reinforced the interview data, serving to strengthen the findings of the study.

As mentioned earlier, following each individual focus-group interview, field notes were constructed to record detailed information and impressions. The notes focused on the interaction, including verbal and nonverbal communication, as well as on pertinent information regarding the internal and external context of the home environment. Theoretical notes were constructed to document the assigned categories and emerging themes.

Instruments of Measure

Interview Guide and Demographic Questionnaire

The lists of suggested questions in the interview guides were developed to facilitate the individual and focus-group interviews. However, as their titles imply, they were merely guides to direct the focus of the questions and were not implemented in a manner restricting the scope of information or topic. The following three broad categories of access topics were addressed in the interview sessions: participant perceptions of routine health care, their responses to crisis care, and their experiences regarding institutional care for serious physical or mental problems. For example, in response to queries regarding routine care, the participants were asked about waiting time for appointments, their last office visit with a

physician or nurse, referrals to specialized services, prescription services, and the availability of transportation. In response to crisis care, they were asked to relate their experiences of telephoning for medical advice, the professional status of the person who delivered the requested advice, and whether they communicated their status of ill health with family members or friends. Questions pertaining to their experiences of institutional care for serious problems focused on their last ED admission and/or hospitalization, the length of time they were hospitalized, and information related to discharge planning. The informants were encouraged to freely discuss any issue they believed to be an inhibitor to their ability to obtain needed health care and/or adversely influencing the delivery of services within their HMO.

A demographic questionnaire was used to elicit data related to the personal characteristics of the research participants such as age, sex, ethnicity, education, marital status, religion, and proximity of family or significant others. Other questions were incorporated to gather information surrounding their living environments, features of the health-care delivery system where they received health-care services, and environmental and cultural issues possibly influencing their access to health care (see Appendix F). The participants were queried as to who they lived with if they did not live alone; their perceptions of the safety of their neighborhoods; the existence of senior centers or services within their communities; the availability of transportation; the accessibility of grocery or drug stores within their neighborhoods; the number of stairs leading to, and inside, their residences; the number of chronic diseases for which they were diagnosed; and whether they had children or family living nearby to assist with transportation or obtaining access to needed health-care services. Questions were also asked regarding what languages they spoke if they did not speak English and the availability of a translator, the availability of assistive social-support services in the community as well as their HMO, and their perceptions of how they were treated as older individuals by health-care professionals with whom they interacted within their HMO (see Appendix E). For convenience, and to

facilitate the ability of the elderly participants to complete the instrument, the questions were incorporated into the structure of the one-on-one interviews and the researcher completed all of the questionnaires for the interviewees.

The Medical Outcomes Study 36-Item Short-Form Health Survey

Designed to detect health status in population surveys and evaluative studies of health policy by the Rand Corporation (1992) and Ware and Sherbourne (1992), the MOS SF-36 was derived from the MOS Questionnaire originally developed by McDowell and Newell (1996). The MOS SF-36 is a generic instrument applicable to study samples of elderly individuals and measures both physical and mental concepts in a variety of contrasting ways. For example, in evaluating behavioral functioning and role limitations, the measure poses questions surrounding work, self-care, and mobility. Because the concept of perceived well-being is subjective and does not lend itself well to behavioral inferences, questions were included on states of feeling. Finally, queries related to overall evaluation of health provide a summary indicator and capture the impact of health problems not directly included in the other questions (Ware, Snow, & Kosinski, 1993). The MOS SF-36 measures the following eight dimensions (McDowell & Newall, 1996, pp. 446–449):

(1) physical functioning; ten items in question 3,
(2) role limitations due [to] physical health problems; four items in question 4,
(3) bodily pain; questions 7 and 8,
(4) social functioning; questions 6 and 7,
(5) general mental health, covering psychological distress and well-being; five items in questions 9 b, c, d, f, and h,
(6) role limitations due to emotional problems; questions 5 a, b, and c,
(7) vitality, energy or fatigue; four items in questions 9 a, e, g, and i,
(8) general health perceptions in five items; questions 1 and 11 a–d

The MOS SF-36 normally consumes approximately 5 to 10 minutes for young and middle-aged adults to complete and may require 15 to 20 minutes for elderly respondents (Weinberger, Samsa, & Hanlon, 1991). For purposes of this study and to compensate for any visual, cognitive, or functional impairments, assistance with its completion was offered at the conclusion of the individual interviews. Due to the amount of information sought,

and concern for the comfort of the participants, second interviews were conducted with a majority of the interviewees. Consequently, approximately 150 hours were spent in individual interview sessions and 2 hours in each of the focus-group sessions, totaling 154 hours of actual interview time. Because it is considered public domain, royalty fees were not required for use of the instrument. A manual describing appropriate administration, scoring, and interpretation was obtained. Additionally, a statistical-analysis software program was utilized for automated scoring calculations (McDowell & Newell, 1996).

Based upon a sample of chronically ill medical and psychiatric patients who participated in the MOS (n = 3,445), a comprehensive analysis of item responses, reliability, and validity revealed exemplary core descriptions of varying types and levels of disease. The analysis also provided the ability "to distinguish people with a chronic medical condition alone from those who had a medical disorder combined with a psychological one" (McHorney, Ware, & Raczek, 1993, pp. 255–259) (see Appendix G). The MOS SF-36 is therefore an appropriate instrument in the identification of perceived physical and psychological health status in older patient populations.

Mental Status Questionnaire

The MSQ is a brief 10-item instrument developed by Kahn, Goldfarb, and Pollack (1960) to provide an objective, quantitative measurement of cognition in older populations. Addressing the factors of time and place orientation, remote memory, and general knowledge, it can be administered by an interviewer in a matter of a few minutes (McDowell & Newell, 1996). Scored on a scale of 1 to 10, errors are tabulated with omissions being considered errors and with a score of 10 considered optimal cognitive functioning. Scores of 1 or 2 indicate severe cognitive dysfunction, scores of 3 to 8 signify moderately advanced impairment, and 9 to 10 indicating nonsignificance or mild to no impairment (Kahn et al., 1960).

The reliability of the MSQ was tested by Lesher and Whelihan (1986) and revealed a "test-retest reliability of 0.87 at two to four weeks; split half reliability was 0.82," with an

alpha of 0.81 (pp. 726–727). An unpublished study by Wilson and Brass (1973), in which the MSQ was examined by administering the instrument four times at 3-week intervals, found that "scores changed one point or less in 75% of repeat administrations" (pp. 92–101). Testing the validity of the MSQ, Kahn et al. (1960) made comparisons with an instrument known as the Face-Hand Test and the psychiatric assessments of a sample of institutionalized patients (n = 1,077), revealing a "strong association between MSQ scores and diagnosis of chronic brain syndrome" (pp. 327–328). Although suitable for detecting cognitive function in institutionalized populations, the MSQ was considered to be less effective in outpatient evaluations (McDowell & Newell, 1996). For example, a survey of community-dwelling elders (n = 487) revealed a low sensitivity (64%) and a specificity of 99% in the ability of the MSQ to detect chronic brain syndrome among this sample, "at a cutting point of 3" (Milne, Maule, & McCormack, 1972, p. 401). Moreover, educational level was not found to obscure the ability of the instrument to identify cognitive impairment (McDowell & Newell, 1996). Overall, the MSQ provides an easy-to-score, brief assessment of several levels of cognition. A limitation is its "omission of recent memory, which forms a critical indicator of the early dementing process" (p. 310) (see Appendix H).

Although both qualitative and quantitative data were analyzed in this study, the primary focus was on the descriptions and analysis of qualitative data regarding the process of accessing health-care services within HMOs, as perceived and experienced by elderly enrollees. The emphasis on qualitative interpretation is congruent with the philosophy of anthropological research and underlying methodological principles. However, quantitative analysis was also conducted on portions of the qualitative data that were receptive to such quantification.

Qualitative Data Analysis

In ethnographic research, data collection and analysis occurs simultaneously. According to Pelto and Pelto, descriptions of culture and human behavior are inherently

theoretical (cited in Hammersly & Atkinson, 1995). The identification of, and notions that explain, patterns contained within data is expanded upon by Bernard (1994) as he documents the following definition:

> The word *analysis* [emphasis added] has two meanings. On the one hand, it means making complicated things understandable by reducing them to their component parts. This is descriptive analysis. On the other hand, it means making complicated things understandable by showing how their component parts fit together according to some rules. This is theory. (p. 317)

Content Analysis

Content analysis was applied to the data collected for this research through individual and focus-group interviews. It is a technique that makes inferences from textual data (Bernard, 1994). The labor-intensive nature of content analysis usually involves the categorization of words or phrases contained within the text with labels or codes reflecting correlated concepts. Two types of content analysis are identified by Wilson (1989) as semantic or manifest and further categorized as inferred or latent. They may be used separately or jointly. Latent analysis involves the inference of meaning beyond the spoken or written word. Three basic elements found in content analysis as a whole are (a) decisions surrounding unit of analysis, (b) categorical development or "borrowing," and (c) the establishment of rationale and illustrations for the purpose of guiding the coding of data into categories.

The field notes documented in this study were coded and categorized, and a reduction of the categories was subsequently conducted through a process of selection, ordering, and clustering (Hammersley & Atkinson, 1995). Central patterns or themes were examined to render a description of the clinical, cultural, social, and environmental factors influencing the process of accessing health-care services, as perceived and experienced by elderly HMO enrollees. As the categories and themes emerged from the data, a list of positive (i.e., facilitating) and negative (i.e., inhibiting) factors was compiled. Throughout the process of data collection and analysis, theoretical memos were constructed to develop a schema explaining the emerging data and its underlying cultural processes (Agar, 1986).

Comprehension, synthesis, theorizing, and recontextualization are cognitive processes and essential components salient to all types of qualitative inquiry (Morse, 1994). To comprehend a phenomenon, the researcher must enter the setting as a "stranger" and be able to visualize the reality of the images as seen through the eyes of the participants. When data collection becomes sufficient enough to provide a "complete, detailed, coherent, and rich description" of the phenomenon under study, comprehension is achieved (p. 27). *Synthesis* involves the merging of themes to form composite descriptions of experiences, meanings, patterns, and behavioral responses that accurately depict the phenomenon. *Theorizing* is defined by Morse as "the constant development and manipulation of malleable theoretical schemes until the 'best' theoretical scheme is developed" (p. 259). It is accompanied by tandem processing of speculations, conjecture, falsification, verification, revisions, and discarding. Morse (1992) cautions qualitative investigators against "mistaking conjecture for fact" (p. 262). According to Geertz (1973), "cultural analysis is (or should be) guessing at meanings, assessing the guesses, and drawing explanatory conclusions from the better guesses, not discovering the Continent of Meaning and mapping out its bodiless landscape" (p. 20). Morse (1994) defines *recontextualizing* as "the development of the emerging theory so that the theory is applicable to other settings and to other populations to whom the research may be applied" (p. 34).

Respondent Validation

Upon conclusion of the preliminary data analysis for this research, it was necessary to reinterview several of the participants by telephone to assess the accuracy of the session transcriptions. It was imperative that the findings reflect accurate interpretations of participant perceptions regarding care-access barriers to avoid inclusion of potential preconceived notions or biases. Emerson, Fretz, and Shaw (1995) caution ethnographers against imposing exogenous meanings and classifications that are unrecognizable by the

participants. Repeat interviews serve as an effective way to elicit respondent validation of preliminary findings. According to Hammersley and Atkinson (1995),

> The value of respondent validation lies in the fact that the participants involved in the events documented in the data may have access to additional knowledge of the context---of other relevant events, of temporal framework, of others' ulterior motives, for example---that is not available to the ethnographer. (p. 228)

Encompassed within a single study are many voices and multiple layers of meanings. Scientists are challenged with the responsibility to view these with restraint (Lather & Smithies, 1997). It is imperative they investigate "the extent to which" the participants "recognize, [or] give assent to," the analysis of the data (Bloor, 1988, p. 159).

Reliability and Validity

The ability of scientific research findings to be replicated is referred to as reliability, which is achieved when internal and external methodological issues have been resolved. If two independent researchers detect the identical phenomena or constructs from the same data, external reliability is established. Internal reliability is established when two independent investigators are able to categorize similar data elicited from the same sample in the same manner. Although expensive, the use of multiple investigators to establish internal reliability is efficient and effective. Additionally, the avoidance of nonneutral, value-laden terms in describing fieldwork activities and settings will facilitate concrete descriptions and precise qualitative text.

Four alternative constructs are proposed by Lincoln and Guba (1985) as a more appropriate reflection of naturalistic or qualitative assumptions. Replacing the measures of internal and external validity, reliability, and objectivity associated with positivist inquiry, these researchers substituted the constructs of credibility, transferability, dependability, and confirmability. The aim of *credibility* is to demonstrate accurate identification and description of the phenomenon or phenomena of study (Marshall & Rossman, 1989). The provision of an in-depth description revealing the complex nature of the variables and interactions ensures the strength or validity of qualitative methods. However, this

assurance remains solely within the confines of that particular setting, population, and theoretical framework.

Transferability refers to the applicability or generalizability of findings to another context, and accuracy of the replication is the responsibility of the transferring investigator rather than the originator (Lincoln & Guba, 1985). The process represents the second decision span in generalization (Kennedy, 1979); the first would allow the findings of a single study to be generalized to the same sample population. The second decision span involves judgments surrounding the relevancy of Study A to Study B in considering the application of findings in Study A to the population of Study B. Generalization of the findings of one qualitative study to another denotes external validity, which is viewed as a weakness in qualitative research by traditional canons (Marshall & Rossman, 1989). Researchers can counter these criticisms by revisiting the original theoretical model to demonstrate that the collection and analysis of data will be guided by preconceived and pretested concepts and models. Thus, by stating the theoretical parameters, researchers reveal how qualitative investigations are linked to a particular body of theory. The triangulation of multiple data sources is a strategy used to enhance the generalizability of a qualitative study. By using a design that employs multiple cases and informants, as well as data-collection techniques, researchers strengthen the generalizability of the study or the value of the findings within other settings.

Dependability refers to attempts by a researcher to account for "changing conditions in the phenomenon and design" caused by "increasingly refined understanding of the setting" (Marshall & Rossman, 1989, pp. 146–147). The positivist assumption of an unchanging universe, as it applies to reliability, are contrary to that of qualitative inquiry wherein the social world is in a constant state of flux. Inquiry conducted in an unchanging environment is logically deemed replicable, whereas the changing social environment of qualitative paradigms presents many replication challenges. Although qualitative inquiry does not claim to be replicable, researchers maintain thorough notes, records, and diaries

that design decisions and rationales to allow for audits of their procedures and protocols. Additionally, if data is appropriately handled, it is stored in a well-organized, retrievable form, enabling easy access for possible reanalysis.

Confirmability refers to the concept of objectivity. In pondering the ability of Study A to confirm the findings of Study B, such an evaluation of objectivity is redirected from researcher characteristics to the data itself (Lincoln & Guba, 1985).

Quantitative Data Analysis

Quantitative analysis was applied to those portions of the qualitative data that were conducive to quantification. For example, descriptive statistics (e.g., means, frequencies, and percentages) were applied to the demographic profile data (see Table 3), data extracted on chronic illness (see Tables 4 & 5), and that collected via the MSQ (see Table 6). To seek answers to the three research questions, frequencies and percentages were applied to the qualitative data obtained during the individual and focus-group interviews. Descriptive statistics (i.e., frequency, mean, and standard deviation) were applied to data elicited from the MOS SF-36. *T*-test calculations were computed to determine the differences between two groups to provide a comparison of the study sample ($n = 50$) and the normative sample ($n = 264$) of the U.S. population aged 75 and older (see Table 7).

Triangulation Techniques

Data and methodological triangulation were also implemented in the current study. According to Denzin (1989), triangulation is more than a mere strategy employed by scientific investigators within which multiple methods are utilized to create a more comprehensive portrait of the phenomena under study; rather, it is an alternative to validation. By expanding the conceptualization of triangulation to encompass a multiplicity of data, theories, methods, and investigators, it is possible to gain a variety of perspectives relative to the unit of analysis. The ultimate goal is to enhance systematical thinking, facilitate verification, and provide for the enrichment of data and subsequent findings.

Table 3

Demographic Characteristics of the Study Participants

Characteristic	*n*	Percentage	Mean (*SD*)	Range
Age			83.96 (7.99)	75–104
Sex				
Female	28	56		
Male	22	44		
Ethnicity				
African-American	18	36		
Asian	2	4		
Euro-American	21	42		
Latino	8	16		
Multiethnic	1	2		
Other	6	12		
Marital Status				
Married	11	22		
Divorced	6	12		
Single (never married)	2	4		
Widow or Widower	31	62		
Education				
Elementary (Grades 1–8)	28	56		
High School (Grades 9–12)	16	32		
Trade/Vocational	2	4		
College (Years 1–4)	4	8		
Religion				
Atheist	1	2		
Catholic	15	30		
Protestant	10	20		
Nondenominational	3	6		
Baptist	19	38		
Seventh-Day Adventist	2	4		
Residence				
Lives alone	26	52		
Lives with spouse	11	22		
Lives with children	5	11		
Lives with sibling	1	2		
Lives with niece/nephew	5	10		
Lives with friend	2	4		
Roommate/Other	1	2		
Culture				
English Speaking	43	86		
Non-English Speaking	7	14		
Spanish	3	6		
Filipino	1	2		
German	1	2		
Portuguese	1	2		
Italian	1	2		

Note. $N = 50$.

Table 4

Chronic Illnesses and/or Disorders of the Study Participants

Chronic disease/disorders	Frequency	Percentage
Anemia	9	18
Arthritis	38	76
Cancer	15	30
Cardiac	37	74
Chronic obstructive pulmonary disease	33	66
Cerebral vascular accident	29	58
Dementia	18	36
Psychiatric disorders	11	22
Diabetes mellitus	28	56
Gastrointestinal disorders	26	52
Genitourinary disorders	47	94
Migraine headache	21	42
Hearing loss	50	100
Malnutrition	19	38
Peripheral vascular disease	14	28
Prostate	16	32
Alcoholism	12	24
Visual deficits	50	100

Table 5

Distribution of Chronic Illness Among the Study Population Sample

Distribution	*N*	Minimum	Maximum	*M*	*SD*
Total number of diseases	50	6	13	9.46	1.91
Valid *N* (listwise)	50				

Table 6

Cognitive Status of Study Participants as Measured by the Mental Status Questionnaire

Characteristic	*n*	Percentage
Severely impaired	2	4
Moderately impaired	28	56
Mildly to not impaired	20	40

Table 7

Comparison of the Study Sample (n = 50) With the Medical Outcome Study 36-Item Short-Form Health Survey Normative Sample of Americans Aged 75 and Older

MOS SF-36 Subscale	Study sample (n = 50) *M*	Study sample (n = 50) *SD*	MOS SF-36 normative sample (n = 264) *M*	MOS SF-36 normative sample (n = 264) *SD*	Significance
Physical-Functioning Scale	51.30	26.57	53.20	29.98	NS
Role-Physical Scale	36.00	48.49	45.28	41.95	NS
Bodily-Pain Scale	35.72	23.39	60.88	26.00	($p \leq .05$)
General-Health Perception Scale	29.34	22.47	56.66	21.21	($p \leq .05$)
Vitality Scale	23.90	30.69	50.41	23.62	($p \leq .05$)
Social-Functioning Scale	53.25	31.32	73.89	28.75	NS
Role-Emotional Scale	78.00	40.75	63.18	42.96	NS
Mental-Health Scale	63.92	24.69	73.99	20.23	($p \leq .05$)

Note. Scores range from 0 to 100; the higher the score, the better the level of function. MOS SF-36 = the Medical Outcomes Study 36-Item Short-Form Health Survey; NS = not significant. N = 264.

The following four types of data were triangulated in this study: individual interview data, focus-group interview data, field note data, and instrument data. Triangulation facilitates multiple perspectives of a single entity, creating a more in-depth, comprehensive portrait of given phenomena. This increased visualization will enhance the understanding of health-care providers relevant to the physical, cultural, and social factors influencing the ability of elderly HMO enrollees to obtain care access, as perceived by the elderly enrollees themselves.

In this study, qualitative and quantitative methods were used to explain, describe, and analyze the topic phenomenon. The most common form of triangulation—methodological triangulation—involves the use of two or more data-collection methods within one study (Cowman, 1993). According to Jick (1979), this particular type of triangulation is excellent when exploring complex, multidimension concepts; it contains two subtypes—within-method and between-method triangulation. Through the use of two qualitative strategies—individual and with multidimensional observational units (Denzin, 1989)—within-method triangulation involves the use of multiple strategies within one method (Cowman, 1993). It is defined by Kimchi, Polivka, and Stevenson (1991) as "the combination of two or more similar data collection approaches in the same study to measure the same variable" (p. 365). The quantitative strategies that were employed in this current study to test for cognitive function through the MSQ and the MOS SF-36 will constitute within-method triangulation.

Between-method triangulation was also implemented in this research. More sophisticated than within-method, between-method triangulation integrates the use of qualitative and quantitative methods within the same study in an attempt to achieve convergent validity (Cowman, 1993). The most basic characteristic of between-method triangulation is the use of two or more methods or strategies to study the same phenomenon. Consequently, the unique deficiencies and strengths of each method are

counterbalanced by the other (Denzin, 1989). The use of dissimilar methods to explore the same empirical units is referred to as *across-method* triangulation.

Study Limitations and Summary

Among the limitations of the current research is the nonprobability sampling techniques. Although approval from the Internal Review Board to conduct research on human subjects was granted from the participating health-care agency, no recruitment of participants was conducted directly through the group-model HMO. Therefore, access may have been limited, creating a potential for selection bias, decreased internal validity, and possibly misrepresentation of the sample in terms of the general population of frail, elderly HMO enrollees. However, the knowledge elicited will provide an awareness of the experiences encountered by older people as they attempt to access care and contribute toward improving accessibility and delivery of health-care services for elderly individuals.

Another limitation was the small sample size ($n = 50$). Although a greater number of participants may have be preferable, time constraints and economical resources had to be considered. Finally, investigator bias may constitute another limitation to the findings of this study. Experiences encountered during nearly 20 years of clinical practice within a group-model HMO caring for elderly people, as well as being the recipient of myriad stories told by elderly patients and their families surrounding the process of accessing health-care services, have unquestionably influenced researcher perspective of the phenomenon. However, great effort was indeed made to ensure an open mind during data analysis to protect accurate reflection of the perceptions of the study population and not the individual perspective of the researcher.

This chapter discussed particularistic ethnography—the methodology used for this research. Additionally, the process undertaken in conducting the study was delineated and a description of the research design, participants, and the manner in which the data was collected and analyzed is contained herein. The chapter concludes with a discussion of the data, the methodological triangulation methods used, and the limitations of the study.

CHAPTER IV

FINDINGS

Clinical, cultural, social, and environmental factors influenced the process of accessing health-care services for this sample of frail, elderly HMO enrollees. For example, the vague presentation of illness (i.e., clinical) in the elderly enrollees without family advocates or other support systems (i.e., social), and who were non-English speaking (i.e., cultural), as well as automated telephone-answering devices (i.e., environmental), were identified as barriers to care for older patient populations.

Characteristics of the Population Sample

The participants in this research were community-dwelling enrollees of a large group-model HMO in Northern California (n = 50), aged 75 and older. The demographic characteristics of the sample participants were represented by applying descriptive statistics to the study data. A near-equal representation existed among gender; 56% were women (n = 28) and 44% were men (n = 22). Twenty-two percent (n = 11) were married, 12% were divorced (n = 6), 4% had never married (n = 2), and 62% were widowed (n = 31). The ethnicity of this sample was diverse in that 36% were African-American (n = 18), 4% were Asian (n = 2), 42% were Euro-American (n = 21), 16% were Latino (n = 8), and 2% were multiethnic in origin (n = 1). While 86% of the participants spoke English (n = 43), 14% were non–English-speaking enrollees (n = 7). Data related to academic level indicated that 56% of the participants completed the eighth grade (n = 28), 32% completed high school (n = 16), 4% achieved certification from trade or vocational schools (n = 2), and 8% were college graduates (n = 4). Sixty-six percent of the participants had living children (n = 33), of which 46% lived nearby and were able to assist with transportation (n = 23). While 52% of the participants lived alone (n = 26), 48% lived with a spouse (n = 24), 22% with a significant other (n = 11), 2% with a brother or sister (n = 1), 14% with a son or daughter (n = 7), 10% with a niece or nephew (n = 5), 4% with a friend (n = 2), and 2%

reported *other* living partners (n = 1). Religious affiliation was self-reported as Athiest in 2% of the study sample (n = 1), Catholic in 30% (n = 15), Protestant in 20% (n = 10), nondenominational in 6% (n = 3), Baptist in 38% (n = 19), and Seventh-Day Adventist in 4% (n = 2) (see Table 3).

The following 18 broad categories of chronic disease or disorder diagnoses were reported by the participants in this study: anemia (n = 9, 18%), arthritis (n = 38, 76%), cancer (n = 15, 30%), cardiac (n = 37, 74%), chronic organic pulmonary disease (n = 33, 66%), cerebral vascular accident (n = 29, 58%), dementia (n = 18, 36%), psychiatric disorders (n = 11, 22%), diabetes (n = 28, 56%), gastrointestinal disorders (n = 26, 52%), genitourinary disease (n = 47, 94%), migraine headache (n = 21, 42%), hearing loss (n = 50, 100%), malnutrition (n = 19, 38%), peripheral vascular disease (n = 14, 28%), prostate disease (n = 16, 32%), substance abuse (n = 12, 24%), and vision deficits (n = 50, 100%) (see Table 4). Each participant was afflicted with a minimum of 6 of these conditions and a maximum of 13 (see Table 5). Sixty percent of the sample were cognitively impaired; 28 of these individuals (56%) had moderate impairment and 2 (4%) were severely impaired, as measured by the MSQ (see Table 6).

The MOS SF-36 collects data related to the following concepts and measures: physical functioning (PF), role physical, bodily pain, general health perception, vitality, social functioning, role emotional, and mental health. The higher the score, the greater the level of functioning, while lower scores reflect a more severe level of limitation or dysfunction. In comparing the study sample (n = 50) with the normative sample of U.S. population aged 75 and older (n = 264), t tests were performed to reveal the differences between groups (see Table 7). The average PF score for the study sample is more than one standard deviation below the mean of the MOS SF-36 normative sample. However, the mean PF score for the study sample does not vary with that of the 75 years and older normative sample from the general U.S. population. Therefore, the study sample is reflective of the normative sample. The same condition holds true for the role physical,

social functioning, and role emotional scores. The statistical analysis revealed no significant differences between the study and normative samples in any of these areas either. However, four subscales were indeed found to be significant. The study sample experienced more bodily pain (t calc = 6.37, $p < .05$), lower perceptions of general health (t calc = 8.28, $p < .05$), less vitality (t calc = 6.92, $p < .05$), and greater mental-health limitations (t calc = 3.39, $p < .05$) than did the normative sample from the U.S. population aged 75 and older.

Clinical Factors

Among the clinical factors influencing access to health-care services for elderly HMO enrollees are (a) vague symptomatology associated with the presentation of illness in older populations; (b) cognitive and functional impairments; (c) alterations in the thermoregulatory system (e.g., decreased ability to develop elevation in body temperature and increased susceptibility to extremes in body temperature such as hypothermia and hyperthermia); and (d) sensory deficits (e.g., decreased hearing and vision, and diminished tactile ability).

Vague Symptomatology

The presentation of illness in older people versus younger adults differs considerably in that elderly individuals initially manifest vague or no symptoms, whereas younger adults are usually able to identify specific ways in which they feel ill. Eighty-two percent of the respondents in this study described experiences of general feelings of failing health, of feeling something was wrong, and of calling their health-care agency to request medical advice and/or an appointment to be examined by a physician. Unable to identify specific symptoms, or to state in precisely what way they felt ill, these study participants still sensed that something was wrong with their health. This vague presentation of symptoms that is often associated with infection in older people may act as a barrier during the process of accessing health-care services. For example, one 89-year-old female

telephoned an advice nurse for help because she "just did not feel right." When the nurse determined that the respondent was afebrile and asymptomatic, she advised the patient to take Acetaminophen for body aches or fever and call back in 3 to 4 days if the condition did not improve. A few days later, the caller's daughter brought the patient to the ED with a sudden onset of confusion and her mother was diagnosed with pneumonia. The patient does not recall being confused, nor does she have any recollection of her subsequent ED visit and hospital admission.

A 79-year-old woman telephoned the advice nurse for an appointment because she did not feel well. When questioned by the advice nurse, this elderly enrollee was unable to describe exactly how she felt ill. She had no specific symptoms (e.g., fever, cough, dysuria, or pain) other than a feeling of general malaise. Although she was an insulin-dependent diabetic, the advice nurse was not concerned with her vague complaints. The caller was advised to check her serum-glucose levels, to adjust her insulin dosage accordingly, and to call back if her glucose was elevated above 300 or if her temperature was 101° F or higher. The following morning, the patient was found unconscious and 911 was activated by her husband. The patient was transported Code 3 (i.e., life-and-death status) to the ED in acute ketoacidosis and subsequently admitted to the intensive-care unit for continuous, intravenous insulin administration. With very little variation, the essence of these acute-illness episodes was experienced by many of the other participants (n = 24, 48%).

Cognitive Impairment

Sixty percent of the participants (n = 30) experienced moderate to severe cognitive impairment, as measured by the MSQ. Furthermore, many of the elderly participants were able to describe situations in which they had difficulty with their short-term memory. For example, one 79-year-old female described an encounter with her medical doctor for a routine appointment in which she

had to write his instructions down on a notepad because, otherwise, I would forget what he said by the time I got home. This has happened to me many times in the past, and my children get very upset with me because I have such a poor memory. It is difficult for them to go to the doctors appointments with me because they both work, and it is too hard for them to get time off to take me. So, they came up with the idea of taking notes, and even sent a letter to my doctor telling him that he needed to give me written instructions. He does, sometimes, but it is hard to read his writing so I take notes as well. This way, I can follow his instructions to stay well.

Functional Impairment

The study participants scored a mean of 51.30 on the MOS SF-36 PF scale. The scores ranged from 0 to 100 with higher scores indicating a higher degree of functioning. Comparison of the study sample (n = 50) with the MOS SF-36 normative sample (n = 264) of U.S. population aged 75 and older revealed no significant differences. Therefore, the study sample demonstrated functional status similar to the general U.S. population aged 75 years and older. Physical function is an important factor to consider in the delivery of health-care services for older people because functional limitations may impede the ability of elderly enrollees to access needed care. For example, several elderly people described situations in which they were unable to drive to the medical center for medical appointments due to arthritic pain and functional limitations in their ability to perform IADLs and ADLs. While many of the study participants were able to function independently in IADLs, an equal number needed assistance, particularly with ADLs during episodes of illness.

Thermoregulatory Changes

Age-associated alterations in thermoregulation (i.e., alterations in body temperature) influence the ability of the body to develop elevations in temperature; the manifestation of fever is usually a late sign of infection in older people. Many of the participants in this study (74%, n = 37) described experiences of fatigue, of calling the medical-advice center for an appointment, and of being denied care due to the absence of any specific symptoms or an elevated temperature. Instead, they were advised to "drink plenty of fluids, take aspirin or acetaminophen for pain, and to call back in a couple of days

if they did not feel better." Sixty-four percent (n = 32) of the elderly enrollees participating in this study developed infections that required hospitalization (e.g., urosepsis, pneumonia, or cellulitis). A 91-year-old woman recalled the following scenario in her one-on-one interview for this research:

> I called the medical-advice nurse because I just didn't feel right, had been awake most of the night, and felt chilled. She asked me if I had taken my temperature; I had, several times, because I felt so awful, but it was even less than normal. But, my head hurt and I felt lousy, kept piling on the covers, but I still had the shivers. The advice nurse told me to drink lots of fluids, orange juice, and to take, you know, aspirin for the headache. Asked if I had any other pain, but I didn't, just didn't feel well. She told me to call her back in a few days, if I didn't get any better. Well, the next day, I could hardly get out of bed and my neighbors took me to the hospital. I still didn't have a temperature when they first examined me, put that thing in my ear, and it didn't even come out normal. But, it turned out that I had a bad urine infection and they kept me in the hospital for almost a week. One of the nurses took a temperature in my bottom—didn't like it taken this way—but it was very high—almost 102. So, maybe the ear thing they used really didn't work. I don't know, but I do know that I felt terrible, and nobody thought there was anything wrong with me. But, I was very sick, as it turned out!

Sensory Deficits

Of the sample participants, 100% (n = 50) reported visual and hearing impairments, 62% (n = 31) wore hearing aids, and 18% (n = 9) complained of decreased tactility. These sensory impairments, while clinical in nature, have a cumulative effect in the ability of older people to overcome environmental barriers, such as automated telephone-answering devices, in their attempts to obtain health-care services.

Cultural Factors: Ethnicity and Language Barriers

Cultural factors that influenced health-care access for the sample of community-dwelling HMO enrollees in this study were attributed to language barriers associated with non–English-speaking elderly people. A few of the participants and their caregivers (n = 7, 14%) described frustration with medical advice because it was in the form of written or recorded instructions delivered only in English and, therefore, not understandable to those whose primary or only language was not English. For example, the daughter of a Portuguese-speaking couple in their late 80s described an experience they

encountered when presenting to the ED for care. Transported by ambulance for shortness of breath and an altered level of consciousness, her parents arrived at the hospital approximately 30 minutes before she was able to get there. In the interim period between her own arrival and the earlier ambulance arrival, no one was able to communicate with her parents because none of the ED staff spoke Portuguese and her parents could only understand a few words of English. The daughter was present in the study interview and offered the following explanation:

> It is very hard for my parents to try to get health care on their own because they only speak a few words of English. When they become ill, or need to be seen by a doctor, I must telephone for them because it is difficult to find someone who can speak Portuguese. Sometimes there will be someone who can speak Spanish and some of the words are similar, but the meaning is different and the language is not the same. My parents can speak a little bit of English—just a few words, really. But, when they get sick and don't feel well, they don't think to do this; it is hard for them when they are sick and speak in their own language. Usually, my parents call me and I'll call for them, or take them in for care and act as their interpreter. This is the only way that they can get the help they need, and I'll write everything down, you know, the things the doctor tells them to do so that they'll have it all there and not be worried about doing something wrong. It would really be great if, somehow, there could be a way that interpreters could be available to help people who do not speak English.

Other participating HMO enrollees who described incidents involving language interpretation difficulties in the study interviews were those whose primary languages were Filipino, Italian, and German. For example, the son of a German-speaking woman in her late 80s remarked,

> My mother has a hard time using the phones or even just talking to the doctors and nurses because she doesn't speak much English and we haven't had much success in finding people at the HMO who speak German. My wife and I brought Mom to the U.S.A. to live with us after my father died, which was about 15 years ago, and she has learned only a few words of English. So, I usually do all of the calling for her, and I try to take her to all of her doctors appointments. This is difficult, because of my job, but it is the only way that my mother can get medical care when she needs it. One time, when I asked if there was anyone at the HMO who could speak German, the person that I spoke to said that there wasn't, and if I wanted a German-speaking doctor, why didn't I stay in Germany? I was shocked that she said this, and I just can't believe that the HMO supports this type of attitude. They [the HMO] were very happy to enroll my mother as a health-plan member, but we are probably not the only ones who have been confronted with this type of problem.

Caregivers for one of the Hispanic interviewees ($n = 4$, 8%) commented that they had spoken to a few of the triage nurses in the ED who were able to speak to them in Spanish, and that the ability of the nurses to interpret for other health-care professionals had been very helpful to the process of obtaining care. For example, one 93-year-old man stated via a Spanish-speaking interpreter,

> Si, it is very hard to tell people what is wrong when no speak same language as me. I come from old country [South America]. That is where I born and raised my family. When my wife died, my kids—who came to America long time ago—brought me to live with them. My brothers and sisters are all gone now, was all alone in Brazil. The kids here. They worry about me, so I'm here now. But, I no speak English; they have to talk for me. I like it when people here can talk in Spanish so I can understand what's happening. Comprende?

This elderly participant went on to say that neither he nor any of his Spanish-speaking family members had been able to communicate with the advice nurses over the telephone because none of the nurses spoke Spanish. He said, "Would be mucho bueno [very good] if someone could speaka Espanole [Spanish] on advice phone; then, me talk myself."

Social Factors

Encompassed within the social factors that emerged from the data were the attitudes, values, and beliefs of health-care professionals that may influence the ability of elderly people to access health care. These factors include ageism, female gender bias, and lack of support services to older patient populations. Other social factors identified by the participants were family advocacy, consumer assertiveness, and residential support services.

Ageism

Several of the participants (34%) described encounters with health-care providers in which they were subjected to stereotypical and ageist comments. For example, one elderly lady described an experience she had when requesting a referral from her HMO to an orthopedic specialist. After several months of hip pain that was progressively increasing in severity, this client wanted a consultation for treatment options and possible

hip-replacement surgery. She had previously undergone successful total-hip replacement on her opposite side. The medical-advice nurse told her that, at her age, she could not expect to feel "terrific," and should expect to have some arthritic pain. "After all, you're old—in your 90s—and people your age should accept it. Just get used to it [the pain]! It's normal for old people to experience pain." The nurse further elaborated that, due to the age of the member, surgical intervention was too dangerous. Additionally, she advised that it was not good to get addicted to pain killers either. "Think about something other than your pain," was the advice from this nurse.

An 89-year-old male interviewee described an encounter with his HMO when trying to get help for his arthritis. He stated,

> During the winter months, my arthritis kicks in and sometimes the pain gets so bad that I can hardly tolerate it! I've been to see the doctor and he gave me some medicine to take, but it barely takes the edge off and all I can do is huddle under my electric blanket and try not to think about it. All I want to do then is to go to sleep; it is the only time that I'm not in pain. One time, in desperation, I called my HMO to see if there was anything they could do to ease the pain. The person that I finally talked to just didn't understand. She said that, after all, I was old and had joint pain, and told me to take the pills the doctor had prescribed—talked to me as if I were a whining child. It is not my nature to complain; I'm really stoic and only my wife was able to tell when I was in pain, but she's gone now. The lady at the HMO just didn't understand what I was going through and I gave up trying to explain just how terrible it was—just didn't have the energy; the pain was so bad! I felt like I was all alone and nobody cared.

When asked if he knew whether the individual he spoke with at the HMO was a registered nurse, this interviewee replied,

> I don't know whether I asked her that; I was just so happy to finally speak to a real person, after being on hold for such a long time. She said that she was a "nurse," but not what kind [LVN or RN] she was. So, I guess I have to say that I really don't know! But, I do know that she sure didn't know much about what it's like for old people and how awful it [the pain] can be!

Female Gender Bias

Female gender bias was reported by 6% ($n = 3$) of the elderly enrollees participating in this study. One couple described an experience they had several years ago while traveling via automobile to visit with one of their children. While driving on a winding road in rural Northern California, the husband suffered a grand-mal seizure and the vehicle in

which they were riding swerved off the side of the road and over a steep embankment. A passing motorist witnessed the accident and called 911. Extricated from the vehicle by the fire department, both passengers were placed in C-spine precautions and transported via ambulance to the nearest hospital. A professor emeritus of business law at a local university, the husband was recognized by some of the ED staff. His wife, a retired professor of history, was unknown within the medical community. Despite complaints of parasthesia to her lower extremities, the wife was transferred to a gurney in a hallway while most of the attention was focused on her 91-year-old husband. After several hours had elapsed and the injuries the husband had sustained were found to be minor, the attending physician examined the wife. Radiological examination revealed a thoracic spine injury, necessitating lengthy hospitalization and rehabilitation. During her interview for this study, the wife adamantly stated her belief that the delay in treatment was gender related. She said,

> Because I'm a woman. No question about it. It was clearly an example of female gender bias. We were both conscious, oriented to reality, and in pain. However, I was complaining of tingling and numbness in both of my lower legs. Yet, I was ignored, and my husband, who is quite well known in this community, was treated before me.

Another example of possible disparity in treatment between female and male patients was depicted by a 91-year-old female interviewee as she described an experience in which she had been transported by ambulance to the ED for evaluation of chest pain. A known cardiac patient, with a history of prior bypass surgery, she was told by the examining physician that he did not judge her pain to be cardiac in nature. She asked him how her EKG was and, according to her, the physician responded, "Well, you have an arrhythmia—atrial fibrillation—but a lot of older people, especially those who have had bypass surgery, have this rhythm abnormality." The interviewee continued with her description of the incident in the following manner:

> I asked him why no one had taken blood tests on me, and if he was going to give me any more nitroglycerin. The paramedics gave me some on the way to the hospital and the pain went way down. I wanted the doctor to give me another pill to see if all of the pain would go away, but he didn't seem to think that it was necessary. He told me that he thought that I was just scared. Well, I was scared. Wouldn't you be nervous if you had chest pain and were my age? He asked me if I

> was under any stress. He said that, sometimes, older people have a lot of stress and that stress can cause this type of pain, that it, ummm, probably wasn't related to my heart. Well, a little while later, I started to have a hard time breathing, and got all sweaty and threw up. The nurse went to talk to the doctor and, finally, he said "OK" and they gave me another pill. It really helped, but didn't take all of the pain away. So, she [the nurse] gave me another pill. The next thing I knew, someone was taking my blood and the person from X ray was there taking a picture of my chest. The nurses were poking more needles into me, and another doctor came to see me. He was much nicer than the first doctor; he told me that I had suffered another heart attack, and that he was admitting me into the hospital for a few days. Later, when I thought about what happened in the ED, I recalled another older person that was in the bed next to me who also had chest pain. He was treated with the pills, blood tests, and X ray right away, and no one told him that his pain was from stress. He wasn't even admitted into the hospital, and the doctor sent him home with medicine after a little while. Why did the doctor do that to me? I have never had a problem with my nerves, nor have I ever been to see one of those, you know, head doctors.

Family Advocacy

The assertiveness of family members or significant others is a facilitating factor during the process of accessing health-care services for elderly people. Many of the elderly study participants (54%) verbalized feelings of frustration and of being too exhausted to "fight" for care when they were ill. Although some (8%) were able to speak to an advice nurse, they were unsuccessful in obtaining a same-day appointment with a medical doctor or nurse practitioner.

An example of family advocacy was provided by a police officer who described an experience he encountered when trying to access health care for his 99-year-old father. He stated,

> Well, my dad here is usually full of vinegar, if you know what I mean. He does all of his own yard work, and even most of the indoor cleaning, but a month or so ago, I dropped by to check on him. I had called him earlier on in the day, several times, but no one answered the phone. Got kinda worried, the first few calls. I figured maybe he was out in the yard. As the day wore on, I began to worry so I went by the house. The morning paper was still on the front porch, and he didn't answer the door bell. So, I, uh, used my key to enter. He didn't answer me when I called out his name. Really scared me, tore through the house and finally found him on the floor in the bathroom. Scared the living ___ out of me! He had a pulse and he was breathing, but he really didn't seem to know what I was saying to him. Acted sort of dazed—spacey. Know what I mean? I checked for cuts or broken bones, but other than a bump on the back of his head, he didn't look to be injured. Said he didn't have any chest pain or dizziness. Well, decided to call Kaiser for an appointment with his doctor and you just wouldn't believe it. Got this jumble of instructions from a recording, finally got the extension I wanted, and the "suckers"

> put me on hold. Here my dad was lying on the floor, and they put me on hold! No one checked to see what the problem was even. Just put me on hold! Unbelievable! It seemed like forever, but was actually only about 20 minutes or so. Then I figured, "screw it," and carried him out to my car and took him into ED.

This interviewee also spoke of the "squeaky wheel syndrome," and knew that if he "made a fuss" at ED triage, his father would be examined by a doctor. He elaborated by saying,

> Part of it was that I'm a cop, that I know many of the nurses and docs who work in ER, and that I was in my uniform and on duty. I was on duty so the nurses took one look at my uniform and my dad was quickly taken care of. But I was very worried about my dad and I insisted that someone take a look at him *now*!!! I was calm—well, I didn't cause a ruckus or anything like that—but, I was very firm in that I wanted my dad to be checked out *now*! Just wanted a doc to look at him is all, and one of them did! Turned out that he had a "humdinger" of a urinary-tract infection and they admitted him into the hospital. Seems that his blood count was way off, and he was confused—big time! Ran a pretty high fever, also, so they kept him for several days. After he recovered from the infection, we talked about what happened. He doesn't remember how come he was on the floor, or my being there and taking him to the hospital. He does remember that he didn't feel very well, and the next thing he recalls was being in the hospital with a tube in his arm and one in his, you know, his penis.

Advocacy by family members who are health-care professionals facilitates access to health-care services for elderly individuals. Several of the participants (16%) relied upon their nurse and physician family members for advocacy. One elderly retired engineer survived an experience of urinary retention due to infection that progressed to sepsis, resulting in impending renal failure. Fortunately, the intervention by his wife and daughter, who were both nurses, brought about a positive health outcome. The following excerpt is from the study interview with this engineer:

> I really don't remember very much of what happened, had not been feeling very well for a few days. Nothing hurt anywhere in my body, but I do remember feeling kind of "spacey" and out of it. My wife, who is a retired home-health nurse, took me to see the doctor at the HMO, but he didn't think there was a problem other than old age. Upon physical examination, I didn't have an elevated temperature and he didn't order any blood or urine tests, but I felt worse the next day; really, like my mind was in a "fog," and my wife was very concerned and called the doctor. They told her not to worry, that nothing was wrong other than being 87 years old, to give me some Acetaminophen, and wait it out. But, as the day wore on and I didn't get better, my wife called my daughter and, by the time she arrived at our home that evening, I was really in a state of confusion and my belly was kind of bloated. They got me in the car—no small feat because, as you can see, I am 6'3" tall and at least 230 pounds—and drove me to the ED. I really don't remember much of what happened after that, but several days later, another doctor told me that I had a very close call.

Due to illness-induced confusion at the time of the incident, this participant had little recall of the event except an awareness that, had it not been for the advocacy of his daughter and wife, he might not have survived the ordeal. His daughter and wife were interviewed for this research and it was discovered that the respondent had been catheterized for bladder distention and urinary retention. His wife stated,

> My husband was becoming more and more confused, his abdomen was distended, and he was becoming agitated. This is not normal behavior for him; he is usually a very calm person. So, I knew that something was very wrong, despite the lack of concern by his primary medical doctor at the HMO and the nurse who returned my call. When we arrived in the ED, it was quite crowded and we were told that the wait was at least 3 to 4 hours, perhaps longer. My daughter-in-law—also a nurse—was very assertive and demanded that they have a blood count drawn as well as a urinalysis while we waited. After a few hours of sitting in the waiting room, my husband really began to get fidgety. He couldn't seem to sit still and it looked like his stomach was getting larger. We asked if there was an empty gurney somewhere in the ED that he could lie down to be more comfortable and, finally, they were able to find one and he was put in a hallway. There were no empty rooms. I recall that the hallways were lined with occupied gurneys; it was truly a mess! There were people everywhere, some angry and interrupting the nurses as they tried to deliver patient care. By the time a doctor was able to evaluate my husband, his urine tests were back and he had a urinary-tract infection. His white blood-cell count was quite elevated in the 25,000 range [a critical value]. When they finally decided to cath him, he was rolling all over the gurney in his discomfort, and they subsequently drained over 3,000 cc of urine from his bladder. Throughout the entire ordeal, he still did not have an elevated temperature. They wanted to send him home with a catheter; however, by this time he didn't recognize me or his daughter. We insisted that he be given IV antibiotics and kept over night in their observation unit. I just couldn't believe that they would try to discharge him in that condition; it was terrible!

The daughter recounted,

> The care that my father received was deplorable. We had to fight every inch of the way to ensure that the appropriate tests were done, and that he receive intravenous versus oral antibiotics. In fact, I had to insist on the urinalysis; the triage nurse did not think that it was necessary. To make matters worse, after they finally decided to insert a foley catheter, I was furious when I learned that they had drained 3 liters of urine from his bladder in a 20-minute period. When I entered the room, the collection bag was completely full and the urine was backed up in the tube to his penis. No one had thought to clamp the foley catheter to slow down the evacuation of urine. What has happened to the quality of nursing care and critical thinking in health-care environments? Frankly, I am fearful for my health care because I do not have children to act as advocates for me when I get old. After 3 days of hospitalization and still somewhat confused, my father was discharged home. His wife and I were the care providers and, despite our efforts, his improvement was marginal. When he complained of penile pain, at the site of the catheter insertion, we again took him to the ED. He was seen by a urologist who removed the catheter and discharged him home. This was the beginning of several more trips back to the ED for urinary retention and catheter insertion, the end result of which was another

> hospitalization because his creatinine and BUN serum levels were quite elevated, and the doctors feared impending renal insufficiency. Overall, the entire experience—from his initial feelings of general "unwellness," trips to the ED, and subsequent hospitalizations—was a "nightmare." I am convinced that, had we not acted in his behalf, my father might not have survived.

Another example of the effectiveness of family advocacy was provided by the daughter of a 79-year-old female study participant who called her daughter from her adjacent quarters in the middle of the night. The mother had been vomiting, became dizzy, fell onto the bathroom floor, and was unable to get up. Her daughter, a registered nurse, spent the remainder of the night in her mother's room. Unsuccessful in her attempts to force oral fluids, she periodically monitored her mother's pulse and blood pressure. By morning, the mother's symptoms had not resolved and the daughter was fearful that she was becoming dehydrated. The daughter called the HMO for an appointment and was instructed to continue to force fluids and monitor her mother's oral intake and vital signs. As afternoon approached and her mother's condition deteriorated, the daughter again called the HMO and demanded to speak to the doctor. The doctor told her not to worry, that her mother "probably had a viral infection in her gastrointestinal tract" and that he would prescribe some medication to resolve it. When the medicine failed to alleviate the vomiting, the daughter noted the presence of dry oral mucous membranes and a furrowed tongue and drove her mother to the ED for treatment. Her mother was found to be severely dehydrated with profound orthostatic vital signs (i.e., postural hypotension and tachycardia upon standing) necessitating the administration of antiemetics and antibiotics along with an infusion of 3 liters of intravenous fluids to restore fluid and electrolyte homeostasis. When the physician was informed that the elderly woman was brought to the ED, contrary to his orders, he remarked to the daughter's husband, "Well, she [the daughter] was 'hell bent' to do what she wanted, wasn't she?!"

Consumer Assertiveness

Many of the study participants (38%) described situations in which they had to "fight for care." They spoke of assertiveness and identified the ways in which being

assertive behavior helped them in receiving the care they wanted and needed. For example, a 75-year-old female interviewee spoke of calling the advice nurse for an appointment to see her doctor. She said,

> The person that I talked to over the phone told me things to do to get well. Well, you know, I am an old lady, and I just think that my doctor needed to see me to know what was goin' on. My friends are droppin' like flies; I don't want that to happen to me, at least not yet. The lady on the phone kept trying to tell me to just rest, take it easy, drink lots of water, and that I'd feel better in a few days, but I knew that I really felt bad and I wanted a doctor to see me. So, I insisted that she give me an appointment. She really didn't want to, but I kept at her until she did. What is this business about telling you what the problem is over a phone? Forget this "new-fangled" system of taking care of me over the phone. I want the good old-fashioned way of going to see the doctor, having him look at me, and touch my body! I want the doctor to *put his hands on me*!!! How can he know what the problem is if he doesn't *put his hands on me*?

Another older woman described her frustration in trying to get through to the advice nurse. She finally gave up and called the patient-assistance department. This is the area in the hospital that addresses patient complaints and tries to assist them in overcoming problems within the health-care system. The interviewee remarked,

> I get so sick of those damn phones—such a nuisance and annoying as all get out! Finally, one time, when I had been waiting for almost an hour, I hung up and called the hospital operator to ask her what I should do. She referred me to the lady at "patient assistance." Well, she really helped me and fast—got me an appointment for the same day, with a doctor. Now I just call her and forget about the darn phones. When I am really sick, I just do not have the energy to fight with the phones.

Residential Support Services

Some of the study participants (n = 8, 16%) resided in a retirement residence for seniors. Their individual apartments were located within a larger complex, and free transportation services are provided by the facility. A social worker is available to intervene with the procurement of medical and dental appointments for the residents, and a recreational activity coordinator ensures social interaction among the elderly residents. One of the elderly residents stated,

> I don't never have to phone my doctor for help. We used to have to call, but it was such a lot of bother, and most of the time it was too darn hard to get through to those people at [the HMO]. Now, we have a lady workin' here at this place who does all of that kinda stuff for us. She gets all of my appointments for me and

> everything so I don't have to fuss with all the trouble of tryin' to get through on the phones. It's a big hassle and Jessie here takes care of everything for us here at this place. It's real nice not to have to worry about doctors appointments or worrying about how to get there. We have a bus here at the home that will get us to wherever we need to go, so we don't have to worry about that either.

Due to the helpfulness and advocacy of the employees at this facility, these elderly participants did not encounter any barriers during the process of attempting to obtain needed health-care services. Consequently, the availability of social-support services is deemed a facilitator in accessing care for older individuals.

Environmental Factors

Environmental themes, or factors related to the health-care organizational system and ease or difficulty of access, that emerged from the data included modes of access to services (i.e., person to person vs. mechanical devices), the ability to maneuver through the system to obtain care (i.e., knowing how to *use* the system), geriatric assessment knowledge among providers, difficulty in obtaining referrals for specialized services, transportation, and patient advocacy by providers.

Automated Telephone-Answering Devices

The influence of managed care and its cost-efficient strategies during the last decade has led to the implementation of technological modes of communication such as electronic mail, fax machines, and automated telephone-answering devices. An overwhelming majority of elderly people (98%) identified difficulty in maneuvering their way through the maze of options offered by the automated telephone recordings as a barrier in their attempts to access health-care services. Due to the pathophysiological changes associated with aging, many elderly people experience deficits in hearing, cognition, vision, physical function, and tactility. The study participants relayed their experiences in using automated telephone-answering devices and identified the following barrier factors: (a) difficulty hearing portions of the recorded messages; (b) confusion and frustration due to difficulty in remembering the sequence of the options that were offered (i.e., the verbal instructions

were given faster than their ability to note them on a notepad); and (c) difficulty following the specified instructions due to visual impairments (i.e., they could follow the instructions, but were unable to see the numbers they were advised to use on their home telephones to get the option they needed). Only one of the respondents (2%) was able to negotiate the mechanical phone system successfully to speak to a "live" person. The granddaughter of an 81-year-old woman and her 86-year-old husband provided the following explanation during a study interview:

> You know, with the regional call center, and the way things are now, it is almost impossible to get through. My grandmother has a hard time with the phones. When she would finally get connected, there were all of these choices she would have to make, like, uh, what department did she need, or what was she calling about? Then she would have to remember all of the choices and the different numbers to punch into the phone. If she was able to get this far, then they put her on hold for a half hour or even more. It was just too much for her to manage. Even then, she still would not have been able to talk to a live person.

The son of a 98-year-old man commented,

> You guys sure have a "holy mess" with your new phone system—that, uh, you know, medical advice or whatever it is. Whose brilliant idea was that? It was bad enough before; at least you could get through to the doc's station. But now, with someone my dad's age, it's nearly impossible to work it!

The caregiver of an elderly man described his experience of negotiating through the options to finally speak to a "real person" in the following manner:

> I wanted to know what kind of nurse she was. So, I asked her if she was a RN or a LVN. Well, she sort of, you know, "hemmed" and "hawed" over the question, but when I told her that I was a cop and wanted to know what her professional title was, she finally said that she was a nursing or maybe it was a patient-care assistant, and that she would try to help me. I told her that I wanted to talk to a RN and, before I could say another word, she put me on hold. I waited another 10 to 15 minutes, and finally this other woman answers, and I finally have a real nurse on the line. Unbelievable!

In describing his frustration in attempting to access care for his 103-year-old father, another caregiver stated,

> Hmmm, a while back, my dad had this cough that just wouldn't go away. He didn't want to go see the doctor, but after a week or so, he started to look a little peaked; you know, his coloring was washed out and he acted tired. This is unusual for him. So, I told him that I was going to call and make an appointment for him and that I didn't want any arguing about it; he was going in. Well, then I found out that I couldn't call directly to his medical doctor. They referred me to medical advice! Phew! That's a laugh! Went through this recording that offered a lot of

> different options. After getting through that mess, I was put on what I call "the holding lane" and I waited—swear to God—for nearly 45 minutes. By the time I heard a real voice, not a recording, I nearly took her head off. That's how frustrated I was. It wasn't her fault, but it was so irritating to waste my time hanging on the phone all that time.

A 94-year-old woman described the difficulty she encountered in reaching out for help via the telephone and how she was able to resolve at least part of the problem. She explained,

> It takes a long time before you can speak to a real person. You get this recorded message that tells you to do all of these things, and then you wait—sometimes, for as long as a half hour or more. My hearing is bad, and I used to have a hard time hearing what was said. Then I found out about this thing—an amplifier—that the telephone company will attach to your phone free of charge. All you need is for your doctor to write out a statement saying that you are hard of hearing and the telephone company will give this to you. Now I hear fine over the telephone. Even with the amplifier, it is still difficult to follow the instructions because my eyesight is not that good, even with my glasses. I have this condition called macular degeneration and the center portion of my vision is quite blurred. It is like looking through an opaque window, so I can't read or write things down easily. Because of this problem with my vision, I find that I must remember all of the steps that are given on those recordings in order to get from "A" to "Z," so to speak, and this is hard for me to do, especially if I'm not feeling well and my mind is fuzzy. So, I don't like the telephone system with the recorded messages! It would be better for me if I could just speak to a real person.

Many of the participants described their experiences in attempting to refill prescriptions over the telephone. They expressed feelings of frustration in their failed attempts to negotiate the automated telephone-answering devices. For example, the son of a 99-year-old male participant stated,

> Well, first you have to call the refill number. Next, you get another recorder thing that tells you to punch in the information they request for several questions. Each response has to be followed by the pound sign. You have to then listen to your response repeated back to you, so as to verify if you answered correctly. Then, let's see, you get a choice of picking it up at one of several pharmacy locations. My dad can't begin to do this. I have enough trouble with it, and I'm in my 40s. How "in the blazes" can they expect an old person to do this? Even if he could hear, which he can't too good and, if he could see well enough to do this, which he can't . . . . He has macular degeneration so he isn't able to see much of anything, let alone read! Then, there's the language thing; the recordings for the pharmacy are only in English!

A 92-year-old male participant who commented on the automated telephone-answering devices described listening to instructions pertaining to several options from which to select. He finally made it through that and then waited for approximately 40 minutes before actually speaking to a real person. It is extraordinary that, at 92 years of age, he was able to

accomplish such a task. Unlike many of his counterparts, and despite hearing deficits and terrible pain, he was able to negotiate his way through the automated device. Repeatedly, the other sample participants described the phone system as a "real problem" and expressed that it blocked them from getting the help they needed.

Knowing How to Use the System

For many elderly people, accessibility of health-care services is synonymous with knowing how to negotiate or "use" the system. For example, one 93-year-old study participant described the process by which she initiates access to care in the following manner:

> If I am not feeling well, I used to be able to call my doctor's nurse and tell her my problem. Usually, she would be able to get me some medicine or make an appointment for me to see the doctor, but with this new system, you know—the call center or medical advice—I can't do this anymore and it is more difficult to get help when I need it. One time, I had a terrible problem with one of my eyes. My doctor told me that he would refer me to an eye specialist, and that I should not have to wait for more than 1 week. Well, what a joke that was!!! Three weeks went by and I still hadn't received a call from opthamology, nor had I received an appointment notification in the mail. When I called opthamology to find out what the problem was, they put me on hold for a long time, and then told me that they would have to order my chart to see what Dr. S had in mind regarding the referral. I had called the medical center around 10 o'clock in the morning and they promised to call me back. Well, I waited by the telephone all day long, but they never did call me back. Finally, the next morning, I had my daughter drive me in to the Opthamology Department and I just stood there until a doctor finally examined me. Mistakes can happen anywhere and I realize that doctors and nurses are very busy. I don't want to be difficult, but in this particular situation, my vision was quite blurred and I could barely find my way around my tiny cottage. I was afraid that I would fall and break a hip or something. Now I know that, if I really need to be seen, the best thing to do is to just go in to the medical center and demand to be seen.

Several of the interviewees (n = 7, 14%) spoke of their use of medical clinics and pharmacies that were located in safer, less congested environments. They were able to go directly to these locations and obtain same-day appointments in a timely manner, thus avoiding the confusion of the call center. For example, an 82-year-old gentleman and his 76-year-old wife described the manner in which they go about obtaining health-care services from their HMO. Cognizant of the difficulty encountered when telephoning for

medical advice and appointments, they now drive directly to an outlying medical clinic located not far from their home. They explained,

> It was too hard to get care when we needed it. First you have to call medical advice. This department now operates out of an off-site location and is called the Regional Call Center. Then, you're stuck with that answering-machine thing and you can wait for 45 minutes to an hour to speak to someone. We found that, if we drove to this outpatient clinic nearby, rather than go to the big hospital medical center, we can usually get help right away. And, as it is connected to the same HMO, this is what we do now. So much easier this way.

Insider awareness of the internal and external features of the health-care system was identified as a facilitator in the process of elders accessing health-care services within HMOs. Among the sample participants and their caregivers, 8% ($n = 4$) identified insider knowledge as a factor in successfully obtaining care. For example, one of the informants was employed by the HMO that delivers health care to her grandparents. She stated,

> If something is wrong, my aunt or grandmother will call me. If Dr. S—he is my grandparents' doctor—is on duty, I'll go up to his clinic and speak to him, but he only works in the morning so he usually isn't there when I need him, and he is the only geriatrician at the medical center. One of the nurses that works in my department knows a lot about the care of old people, so I will ask her what she thinks is wrong and what I should do. If she is on duty, she'll book an appointment for me. I can't do that because I'm not a nurse. If I call her at home, she'll call one of the nurses on duty to ask them to make a same-day appointment with a doctor.

Another caregiver described an experience in which she called a personal friend—a physician on duty in a medical clinic—to get an appointment that day for her elderly father. Her physician friend booked a same-day appointment and examined the 94-year-old man a few hours later. The caregiver had previously attempted to schedule an appointment through the medical-advice nurse, but was unsuccessful in getting through the phone lines. According to the caregiver,

> I waited on hold for 40 minutes, and I just couldn't wait any longer. My boss was getting impatient with me, told me to just take the rest of the day off because I wasn't getting any work done waiting on the phone. In desperation, I called my friend, a physician who I knew was on duty in one of the medical clinics that day. Thank God we are personal friends and I could do this; otherwise, I don't know what I would have had to do to get my father seen. Luckily, I have a good relationship with my boss; otherwise, my job might have been in jeopardy.

Lack of Provider Knowledge

Lack of provider knowledge regarding the care of older people is also a factor influencing access to health-care services. An elderly, male study participant described an experience in which he felt that his complaints were ignored by the physician who examined him. He stated,

> I really hadn't felt well for several days, but couldn't really say exactly what was wrong. My daughter drove me in to see the triage nurse in the emergency department, and she gave us an appointment to be seen in the urgent-care clinic later that morning. Well, the doctor who examined me couldn't seem to find anything wrong with me, and he told me to go home, take some Acetaminophen for fever or pain, and to try to get some rest. He told my daughter that, if I wasn't feeling any better in a couple of days, to bring me back for a follow-up appointment with my regular medical doctor. He said that it was probably just my age [92] and that I shouldn't expect to feel full of pep at that age. Well, the next day I didn't feel like eating anything, and I was a little bit "fuzzy" in my head. When my daughter got home from work and discovered that I hadn't eaten anything since she left for work earlier in the morning, she again drove me into the medical center. This time, she insisted that they draw some blood tests, and test my urine, and it turned out that I had a mild case of pneumonia and they kept me in the hospital for a day or two. I really don't think that the doctors know what to do with older people, in terms of how to treat us. He [the first doctor] didn't seem to know what was wrong with me.

While the majority of elderly HMO enrollees participating in this study ($n = 47$, 94%) believed that the medical care they received was substandard, a few of the study participants and their caregivers (n = 3, 6%) described encounters with a geriatrician and a gerontological clinical nurse specialist with whom they felt they received appropriate and effective advice and treatment. Therefore, geriatric assessment knowledge among health-care professionals is identified as a facilitator for elderly HMO enrollees as they undertake the process of seeking health care.

Lack of Transportation

The availability of free or low-cost transportation for seniors to and from their HMO is also a factor influencing access to health care. Many older people do not drive, nor have family or friends living nearby to provide transportation. Others live on fixed or low incomes normally considered secondary to retirement or pension plans and are unable to afford the expense of transportation. Even those who could afford to pay for public

transportation expressed fear of crime and physical injury. Twenty-eight percent (n = 14) of the participants were residents in neighborhoods where they did not feel safe. While some communities provide low-cost transportation for seniors, the majority of the study participants (n = 44, 88%) did not reside in neighborhoods within the jurisdiction of such benefits. Moreover, their health-care agency did not provide transportation services to elderly enrollees. Consequently, for the sample of community-dwelling elders participating in this research, lack of transportation was perceived as a barrier to health care. One caregiver described the financial precariousness of calling for an ambulance, even if one is instructed to do so by their health-care delivery system. He stated,

> Well, you can call for an ambulance, but unless the doctor who examines him says that he needed to come by ambulance, the HMO will not pay for it. So, you're talking about a $400.00 and upwards bill, and, you'd better be sure that you really need that ambulance before you ask for one! It's the same scenario if you call 911, even if the advice nurse tells you to call 911. If the ER doctor doesn't think that you needed 911 transport, he won't authorize payment, and then you're looking at a thousand "smackeroos," or more—out of your pocket, my friend!

HMO denial of 911 transport reimbursement was affirmed by a 79-year-old woman who experienced a sudden onset of shortness of breath while climbing a flight of stairs. When a brief period of rest and administration of oral inhalers of asthma medication failed to alleviate her distress, she called 911. She recounted the incident in the following interview dialogue:

> I have had asthma since I was a child, so I am used to dealing with it. I can tell just about how many times I'll need to use the inhalers by the way I'm wheezing. I don't panic easily and have had my son drive me into the medical center for treatment many times. I also have emphysema and congestive heart failure and, on this particular occasion, my legs, hands, and feet had been swollen for a couple of days. When I got to the ED, the wheezing was much better, but the ambulance drivers had given me oxygen and kept the inhalers going the whole time. They also gave me some medicine in the IV that they said would get rid of some of the water that had built up in my lungs. Well, the doctor was very angry with me—the one in the ED. Said that I was just scared because it was dark and the middle of the night. He said that old people get worried during the nighttime, and that I should have waited until morning. He was a real "jerk," bawled me out for calling 911. Man, he just doesn't know what it feels like to gasp for breath and not to be able to breathe! The ambulance drivers said that my oxygen, whatever—can't remember the word they used—was very low and that my lungs sounded like a symphony. The nurses were rushing around in my room, and they seemed worried about me, too, but the doctor just made me feel like I was a burden! Even though I was admitted to the hospital for pneumonia, the HMO wouldn't pay for the ambulance. I can't afford to

> pay for it; the bill was $1,400.00. I live on my social-security check and it is less than $1,000 a month. If I was sick enough that they kept me in the hospital, then I was sick enough to call for the ambulance. The advice nurse told me to call 911 so the HMO should pay for it. It really makes me mad, but what can I do? To them, I'm just an old lady who was scared in the dark, and the doctor said *no*! My son is in the process of seeing a lawyer to fight this.

Another elderly couple in their late 80s remarked,

> Transportation, of course, is abominable. Our HMO does not provide transportation for older people. The biggest problem for us, in going to see a doctor when we suddenly do not feel right, is transportation. Neither of us drive and our children do not live nearby. We either have to find someone to drive us, or else we must call a taxi, which is very expensive. There is bus transportation in our neighborhood, but we do not think that it is safe for us to use. We live about 25 miles away from the medical center and taxi fees are quite costly. It would be tremendously helpful if our HMO had a van service for seniors who are no longer able to drive.

An elderly gentleman in his mid-90s described the following experience:

> Transportation is the "pits," nonexistent unless you are able to make arrangements with a friend or relative. One day I woke up and I felt very strange—shaky and somewhat confused, you know, like "fuzzy" in my head. Couldn't get through the damn phone lines to speak to the advice nurse. After a couple of hours, I realized that I wasn't getting any better so I called 911. The doctor in the emergency department was very impatient with me. He talked to me like I was a "flaming idiot," said that I should have taken the bus or called a friend to bring me in. Most of my friends are dead now, I don't have any children, and the little bit of family that is left are in worse shape than me; none of them drive. I didn't think that I would make it for another 24 hours so that my nephew could drive me in. As it turns out, I had a urinary-tract infection that was bad enough that they kept me in the hospital for 4 or 5 days. It was insulting—degrading to me to be treated the way the first doctor in the emergency department did. He scolded me like I was a kid, but to answer your question about things that make it difficult for me to get medical help, well, I have to say that, for me, transportation is a big worry!

Lack of Support Services

Several (n = 13, 26%) of the female study participants and one male participant (n = 1, 2%) described their unsuccessful attempts to obtain caregiver support services. Exhausted from providing around-the-clock care for her cognitively impaired husband, an elderly cardiac patient telephoned her primary medical doctor to see if she could enlist his help in getting home-health or paraprofessional ancillary support services so she could get some rest. She had a past medical history of a MI 2 years ago and had been experiencing intermittent episodes of angina. Her request for assistance was denied and the doctor

advised her that the HMO does not provide long-term home-health services. In contrast, when she was hospitalized for an MI, the HMO provided home-health visitation for her husband to assist with his ADLs and a sitter to watch him during the night, rather than the only other alternative, which was to place him in a nursing home.

An elderly gentlemen, who provides care for his 88-year-old wife, shared the following story surrounding his attempts to obtain assistance in caring for his spouse. He explained,

> My wife is nearly bedridden and I do most of her care. We live alone in our home of some 43 years. We don't have any living children to help out, or any other relatives that live nearby. My wife has had a stroke and is paralyzed on one side of her body. She has a catheter in her bladder and her speech is garbled, but I understand her most of the time. I do all of the cleaning and cooking, bathe and feed her, and give her the medicine the doctor has ordered for her. I don't want her to go to a nursing home. We both used to talk about what we would do when we got old, and we promised each other, way back then, that we'd make sure that neither of us had to go into one of those places. We always used to hate to visit our friends when they were in nursing homes. My wife said that she'd rather die than live in one, and I feel the same way. So, I'm taking care of her as best I can, but it sure would help me a lot if I could get someone to bathe her or change the bed, just so that I could get some rest. I'm 90 years old and not a young "rooster" anymore, but I love my wife. We've been together for nearly 60 years, and no way is she going to one of those homes. When I called the HMO we belong to—to ask for help—they said that we didn't qualify for that type of help. So, I guess that I'll just keep on doing the best that I can until I can't do it anymore, but it doesn't seem right that old people can't get help when they need it.

Difficulty With Referrals to Specialized Services

Many of the participants (n = 31, 62%) described encounters with health-care providers in which they experienced difficulty in obtaining referrals to specialized services. Of these, 42% (n = 13) experienced delays of up to 1 year for the initial appointment to see a particular specialist and 58% (n = 18) experienced delays of greater than 1 year. For example, one elderly lady suffered from osteoarthritis and subsequent hip pain for nearly 2 years. She described her experience in the following interview dialogue:

> You know, it's such a hassle to get medical help these days. My hip has been hurting so bad, and everything that I've tried to do to make it [the pain] go away just hasn't worked. I've used a heating pad, pain pills, and I try to walk and keep active, but the darn pain simply won't go away and I wanted to see a bone doctor—you know what they're called—yes, the orthopedic doctor. Well, my regular doctor at Kaiser didn't think that this was such a good idea. He said that I

> was pretty old and that, at my age—I'm 83 years old—they really do not like to do surgery and that this [intent to have surgery] was the main reason that people get referred to see the orthopedic doctors, but I want to see one and, anyway, I think that I have the right to make this decision for myself. I'll listen to what the orthopedic doctor has to say. Being old may increase my risks, but it is my right to decide whether the pain is intolerable and if I want to have surgery or not.

Of the HMO enrollees participating in this study who were able to access care (n = 36), 14% (n = 5) were denied referrals to specialized services (see Table 8).

Lack of Continuity of Care

While the majority of the participants in this research (n = 47, 94%) had primary physicians at the HMO, many (n = 40, 80%) described experiences in which they were unable to obtain same-day appointments with their primary physicians for urgently needed care. For example, one elderly gentleman stated,

> A while back, I woke up feeling kinda weak and had a headache. My daughter took my temperature, but it was normal and I really didn't have any other symptoms. As the day wore on, I did not have any appetite, and this is very unusual for me, so my daughter called the medical-advice nurse and insisted on an appointment that afternoon for a doctor to check me out. My private doctor was unable to see me so they had a nurse practitioner see me instead. This has happened to me many times before when I have been examined by different doctors or nurses. Rarely have I been able to see my own doctor, which I would prefer. It seems to me that it would be better if I could see my own doctor and not a bunch of different doctors, especially when they are doctors that I have not see before and who do not know about my health problems.

Some of the study participants reported being referred to another medical doctor (n = 33, 66%), an advice nurse (n = 18, 36%), or a nurse practitioner (n = 20, 40%). The length of time the participants had been enrolled in the HMO ranged from 18 to 53 years, with a mean of 42 years and a standard deviation of 7.75.

Access Outcomes

The following four overall categories of realized access outcomes were identified by the study participants: (a) routine and preventive health-care services, (b) urgent health-care services, (c) crisis health-care services, and (d) referrals to specialized services. A fifth category was defined as inequitable access or the inability to obtain access to needed health-

Table 8

Access Outcomes for Frail, Elderly Enrollees of Health-Maintenance Organizations

Type of access	Frequency	Percentage
Access outcomes of total sample (n = 50)		
Realized access	36	72
Unable to access	14	28
Total	50	100
Initial service for those accessing care (n = 36)		
Routine and preventive health-care services	7	19
Urgent health-care services	15	42
Crisis health-care services	14	39
Total enrollees accessing care	36	100
Referral status of those accessing care (n = 36)		
Referrals to specialized services	31	86
Denied referrals to specialized services	5	14
Total enrollees with delayed access	36	100
Time to actual service from referrals (n = 31)		
Less that 1 year	13	42
One year or more	18	58
Total enrolleees with referrals delayed	31	100

care services (see Table 8). With the assistance of advocacy by family and/or a friend, 72% of the participants (n = 36) were able to obtain access to health-care services. Of these, 19% (n = 7) successfully obtained routine and preventive health-care services, while 42% (n = 15) obtained urgent care and 39% (n = 14) received crisis health-care services. However, 28% (n = 14) were unable to access needed health-care services. Upon conclusion of the data collection and analysis for this study, family members of three of the study participants telephoned to report the subsequent deaths of the participants, determined by autopsy to be attributed to infectious-disease processes (i.e., pneumonia and urosepsis). According to these family members, their loved ones had not felt well for a few days prior to their deaths, but had been unsuccessful in obtaining an urgent appointment to be examined by a medical doctor at their HMO. Prompt accessibility to needed health-care services is crucial to the well-being of vulnerable patient populations such as the oldest-old in our society because they are often quite frail with diminished capacity for positive response to intervention and ultimate healing.

Summary

An analysis of this research has been presented in this chapter along with the factors influencing the process of health-care access in Table 9. Table 8 delineates the access outcomes experienced by the elderly study participants. A social diagnosis of the process of accessing needed health-care services, as experienced and perceived by frail, elderly HMO enrollees is depicted in Figure 8. The overall organization of themes that emerged from the data were derived directly from participant narratives. Upon conclusion of data analysis, the accuracy of the themes were confirmed by the study participants.

The findings from this study suggest that, among this sample of frail, elderly HMO enrollees, the profile of those at greatest risk of encountering barriers to health care are those with (a) moderate to severe cognitive impairment, (b) hearing and/or vision loss, (c) minimal to no family advocacy, (d) vague symptoms of confusion secondary to infection, and (e) delivery systems that utilize automated telephone-answering devices. A

Table 9

Factors Influencing Health-Care Access

Factor	Frequency	Percentage
	Clinical	
Vague symptomatology	41	82
Cognitive impairment		
Moderate impairment	28	56
Severe impairment	2	4
Functional impairment	24	48
Thermoregulatory changes	37	74
Sensory deficits		
Hearing deficits	50	100
Used hearing aids	31	62
Visual deficits	50	100
	Cultural	
Language barriers	7	14
	Social	
Ageism	34	68
Female gender bias	3	6
Family advocacy	27	54
Insider knowledge	19	38
Consumer assertiveness	4	8
Consumer exhaustion & inability to fight for care	27	54
Residential support services	8	16

(*table continues*)

Factor	Frequency	Percentage
	Environmental	
Automated telephone-answering devices	50	100
Knowing how to use the system	4	8
Use of other health-care facilities	7	14
Lack of provider knowledge	47	94
Lack of transportation	44	88
Lack of support services within health-maintenance organization	13	26
Delayed referrals to specialized services	31	62
Lack of continuity of medical care	40	80

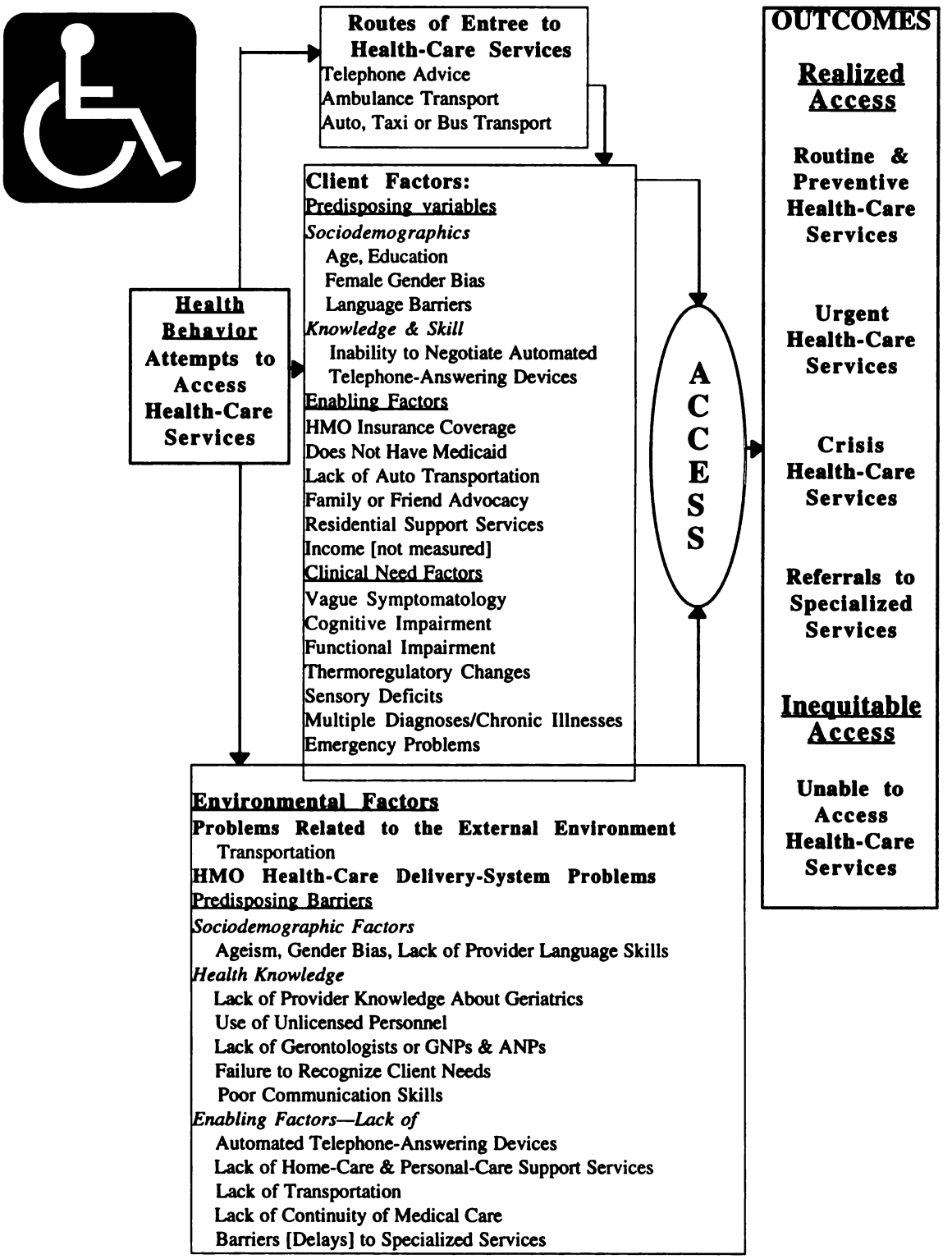


Figure 8. This illustrates health-care access as a process of negotiation, as well as Andersen's Model of Health Services Use and the process of accessing health-care services as perceived by frail, elderly enrollees of health-maintenance organizations.

keen awareness was developed through this research of the cumulative, overlapping nature of the barrier factors, as well as the manner in which this further deters elderly people from successful care access.

CHAPTER V

THEORETICAL INTERPRETATION AND DISCUSSION

Overview

The review of literature conducted for this study indicates that this current research is the first to elicit the experiences and perceptions of elderly, community-dwelling HMO enrollees surrounding the process of seeking health-care services. The findings reveal the experiences encountered by elderly people as complex and multidimensional. Factors influencing their ability to access health-care services occur both individually and cumulatively. The following four broad categories of influential factors emerged from the data: clinical, cultural, social, and environmental. Encompassed within each category are subcategories, each capable of eliciting a facilitating (i.e., enabling) or inhibiting (i.e., a barrier) response, and of having overlapping effects.

Some scholars may argue that other theoretical frameworks could be used to analyze the data, such as the HBM and The PRECEDE-PROCEED Model of Health Promotion and Planning. While each model provides a framework that could potentially offer some explanation of the phenomenon, the principles contained in the Andersen model enable a more thorough description of the measures of access and those factors influencing the process of obtaining needed health-care services, as perceived and experienced by elderly individuals. The following fundamental propositions underpin Andersen's (1968) Model of Health Services Use and serve as the theoretical foundation for this research:

1. The use of health services is the result of a complex, interrelated set of factors.

2. The use of health services is dependent upon three conditions—the predisposition of the family, later modified to the individual, to use services; their ability to secure services; and their need for such services.

Andersen's (1968) behavioral model was originally formulated to predict the utilization of health-care services according to measurements of physician ambulatory care, hospital inpatient services, and dental care consumed during a given year (Andersen &

Davidson, 1996). Application of the model, with its emphasis on measures and determinants of access and its influence on crucial outcome factors, is particularly relevant to an understanding of the accessibility of needed health-care services for elderly HMO enrollees. Identifying the etiology of those factors influencing the actual process—the point of initial contact with the health-care agency—is crucial to the development and implementation of gerontological services. Because the nature and characteristics of many of the factors influencing the delivery of health-care services are unique in their specificity to problems encountered by older people, a social diagnosis and subjective assessment by the target population were indicated. Due to the individual and cumulative effects of the factors influencing service delivery for older patient populations, and its ability to explain the use of health-care services, the Andersen model provides a sound theoretical foundation for this study.

The Research Questions

As presented at the onset, this study sought answers to the following research questions:

1. What are the clinical, cultural, social, and environmental factors influencing access to health-care services, as experienced and perceived by frail, elderly HMO enrollees?

2. How do elderly people experience the process of accessing health-care services in HMOs?

3. What are the perceptions of frail elderly enrollees of the HMO features (i.e., the independent study variables) influencing their ability to access health-care services (i.e., the dependent variable)?

The findings of the current study will be discussed in relation to Andersen's (1995) model, using the following three components: (a) environmental factors, (b) population characteristics, and (c) outcomes. The fourth component (i.e., health behavior) was excluded because the behavioral determinants associated with seeking health care were

activated prior to the onset of the research project. Although an important factor in most investigations pertaining to access and the use of health-care services, health behavior was not applicable to this particular study because of its focus on the actual process of accessing health-care services—the initial contact with the health-care agency.

Environmental Factors Influencing Access

There are two broad categories of environmental factors influencing the process of accessing health-care services for elderly enrollees. They are factors related to the external environment and those related to the health-care delivery system (i.e., the HMO).

Factors Related to the External Environment

The majority of the respondents in this study ($n = 44$, 88%) reported that transportation was a barrier in successfully accessing health-care services. This finding is somewhat consistent with a survey of older adults ($n = 4{,}162$) residing in North Carolina who perceived cost, rather than transportation, as a barrier to health care (Blazer, Landerman, Fillenbaum, & Horner, 1995). The participants stated that when payment authorization was denied by the HMO, lack of routine transportation for health-care visits, and the high cost of ambulance transportation, were major barriers to obtaining care. Many of the participants relied upon public transportation to access care and expressed fear and feelings of vulnerability during its use. This is consistent with the findings of a survey of poor, frail elderly people in New York (Rittner & Kirk, 1995). Lack of automobile transportation is a barrier factor ascribed to client-enabling factors in the Andersen (1995) model (see Figure 8). Lack of transportation afforded to elderly enrollees may also be characterized as a factor related to the health-care agency. Consequently, this factor possesses duality and may contribute to a cumulative, overlapping effect. For example, an elderly individual may not be able to operate and drive an automobile and, as in the case of the study participants, transportation may not be provided to elderly enrollees by the HMO.

Factors Related to the Health-Care Delivery System

There are a myriad of factors associated with service delivery in HMOs that influence the ability of older people to access health care. Many of these factors are interrelated and interlink, subsequently increasing the difficulty encountered by vulnerable patient populations during the process of accessing care. The complexity of these factors, and their influence on the delivery of health-care services, is consistent with the theoretical assumptions inherent in the Andersen (1968) model. Features of the environmental themes or factors related to the participating health-care agency that emerged from this study data include routes of entree to services (i.e., telephone advice; ambulance transport; and transportation by automobile, taxi, or bus); ageism; the ability to maneuver through the system to obtain care (i.e., knowing how to use or optimize the system); geriatric assessment knowledge among providers; difficulty in obtaining referrals for specialized services; and patient advocacy by providers.

Routes of entree to health-care services. The descriptions provided by the study participants of their experiences while attempting to obtain needed health-care services revealed that the majority (98%) encountered difficulty in communicating their needs to the health-care agency. The primary methods of establishing access to HMO services was through (a) automated telephone-answering devices; (b) ambulance, automobile, bus, or taxi transportation to the ED for triage; or (c) presentation to outlying clinics for care. Of these three methods of access, elderly people experienced the greatest difficulty when trying to negotiate the automated telephone-answer devices (n = 49, 98%). Only one participant (2%) denied having a problem with the telephone system; however, upon careful questioning, even this participant admitted that, while he had not personally called for the services, his spouse had indeed been unsuccessful in her attempts to obtain care for him via the telephone. This finding is unique in that, with the exception of the preliminary study for this current research (D. L. Jennings, 1998), there were no studies found in related literature that explored the experiences encountered by elderly people during their

attempts to use automated telephone-answering devices to access needed health-care services. However, one study did explore the reliability and validity of these devices in assessing for alterations in the functional status of disabled community-dwelling elders (Mahoney, Tennsted, Friedman, & Heeren, 1999). The researchers reported that automated telephone systems failed to capture the degree of impairment—valuable information gained through in-home assessments by case managers.

Numerous studies have attributed positive effects to the use of automated telephone systems. These studies focused on telephone communication initiated by health-care professionals as a means of follow-up care. Among this research are investigations of follow-up to diabetes care and disease management (Piette, Weinberger, & McPhee, 2000); patient education (Piette, 1997); English and Spanish-speaking diabetics (Piette, 1999); ethnically diverse, low-income diabetics (Piette, McPhee, Weinberger, Mah, & Kraemer, 1999); cancer care (Siegel, Mesagno, Karus, & Christ, 1992); cholesterol reduction (Hyman, Herd, Ho, Dunn, & Gregory, 1996); chronic-illness management (Friedman et al., 1998); hypertension (Friedman et al., 1996); home-care patients (Patel & Babbs, 1992); smoking cessation (Burke, 1993; Ramelson, Friedman, & Ockene, 1999); health-behavior modification (Friedman, 1998); depression (Baer et al., 1995); drug abuse (Alemi et al., 1994); ambulatory-care services (Leirer, Tanke, & Morrow, 1992); psychiatric outpatient care (Hunkeler, Westphal, & Williams; 1995); memory in younger and older adults via message repetition (Morrow, Leirer, Carver, Tanke, & McNally, 1999); and patient recruitment (Silva, Abbott, Petrucci, Canfield, & Muir, 1993). It is important to note, however, that the majority of these studies were conducted with younger adult patient populations.

Interactive voice-response technology was introduced to monitor patients through automated devices (Wuft & LeVine, 1997). The use of a voice-activated telephone device to decrease serum-glucose levels in diabetics was found to be significantly less expensive and easier to use than patient-nurse telephone intervention (Levine, 1997). Voice-activated

systems might be useful for elderly people who are cognitively intact and free of the delirium associated with infection and hearing difficulties. However, according to the participants in this current study, this type of technological support is not currently available at their HMO. Although a few of the elderly interviewees (n = 4, 8%) were skilled in the use of advanced technological equipment, such as automated recording devices and computers, they were unable to apply this knowledge during episodes of illness.

Ageism. The attitudes, beliefs, and behavior of health-care providers influenced the ability of the elderly participants in this study to obtain needed health-care services. Thirty-four percent (n = 17) of the participants described experiences in which they were subjected to stereotypical and ageist comments by health-care professionals. Moreover, many of the participants (n = 19, 38%) described situations in which they had to "fight for care." This finding is consistent with that of other investigations exploring ageist attitudes among care providers (Fuller, 1995; Harwood & Williams, 1998; Lookinland & Anson, 1995).

Knowing how to use the system. Through trial and error, a few (n = 4) of the participants in this study were able to determine ways in which they could maneuver through the complicated access modes of their HMO to obtain needed health-care services. For these elderly enrollees, knowledge enabling them to successfully use or optimize the HMO system served as a significant facilitator during the process of accessing health care. However, in the presence of pain, weakness, or illness-induced states of confusion, the ability of older people to successfully negotiate the complexity of the communication modes or routes of entree to access care is seriously compromised. Among this sample of elderly HMO enrollees, the vast majority (n = 46) encountered significant "road blocks" during attempts to obtain care.

Lack of provider knowledge and training. Many of the participants in this study (48%) encountered experiences with health-care providers in which they felt the provider failed to recognize or understand their health problems. This finding is congruent with

those documented by the American Association of Colleges of Nursing (1988) in the late 1980s. In response to increasing concern regarding the predicted growth of the American elderly population at the turn of the century, as well as the need for related educational curriculum continuing to promote excellence in nursing practice, the first national effort to define competencies and skills for nursing was initiated by this organization in 1986. Surveying approximately 600 educational institutions throughout the United States to examine the framework of its bachelor of science degree programs in nursing, the American Association of Colleges of Nursing discovered that only 23% made geriatric content a requirement in their curriculum. Of these, no integrated course contained greater than 25% geriatric content. An outgrowth of this effort was an article entitled "Essentials of College and University Education: Three Strategies for Professional Nursing" (Stanley, 1997).

Because approximately 70% of new graduates within the health-care industry work with older people, and because the essence of nursing appeared to lie within geriatric care, the American Association of Colleges of Nursing was concerned with the lack of geriatric content in nursing curriculum. Consequently, they mandated the provision of "stand-alone" courses in gerontology by nursing faculty (i.e., an entire course with a focus on geriatric care). A regional task force of interdisciplinary experts was established in 1995 to define critical nursing competencies and knowledge areas, which were subsequently documented and revised on an ongoing basis. The same task force is scheduled to release a master of science in nursing essentials curriculum, identifying key competencies and making recommendations as to how to remedy knowledge deficiencies in critical areas (Stanley, 1997).

A national survey of health-care professionals in 51 state units on aging and 114 area agencies on aging (n = 3000+) revealed that less than 10% of those employed within these organizations held a credit or noncredit credential in gerontology (Peterson, Wendt, & Douglas, 1994). This was despite the fact that their positions necessitated a knowledge of

aging to fulfill specified requirements and meet the needs of the population they served. Furthermore, less than 6% of these individuals held a degree in gerontology. While the main focus of many health-care facilities is the provision of care to elderly people, few providers have backgrounds including gerontological training. For example, 90% of the care delivered to the elderly in hospitals, long-term-care facilities, and in the home is rendered by paraprofessionals (i.e., nurses' aides and home-health-care aides), the vast majority of whom have had no training in geriatric care (Gueldner et al., 1995).

The specialty of geriatric medicine is relatively new in the United States; the first board-certification examination was administered in 1988 (Steel, Norcini, Brummel-Smith, & Markson, 1989). The influx of geriatric-certified advanced-practice nurses and physicians over the past decade, knowledgeable in the unique health-care needs of the elderly, should improve the delivery of care across the continuum of health-care environments (Harrington, Lynch, & Newcomer, et al., 1993).

Poor communication skills. The impact of education on nurse-patient communication was explored in a study to determine factors influencing nurse communication with elderly people (Caris-Verhallen, de Gruijter, & Bensing, 1999). The sample consisted of 181 videotaped nurse-patient encounters in two different environments—a home-care agency and a senior residential facility. Forty-seven nurses and 109 patients participated in the research. The findings indicated that the most influential factor related to nurse-patient communication was the educational level of the nurses. The more highly educated the nurse, the more therapeutic the interaction between nurse-patient communication.

Other investigators have explored the relationship between verbal and nonverbal communication and found that the use of touch and other nonverbal communication, such as eye contact, head nodding, and facial expressions, were effective in establishing therapeutic relationships with elderly clients (Caris-Verhallen, Kerkstra, & Bensing, 1999). Long and Slevin (1999) studied the dynamics of power and restriction during an

interactional analysis of role play between nurses and elderly patients with dementia, revealing the importance of human social interactions and therapeutic communication in positive health outcomes. Sherrell and Buckwalter (1998) analyzed the value of listening, history, and personality in relation to effective communication approaches with elderly people during episodes of illness. The effectiveness of communication between health-care professionals and elderly people has been traditionally linked to both positive and negative stereotypes (Fuller, 1995; Giles, Coupland, Coupland, Williams, & Nussbaum, 1992; Harwood & Williams, 1998; Tennstedt, 2000), the empowerment of elderly patients during interaction with physicians (Stewart, Meredith, Brown, & Galajda, 2000), patronization (Ryan, MacLean, & Orange, 1994), and infantalization (O'Connor & Rigby, 1996).

Use of unlicensed personnel. The use of unlicensed support personnel in acute-care hospitals and health-care delivery systems is another factor posing a significant threat to the provision of quality care for older individuals. Many (n = 21, 42%) of the participants in this study and their family members reported incidents in which they were given medical advice over the telephone by nonlicensed personnel. For example, they described experiences of speaking with "nursing assistants" and "receptionists" as they sought medical advice regarding specific health problems over the telephone. The delivery of medical advice by unlicensed personnel is a very dangerous practice due to its inherent potential toward increased morbidity and mortality among older patients. Unlicensed personnel do not possess the knowledge base from which to detect problems or assess disease manifestations in any human being, but particularly in vulnerable patient populations such as frail, elderly HMO enrollees. Registered nurses have frequently expressed concern over the educational deficits commonly existing among unlicensed personnel and the potential for disciplinary action inherent in their supervision (Thomas, Barter, & McLaughlin, 2000).

Difficulty with referrals to specialized services. Of the 36 participants (n = 72%) in this study who were able to successfully access care, many (n = 31, 86%) described

encounters with health-care providers in which they experienced difficulty in obtaining referrals to specialized services. Of those who successfully received referrals, 42% (n = 13) experienced delays of up to 1 year before an initial appointment with a particular specialist was secured; 58% (n = 18) waited 1 year or longer. This finding is consistent with that of a 1997 cross-sectional mail survey of group-model HMO enrollees (n = 7718, mean age = 66.7 years, females = 32%) (Grumbach, Selby, Damberg, et al., 1999). Twenty-three percent of the respondents believed that the primary medical doctors inhibited their attempts to obtain referrals for specialized services. Moreover, once successful in receiving a referral, elderly enrollees were more likely to experience problems related to the quality of specialist care within managed-care organizations (Blendon, Knox, Brodie, Benson, & Chervinski, 1994).

Patient-Population Characteristics Influencing Access

Patient-population characteristics are comprised of three subcategories: (a) predisposing characteristics, (b) enabling resources, and (c) need. Predisposing characteristics are defined as demographic, social structure, and beliefs and attitudes. Enabling resources pertain to family, community, and personal factors. Need may be either as perceived by the individual or as evaluated by the respective health-care professional (Andersen & Davidson, 1996).

Predisposing Characteristics

Sociodemographic factors. An increase in multiculturalism among patient populations in the United States, as well as among health-care providers, heralds the onset of the 21st century (Huston & Fox, 1998). Demographic characteristics such as ethnicity and language barriers encountered by non–English-speaking individuals pose a significant problem during attempts to access health-care services. Ethnic demographical changes will be increasingly evidenced by the ongoing decrease in Euro-Americans (from 76–72%); an increase in Latino-Americans (from 8–11.3%); and an increase in African-Americans,

American Indians, Alaska Natives, Asians, and Pacific Islanders (Berk et al., 1996; U.S. Department of Health and Human Services Public Health Service, 1991). Such diversity was also evident in the demographic profile of the participants in this current study who were 42% Euro-American (n = 21), 36% African-American (n = 18), 16% Latino (n = 7), 4% Asian (n = 2), and 2% multiethnic (n = 1).

A study of community-dwelling elderly individuals, aged 75 and older and from minority populations (n = 601), was conducted to identify their opinions of the etiology and treatment of selected common medical diseases (Goodwin, Black, & Satish, 1999). The findings revealed that many older people of diverse ethnicity are fatalistic in their attitudes surrounding the causes and treatment of disease, resulting in decreased utilization of preventive health services. In contrast, a preliminary study (D. Jennings, 1998) revealed that a broad range of factors influence health-care access, including the attitudes and beliefs held by elderly people regarding health and illness that influence their initial decision to seek health-care services. However, the focus of this current study was narrowed to investigate the actual process of accessing needed care. Consequently, the decisional determinants of health-care seeking behaviors are not applicable because the decision to obtain care was made prior to the *process* of access. Although the majority of participants in the current study did not express fatalistic attitudes toward the treatment of illnesses, they did describe feelings of frustration regarding the difficulties experienced during attempts to obtain needed health-care services.

By the year 2050, one third of the U.S. geriatric population will be comprised of elders of color due to the growing proportion of immigrants within this age-group over the last 3 decades (Yee, 1992). Given the increase in multiculturalism within this country, the need is rapidly growing for culturally sensitive knowledge among health-care providers to (a) enhance awareness of the unique responses to health and illness that exist among different ethnic groups and to (b) facilitate the development and implementation of health

promotion and maintenance approaches that will meet the needs of culturally diverse populations of older people.

All (n = 7) of the non–English-speaking participants in the current study (n = 7) encountered language barriers when attempting to access needed care. This finding is consistent with the results of a prevalence study of 736 inner-city residents, aged 65 and older, in which non–English-speaking elders encountered major barriers in obtaining effective community-health services (Ritch et al., 1996).

Female gender bias. Eleven percent (n = 3, 28) of the female respondents participating in this current research reported incidents in which they perceived they received care of a lesser quality than that rendered to male patients. One participant presented to the ED with chest pain. She had suffered a heart attack and was subsequently admitted to the intensive-care unit. Reflecting on the care that she received in the ED, she commented on the disparity in the delivery of care, comparing her own treatment with that rendered to another older person in the bed next to her who was also experiencing chest pain. She stated,

> He was treated with the pills, blood tests, and X ray right away, and no one told him that his pain was from stress. He wasn't even admitted into the hospital, and the doctor sent him home with medicine after a little while.

The finding of treatment disparity between genders is congruent with an epidemiological investigation conducted by Roger et al. (2000) in which the use of invasive and noninvasive cardiac procedures was found to be lower in women than men who presented to an ED with symptoms of unstable angina. However, it is noteworthy that women were less likely than men to present with symptoms of typical angina (p = .004), but when they did, they experienced worse outcomes.

Enabling Factors

Health-maintenance organization insurance coverage. All of the elderly participants (n = 50) in this study carried health-care coverage with a group-model HMO. Over 6 million people, aged 65 and older, are enrolled in managed-care organizations. The fastest

growing subgroup within this population is comprised of those 85 years of age and older, totaling 4.0 million in 1998—a figure 33 times greater than in 1900 (AARP, 1999). Although the income level of the participants in the current study was not measured, none of the interviewees were Medicaid recipients. It is therefore likely that they were not poor or among those living below poverty level.

Residential support services. A small subgroup of the participants (n = 9) in this study resided in a residential complex for independent elderly people. A model for community senior housing, the facility provided free transportation services to the residents, as well as a social worker to facilitate their requests for HMO services via a direct telephone line to the medical center. Consequently, these residents did not have to initiate any calls to their HMO themselves, eliminating the problems associated with the automated telephone-answering devices and procurement of medical advice that were encountered by the other participants. For purposes of this study, this factor is labeled as a facilitator to the process of accessing health-care services for elderly HMO enrollees. It is consistent with the assumption made by Andersen (1968) that the external environment is an influential factor in the utilization of health-care services by any given population.

Clinical Need Factors

Among the clinical factors influencing access to health-care services for frail, elderly HMO enrollees are (a) vague symptomatology associated with the presentation of illness in older people; (b) alterations in the thermoregulatory system (e.g., decreased ability to develop elevations in body temperature and increased susceptibility to extremes in body temperature such as hypothermia and hyperthermia); (c) cognitive and functional impairment; and (d) sensory deficits (e.g., decreased hearing and vision and diminished tactile ability).

Vague symptomatology and alterations in the thermoregulatory system. The presentation of illness in older people versus younger adults differs considerably in that elderly individuals initially manifest vague or no symptoms whereas younger adults are

usually able to identify specific ways in which they feel ill. Eighty-two percent of the respondents (n = 41) described general feelings of ill health or vague feelings that something was wrong, but were unable to identify the presence of specific symptoms of disease. Elderly people experience higher rates of infection than do younger adults, along with increased morbidity and mortality (Yoshikawa & Norman, 1987) and atypical presentation (i.e., confusion and lack of elevation in body temperature) (Kane, Ouslander, & Abrass, 1994). This factor is of particular importance because the vast majority of health-care professionals have not undergone geriatric training and are subsequently unable to recognize the presentation of disease in elderly individuals (Moore, Siu, & Partridge, 1997; Shah, Maly, & Frank, 1997).

Because the physical or clinical findings were neither evaluated by the respective health-care professionals nor recognized by the elderly participants in this study as precipitators of morbidity, they have been labeled as clinical need factors for purposes of this study. As such, they add specificity and a new dimension, subsequently building upon the theoretical framework espoused by Andersen (1995), expanding its explanatory ability in relation to the phenomenon. In this study, the clinical need factors of vague symptomatology, as well as the age-associated changes in thermoregulation resulting in alterations of body temperature that differ from the norm, are identified as barriers to elderly people during their attempts to access health care.

Cognitive impairment. Cognitive impairment is considered to be one of the main disabling diseases in elderly individuals (Barberger-Gateau & Fabrigoule, 1997) . Sixty percent of the participants in this study (n = 30) experienced moderate to severe cognitive impairment as measured by the MSQ. Many were able to describe situations in which they had difficulty with their short-term memory. For example, one 79-year-old female described an encounter with her medical doctor for a routine medical appointment in the following manner:

> I had to write his instructions down on a notepad because, otherwise, I would forget what he said by the time I got home. This has happened to me many times in

> the past, and my children get very upset with me because I have such a poor memory. It is difficult for them to go to the doctors' appointments with me because they both work, and it is too hard for them to get time off to take me. So, they came up with the idea of taking notes, and even sent a letter to my doctor telling him that he needed to give me written instructions. He does, sometimes, but it is hard to read his writing so I take notes as well. This way, I can follow his instructions to stay well.

According to the study participants and their care providers, cognitive status was not assessed by the health-care professionals during the process of accessing HMO services. Furthermore, the confusion manifested by the elderly enrollees was perceived by their caregivers and the health-care professionals they spoke with over the telephone as associated with chronological age rather than morbidity. Consequently, for purposes of this study, the finding of cognitive impairment is labeled as a clinical need factor influencing access to care for older people. Decreased cognitive function has been associated with early morbidity (Bosworth & Schaie, 1999; Deeg, Hofman, & van Zonneveld, 1990; Liu, LaCroix, White, Kittner, & Wolf, 1990; Maier & Smith, 1999) and found to be a more accurate predictor of mortality than level of cognitive performance (Bosworth, Schaie, & Willis, 1999).

Functional impairment. In analyzing the measures of access, Andersen (1968) theorized that it is important to understand the perceptions of the population under study regarding their own health status. In addressing the category of physical function in this current research, the MOS SF-36 was administered to determine the self-perception of the participants in this regard. A mean score of 51.30 on the MOS SF-36 PF scale was found. The individual scores ranged from 0 to 100 with higher scores indicating a higher degree of functioning. A comparison of the study sample (n = 50) with the MOS SF-36 normative sample (n = 264) of the U.S. population aged 75 and older revealed no significant differences between population samples. Therefore, the study sample demonstrated similar functional status as that of the general U.S. population aged 75 years and older.

Physical function is an important factor to consider in the delivery of health-care services for older people because functional limitations may impede the ability of elderly

enrollees to access needed care. For example, several elderly people described situations in which they were unable to drive to the medical center for appointments due to arthritic pain and functional limitations in their ability to perform IADLs and ADLs. While many of the study participants were able to function independently in IADLs, an equal number needed assistance, particularly with ADLs during episodes of illness. This finding is consistent with the viewpoint of Verbrugge and Jette (1994) that function may pertain to situation-free activities such as the ability to perform physical activities or viewed as disabling or situation-dependent (i.e., limitations in ADLs). Functional decline and disability have also been associated with chronic illness (Cho et al., 1998; Guralnik, LaCroix, & Abbott, 1993). Moreover, such impairment may transition over time, leading to increased disability (Stuck et al., 1999). For example, a population-based, prospective study of 1,109 community-dwelling elderly people between the ages of 65 to 84 years revealed that functional impairment and physical inactivity are predictors of further disability and mortality (Hirvensalo, Rantanen, & Heikkinen, 2000). Limitations in IADLs have been correlated with cognitive functioning (Lawton & Brody, 1969) and may also be indicative of early impending dementia (Barberger-Gateau, Fabrigoule, Helmer, Rouch, & Dartiques, 1999).

Through implementing the Andersen (1995) model to explain the role of perceived physical function in relation to the use of health-care services, the finding of functional impairment could be categorized under the resource factors of perceived need or personal enablement. Although it was perceived by the study participants as a problem requiring intervention, functional impairment was not evaluated by the initial contact person at the HMO as necessitating immediate medical attention. Therefore, for purposes of this study, it was labeled as a clinical need factor and identified as a barrier to accessing health-care services for elderly enrollees.

Sensory deficits. Another factor to be considered when identifying determinants to health-care access in elderly individuals is that of sensory changes that occur with aging.

All of the study participants (n = 50, 100%) experienced auditory and visual impairments. Many of the vehicles or avenues by which consumers interface or connect with health-care agencies require adequate sensory responses such as the ability to hear, see, touch, and speak. Therefore, due to the pathophysiological changes associated with aging, many elderly people are afflicted with sensory deficits inhibiting their ability to access needed health-care services. The aged experience progressive declines in visual acuity, color discrimination, light sensitivity, hearing, touch, and smell (Arking, 1998; Lindblade & McDonald, 1995). The sense of touch deteriorates over time, resulting in, for example, decreased sensitivity to touch on the skin of a hand. Visual and hearing deficits common among frail elderly populations have been found predictive of subsequent functional dependency (Keller, Morton, Thomas, & Potter, 1999; Reuben, Mui, Damesyn, Moore, & Greendale, 1999).

One of the ways people commonly access health-care services in today's managed-care environment is through telephone contact with an advice nurse of the agency within which they are enrolled. However, for elderly people afflicted with hearing loss, decreased vision, and loss of the sense of touch, maneuvering through the complexity of automated telephone-answering devices to reach an actual person can be exceedingly difficult (D. Jennings, 1998). A statewide survey of health agencies specializing in aging and blindness revealed that many of these organizations were negligent in meeting the needs of the visually impaired elderly population. Findings of the related study suggested that the delivery of health services to blind elders would improve with additional provider training and increased communication between agencies (Biegel et al., 1989).

The manner in which sensory deficits can influence health-care access was reported in a study with a population sample of frail, community-dwelling elders (n = 10), aged 85 and older, and enrolled in a Northern California HMO (D. Jennings, 1998). The participants described their experiences using automated telephone-answering devices for health-care advice and identified the following barriers:

1. Difficulty hearing portions of the recorded messages.

2. Confusion, frustration, and difficulty in remembering the sequence of the offered automated options (i.e., the verbal instructions were delivered faster than the ability of the elderly callers to note them).

3. Difficulty in following the specified instructions due to visual impairments (i.e., callers were able to follow the instructions, but were unable to see the numbers they were advised to select on their telephones to hear the needed option).

4. Overall frustration secondary to the inability to speak to a live person.

This study increased awareness surrounding the problematic nature of automated telephone-answering devices implemented for purposes of accessing health-care systems. Such devices serve as a deterrent to elderly populations seeking needed health care.

An explanation of the manner in which sensory deficits influence health-care access for elderly HMO enrollees might be provided through analysis of the data within the perceived or evaluated need categories of the population-characteristics component within the Andersen (1995) model. However, the category of environmental factors associated with features of the health-care delivery system could also facilitate such explanation. The finding of age-associated sensory deficits emphasizes the overlapping characteristics of the factors that emerged from the data because it is both clinical and environmental in nature and illustrates the inappropriate nature of using automated telephone-answering devices as a means of initial HMO access for elderly populations.

Nature and Effects of Cumulative, Overlapping Factors

The data indicates that a myriad of potential combinations of factors are possible. All of the participants in this current research (n = 50, 100%) experienced hearing and vision deficits, 60% (n = 30) exhibited moderate to severe cognitive impairment with a minimum of 6 and a maximum of 13 chronic illnesses, 82% (n = 41) experienced vague feelings of overall ill health during the initial stages of infectious disease, 46% (n = 23) were without family advocates, and 98% (n = 49) had difficulty negotiating the automated

telephone-answering devices. These findings equate to a strong implication of cumulative, overlapping effects of factors influencing access to health care. Moreover, 74% of the participants (n = 37) described experiences of fatigue and 64% (n = 32) developed infections (e.g., urosepsis, pneumonia, or cellulitis) requiring hospitalization.

The effects of the population characteristics and environmental factors—barriers and facilitators—influence the degree to which older people are able to successfully maneuver their way through the process of accessing care. The cumulative, interrelated effect of these multiple factors negatively affects the ability of frail, older HMO enrollees to access care. For example, an elderly person may experience overlapping, clinical need factors such as hearing and visual impairment, illness-induced confusion, and/or an absence of elevated body temperature—all of which have a cumulative negative effect on his or her ability to successfully negotiate the process of accessing health-care services. Although these factors are linked together within the same category (i.e., clinical need), when considered concurrently, they contribute to the degree of difficulty or barriers encountered by the consumer during attempts to access care. If other factors are present, such as non-English speaking or lack of family advocacy, or factors related to the health-care system such as the use of automated telephone-answering devices, the process of access becomes more complicated. When factors are interlinked and also overlap with other categories of factors, a cumulative effect can result, further compounding the ability of elderly people to negotiate the process of access. Consequently, their success or failure in maneuvering through the process of access affects the utilization of (a) routine health-care services, (b) urgent health-care services, (c) crisis health-care services, and (d) referrals to specialized care (see Figure 8).

Application of the Andersen Model to Factors Influencing Access

Andersen (1995) conceptualized that the following four broad components of factors have the propensity to explain the use of health-care services: (a) environmental features, (b) population characteristics, (c) health behavior, and (d) outcomes.

Environmental factors encompass features of the external environment as well as those of the respective health-care agency. Population characteristics are condensed into three categories: (a) predisposing characteristics, (b) enabling resources, and (c) need. Predisposing characteristics are comprised of demographic factors; aspects pertaining to social structure; and personal attitudes, beliefs, and values. Enabling resources are those related to person, family, and the community. Need variables address both perceived and evaluated health status.

According to Hulka and Wheat, encompassed within the broad boundaries of predisposing and enabling factors, "a biological imperative accounts for some people's help seeking and consumption of health services" (cited in Andersen & Davidson, 1996, p. 15). Represented under the evaluated component of need, the biological imperative is both biological and sociological in nature. Andersen (1995) further conceptualized that both "community and personal enabling resources must be present for use to take place" (p. 15). Health behavior refers to personal health practices and the use of health services. The outcome component of the model addresses perceptions of health status, evaluated health status, and consumer satisfaction. Although outcome factors were not an initial focus of this study, they manifested in the data and are hence presented (see Table 8). Of paramount importance is the fact that, when the routes of entree to health-care services are blocked, older people are unable to obtain needed care, potentially resulting in increased morbidity and mortality for this vulnerable patient population.

Limitations and Constraints of Andersen's Model

By viewing the phenomenon of today's health-care access through the eyes of the study participants in this research, it is possible to identify their perspective of factors that act as facilitators and barriers to older people. Environmental factors are defined as "those external to an individual, often beyond his or her personal control, that can be modified to support the behavior, health, or quality of life of that person or others" (Green & Kreuter, 1991, p. 28). Many of the factors identified by the participants in the current study as

constraints or barriers in their attempts to access care are features of the HMO within which they are recipients of care. For example, lack of provider knowledge regarding the presentation of disease in elderly people, which can be improved through educational interventions at the HMO. A multisite, educational intervention study was designed during an advanced quantitative-methods research course. The proposal has been funded by the HMO, pending completion of this study and the doctoral education of the researcher (D. L. Jennings, 1998). Other constraints for elderly people were attributed to the automated telephone-answering devices; lack of support services within the HMO; lack of transportation; and difficulty in obtaining, or delayed, referrals to specialized services. These constraints can be addressed by implementing interventions at the educational, organizational, structural, and management levels of health-care delivery systems.

There are many congruencies between the conceptualization provided by the Andersen (1995) framework and the findings of this current study. The result is a more detailed and thorough explanation of the clinical, cultural, social, and environmental factors influencing the process of accessing needed health-care services for elderly HMO enrollees. The findings add specificity to the model; explicitly define access modes (i.e., telephone advice; ambulance transport; and transport by automobile, taxi, or bus); and identify access outcome measures in the specific types of services sought by older people (i.e., routine, urgent, and crisis health-care services, as well as referrals to specialized services). The elderly participants in the current study expressed dissatisfaction in their inability to initiate contact with their HMO for needed health-care services. The degree of difficulty associated with accessing needed care was compounded by the overlapping, cumulative effect of many of the factors identified as constraints or barriers. This finding is consistent with the assumption underpinning the Andersen model that utilization of services is dependent upon a complex combination of interrelated factors.

Influences in the Study Design

Researcher perspective, which was from the perspective of a clinical nurse, may have influenced the findings of this study. From the onset of the study, the assumption that elderly people encountered barriers during the process of attempting to access health-care services indeed existed. Additionally, researcher belief that some of these barriers were attributed to ageism and service delivery insensitive to the needs of vulnerable patient populations, such as frail, elderly HMO enrollees, also existed. Multiple factors were found to influence the process of access to care, and these factors were multidimensional in nature. The assumptions made by the researcher in this study were congruent with the propositions that underpin the Andersen (1995) framework. However, the cumulative nature and overlapping effects of many of the influential factors was an unanticipated finding.

Researcher experiences encountered during nearly 20 years of caring for elderly people in a clinical practice within a group-model HMO, coupled with the myriad of stories recounted by elderly patients and their families surrounding the process of accessing health-care services, have unquestionably influenced the related perspective of the investigator. A passionate commitment to contribute toward the improvement and delivery of health-care services for frail, elderly individuals was the impetus that led to this research and corresponding academic goal. After 10 years of full-time college education and simultaneous employment as a critical-care nurse, the experience of conducting a preliminary study and this dissertation research was humbling and rewarding. Humbling because, in listening to the respondents' stories, the researcher was reminded of similar experiences encountered with her parents and patients under her care. Investigator perceptions surrounding the narratives were undoubtedly influenced by the age of the researcher (i.e., approaching 60); ethnicity (i.e., Spanish, Portuguese, English, and German); married status; occupation as a nurse with the goals of a doctoral student; and a loving, caring, middle-class upbringing. The issue of *voice* was an ongoing concern

throughout this research. The data collection and analysis was conducted with a consistent responsible caution to "hear" the exact and intended content of the narratives offered by the respondents, free of any form of bias. A conscious effort was made to ensure that results from the data analysis reflected only the perceptions of the frail, elderly participants and not the individual perspectives of the researcher.

Summary

This chapter discussed the factors influencing the ability of frail, elderly HMO enrollees to access needed health-care services, as experienced and perceived by the participants themselves. An overview is provided of the population characteristics and environmental factors that were perceived by the participants to influence the process of accessing the health-care system for needed care. Subcategories were also detailed. Access outcome factors were identified and discussed. The chapter describes the individual nature of each factor and the manner in which the cumulative, overlapping effects of the factors subsequently influence the process of health-care access for this vulnerable patient population. The findings of the study were then presented and related to the manner in which they address the research questions. How the findings relate to the propositions underpinning the Andersen Model of Health Services Use is also thoroughly described. The chapter also describes the congruency, or lack thereof, of the findings in relation to the conceptualizations found within the literature.

CHAPTER VI

CONCLUSION

Significance

Inadequate routes of entree to enlist needed health-care services from HMO systems is an influential factor during the process of access and may lead to increased morbidity and mortality for frail, community-dwelling elders enrolled in HMOs. Throughout this research—from data collection through analysis—the fact was clearly evident that elderly people are often confronted with insurmountable barriers as they attempt to access needed health-care services. Through the verbal accounts of experiences provided by the study participants and their caregivers, the paradox of the vulnerability of frail, elderly HMO enrollees during the process of care access repeatedly emerged. While they were enrollees in a health-insurance plan and entitled to receive health-care services, many of the participants were unable to negotiate the process required to obtain needed services.

The existing literature surrounding the phenomenon of access to health-care services for elderly populations pertains to insured, underinsured, and uninsured consumers. A vast body of the literature focuses on the quality of preventive and disease-management services for a variety of patient populations under both FFS and managed-care plans. However, the literature review indicated that this study is the first of its kind to investigate the process of care access at the point of initial contact with the health-care agency, as experienced and perceived by frail, elderly HMO enrollees. The influence of managed care and its cost-efficient strategies, manifested by the implementation of "user-friendly" systems to facilitate service delivery and the inability of vulnerable patient populations, such as frail, elderly enrollees, to use the automated telephone-answering devices, is a prevailing paradox. It illustrates the disparity, or gap, between consumer and provider perspectives of what constitutes effective and efficient health-care access. The findings emphasize that, regardless of the degree of sophistication

of health promotion and health-maintenance services offered within HMOs, these services are useless to elderly consumers if they are unable to negotiate the process.

The most important *major* finding of this study is that this sample of elderly participants was unable to negotiate the automated telephone-answering devices, which consequently blocked their attempts to access care. Additionally, the cumulative effects of other factors that influenced care access (e.g., vague symptomatology, cognitive and/or functional impairment, sensory deficits, non-English speaking, lack of gerontological knowledge among providers, ageism, and transportation) further impeded the process. The findings are congruent with the underlying hypothesis of this study that modes of HMO access that are not age-specific (i.e., customized to meet the special needs of older people), such as automated telephone-answering devices or lack of transportation, inhibit the ability of elderly people to access health-care services. Therefore, it is of particular importance that (a) the delivery of services be designed in a manner enabling older consumers to successfully achieve access, and (b) when older enrollees are able to breach these barriers to interact with a health-care provider, that these providers are knowledgeable about the particular problems and disease entities that afflict the geriatric patient population.

Limitations

There are many limitations inherent to this study. First, it employed a nonprobability, nonrandom sample of community-dwelling elders who were recipients of health care within a group-model HMO. Although the participants were afflicted with cognitive and functional impairments, as well as chronic diseases, they may have been somewhat more robust than their national counterparts due to their geographical location in Northern California. A larger sample of homebound, community-dwelling participants with increased cognitive and functional impairments, as well as a higher degree of physical frailty, would have been preferred; however, the study was limited to nonpurposive methods of sampling.

The potential for differences in frailty between the study sample and the normative sample for the U.S. population, as measured by the MOS SF-36 for people aged 75 and older, may be attributed to the disparity found in the literature between definitions and measurements of frailty. A comparison of three such definitions was conducted in an attempt to standardize the measurements (Paw et al., 1999). Frailty has been defined as (a) an increased susceptibility to disability due to reduced physiological reserve (Buchner & Wagner, 1992); (b) a dependency upon support with ADLs (Rockwood et al., 1994); and inactivity and weight loss (Paw et al., 1999). Incorporating data from the Zutphen Elderly Study, a longitudinal investigation of chronic illness and associated risk factors in the 1960s, was conducted by Keys et al. (1967). Surviving, community-dwelling male participants ($n = 450$) were reassessed in 1985 for weight loss and current energy intake, as well as physical activity. Paw et al. (1999) found that weight loss and inactivity were better determinants of frailty than the other two definitions. Consequently, inclusion of a measurement of weight loss and nutritional status in the operationalization and determination of physical frailty among the participants of this current study would have contributed strength to the findings.

Another limitation may be the assessment of functional impairment via participant self-report on the MOS SF-36, rather than implementing a physiological measure. Although comparisons of the study sample ($n = 50$) with the normative sample of the U.S. population aged 75 and older ($n = 264$) revealed no significant differences in PF, four subscales were indeed found to be significant. The study sample experienced more bodily pain (t calc = 6.37, $p < .05$); lower perceptions of general health (t calc = 8.28, $p < .05$); less vitality (t calc = 6.92, $p < .05$); and greater mental-health limitations (t calc = 3.39, $p < .05$) than did the normative sample for the U.S. population aged 75 and older.

Implications

Nursing Practice

According to Hall et al. (1994), the ability to meet the health needs of diverse, vulnerable populations is a challenge that must be met by nursing. The complexity of such an undertaking can be depicted through the analogy of a circle with a nucleus representing mainstream society (e.g., power) while the circumference (e.g., weakness) represents the diverse and vulnerable members of society. As the periphery is approached, power is lost; subsequently, those on the periphery are marginalized. So it is with the physical and social process of aging; as age increases, power and authority decrease. The health-care dilemma faced by American society (e.g., escalating costs of care and increasing proportions of elderly patient populations with complex health-care needs), poses a serious challenge to nurses in the delivery of future geriatric-specific care, as well as to nursing faculty. The development of comprehensive geriatric curriculum, focused on the delivery of elder care within community settings as health-care transitions away from hospital environments (Burggraf & Barry, 1998), is crucial. Moreover, health-care interventions that are sensitive to the varied beliefs of the diverse ethnicity of elderly populations must be developed and implemented (Goodwin et al., 1999).

The participants in this study identified ineffective, person-to-person communication with health-care professionals as a barrier in their attempts to obtain needed care. This was attributed in part to (a) the attitudes, beliefs, and values of health care professionals (n = 17, 34%) and (b) a lack of geriatric assessment knowledge among care providers. Only a few (n = 3, 6%) of the participants believed that the providers with whom they interacted were knowledgeable about their health status and delivered appropriate advice and treatment. Integral to a therapeutic consumer-provider interaction leading to health care-access when needed and the availability of interventive therapy, effective communication is the "synapse" or central link that establishes the need for assistance and effective connection between the client and the appropriate health-care

services. For communication to be effective, it must be informed, empathetic, unbiased, and reciprocal. Consequently, health-care professionals require geriatric-specific knowledge before they can successfully interact and intervene with the problems encountered by older health-care consumers.

The American Nurses Association (1980) defines nursing as "the diagnosis and treatment of human responses to actual or potential health problems" (p. 9). Embracing the philosophy of caring, the profession of nursing engages in transactional, therapeutic relationships with clients as they endeavor to adapt to, and cope with, internal and external stress. The patient-nurse interaction occurs within the environment the client chooses for receipt of health care; may involve any phase of the life process; and encompasses all aspects of health, morbidity, and mortality.

"Treading on the heels" of the rhetoric of the last decade, which mandated cost-efficient strategies in America's health-care arenas, the profession of nursing is challenged with a mission to improve the accessibility and quality of the health care rendered to every individual, regardless of age, creed, financial status, gender, or ethnic origin. As we progress further into this new millennium, the development and implementation of health-care services that effectively and completely meet the needs of the increasing number of aging Americans is crucial. Defined by the Division on Geriatric Nursing Practice of the American Nurses Association (1980), gerontological nursing is

> concerned with the assessment of the nursing needs of older people, planning and implementing nursing care to meet these needs, and evaluating the effectiveness of such care to achieve and maintain a level of wellness consistent with the limitations imposed by the aging process. (p. 13)

Due to anticipated changes within the health-care industry of the 21st century, health-care services are predicted to increase by approximately 30%. According to the Bureau of Labor Statistics (1998), this will necessitate the addition of 3.1 million new job positions of which nursing is expected to absorb a large proportion (Huston & Fox, 1998). The majority of these positions will be located in outpatient clinical settings and within the

community. Shoultz (1997) recommends that nurses shift their focus from primary care to long-term home-health care as a cost-efficient way to meet the needs of frail, community-dwelling elders and thwart the expense of long-term-care institutional placement. The need for more advanced-practice nurses in clinical practice must be reiterated. Gerontological nurse practitioners and clinical nurse specialists will be in high demand to meet the needs of the increasing numbers of elderly people in this country.

The sample of elderly HMO enrollees participating in this study ($n = 50$) were unable to negotiate the automated telephone-answering devices implemented by their health-care agency. Alternative options must be offered to consumers in the initial recorded message; for example, an option simply allowing callers to stay on the line to be connected to a live voice if the appropriate numbers cannot be selected on their telephone. Option Number One should state, "If you are calling from a Touch-Tone phone and are aged 65 or older, please press one. Otherwise, stay on the line and you will be connected to the Department of Geriatric Services for medical advice." Direct connection to the Department of Geriatric Services would be most efficient and would ideally provide a geriatrician or advanced-practice nurse in gerontology—a clinical nurse specialist or a nurse practitioner—as the advice contact. These care providers would be trained in gerontology, efficiently assessing and advising with capabilities of conducting accurate and effective triage for elderly consumers.

Free or low-cost transportation services to medical appointments and preventive-care services should be developed and implemented for elderly people with limited incomes who do not drive. The formation of a geriatric provider team is also recommended for community outreach and home visits to nonambulatory or homebound patients unable to present to outpatient clinics for nonacute care. Such a team would effectively serve as an alternative to inappropriate and costly use of 911 services. It should be composed of a geriatrician or geriatric advanced-practice nurse, a physical therapist, occupational therapist, geriatric social worker, and geriatric pharmacist.

Future Research

Expansion of this research by sampling other group-model HMO elderly populations in other geographical locations to determine if similarities exist among and between different settings would be highly beneficial. If both the facilitating and inhibiting factors that emerged in this study are found to be representative of those encountered by elderly people enrolled in HMOs throughout the United States, researchers could employ clinical trials to introduce promising care-access interventions toward the promotion of more efficient ways to assist elderly enrollees with the process of accessing health-care services. The development of age-specific theoretical frameworks to support investigations of the needs of this vulnerable population is strongly warranted.

An important factor emerging from the data of this study is the issue of gender bias. The creation and perpetuation of gender inequalities has been commonly reported in the utilization of health-care delivery systems (Mahowald, 1993). According to Schick, Fitzgerald, McLennan, and Crump (2000), many women are confronted with disadvantages regarding the quality of care they receive and inequitable accessibility of health-care services. Their needs and perspectives are not well represented in the empirical literature, contributing to a lack of knowledge surrounding women's health issues (Sechzer, Griffin, & Pfafflin, 1994a, 1994b). The inclusion of women in health-care research—both in topic and sample populations—as well as the use of gender-sensitive instruments and methodologies, must be priorities if the advancement of knowledge in the area of the health and social welfare of women is to occur.

Further in-depth study is crucial to the development and provision of health promotion and maintenance for the aged. Future research must be initiated to evaluate the effectiveness of managed care and its cost-containment strategies as they pertain to vulnerable, high-risk populations who are predisposed to negative health outcomes. Moreover, inquiries are warranted that will explore the personal perceptions of such populations, including frail, elderly HMO enrollees, regarding factors they believe facilitate

and/or inhibit their ability to access health care. The words of David Mechanic reflect the ultimate quality measurement of health-care delivery systems. He stated,

> The quality of a health care system is truly measured not by what it spends or the number of sophisticated procedures it performs, but how it enhances the potential of the population to fulfill its personal and social choices and the extent to which it limits suffering. (cited in Harrington & Estes, 1994, p. 27)

Nursing Education and Health-Care Policy

In order to meet the unique needs of frail, elderly patient populations, the education of more advanced-practice nurses willing to specialize in gerontology is indicated in clinical practice. The development and implementation of geriatric educational programs for nonlicensed personnel actively involved in the delivery of health care for elderly people is also warranted (Schneider et al., 1997).

Formulated in the 1970s, a comprehensive geriatric assessment (CGA) was defined as

> a multi-disciplinary evaluation in which the multiple problems of older persons are uncovered, described, and explained, if possible, and in which the resources and strengths of the person are catalogued, need for services assessed, and a coordinated care plan developed to focus interventions on the person's problems. (National Institutes of Health Development Conference Statement, 1988, p. 12)

Considered to have the greatest potential for improving health-care outcomes for community-dwelling elders, the process of geriatric assessment is multidimensional, interdisciplinary, and three-tiered in nature to include screening, assessment, and recommendation development and implementation by both the health-care provider and consumer (Reuben et al., 1996). Designed to quantify the functional, medical, and psychosocial capability of the elderly client, geriatric assessment facilitates service-issue decisions and occurs in a variety of health-care settings. Moreover, the effect of CGA varies according to the type of setting, assessment protocol, and mechanism implemented for follow up (Rubenstein, Stuck, Siu, & Wieland, 1991). Successful health outcomes are dependent upon completion of all three stages and on the ability of the health-care providers

to recognize ways in which age-associated physiological changes alter the presentation of disease with geriatric populations.

Although a variety of studies revealed that ambulatory assessment is indeed effective in (a) the identification of previously undetected problems (Epstein et al., 1990); (b) the improvement of functional capacity (Rubenstein et al., 1991); and (c) cost-efficiency in terms of decreased hospital and skilled "nursing" facility admissions, there have been limited experimental studies conducted within managed-care settings (Roller & Allman, 1996). One such study (Epstein et al., 1990) was a randomized clinical trial with a sample of elderly HMO enrollees (n = 600) conducted to compare the effectiveness of the following three types of health-care systems: (a) a CGA team, (b) consultation with an internist, and (c) traditional HMO services. Analysis revealed that the CGA team detected problems that had not been previously identified in 35% of the participants. Additionally, the team identified and recommended changes in medication regimes for 40% of the population sample. However, the respective geriatricians providing care for the participants in the Epstein et al. study were unavailable for participation in the study in the majority of the HMOs used as study sites (cited in Reuben, Wolde-Tsadik, & Pardamean, 1992). The question then arises as to the extent or degree to which the inclusion of geriatricians and gerontological advanced-practice nurses, as part of the geriatric assessment teams in the participating HMOs, would have influenced the findings of the investigation.

In response to queries regarding the appropriate nature of prior outcome measurements, a cross-sectional study of elderly patients and their caregivers was conducted to elicit the perceptions of family caregivers concerning the goals of geriatric assessment (Bradley et al., 2000). The provision of education and referrals (57.5%) and the improvement of family and social relationships (53%) were identified by caregivers, physicians, and case managers as being among the most common categories of goals. These are important findings because they take into consideration a broader spectrum of the

health-care needs of elderly individuals, encompassing clinical, social, and environmental factors.

Another implication of this current study is the inclusion of education pertaining to women's issues in the training of health-care professionals to improve the attitudes of providers regarding the health needs of this population, as well as the delivery of related health-care services (Mastroianni, Faden, & Federman 1994). Women 65 years of age or older number 18.5 million (Cohen & Cahan, 1993), outlive men by approximately 8.6 years, and comprise the majority of the elderly patient population (Hazzard, 1994). A study of women aged 60 and older (n = 201) was conducted to examine the patterns of health-promotion strategies employed by residents and physicians engaged in family practice (Blair & White, 1998). The results revealed that elderly women are not immunized or advised regarding urinary incontinence or hormonal-replacement therapy.

Although legislation was approved and chaptered by the secretary of state to regulate the provision of telephone advice by HMOs and its delivery by licensed nurses working under the direct supervision of physicians, the vast majority of medical advice rendered in one of the largest HMOs in this country remains delivered by nonlicensed personnel. There is a tremendous need for policy (i.e., facility, state, and national) to regulate the provision of services—including long-term home-health support—and to ensure the delivery and quality of care for elderly community-dwelling individuals. A mechanism should also be established to ensure compliance by health-care delivery systems with the mandate of this legislation to provide a separate course of instruction in geriatrics for all health-care professionals for a minimum of 6 weeks (Hagopian & Suttmann, 2000). However, although this is indeed a step in the advancement of gerontological knowledge among physicians, given the increase in elder demographics among the total U.S. population, 6 weeks of instruction is insufficient to adequately address the needs of elderly patient populations and should be adjusted in length and instructional scope.

Additional legislation is needed to ensure the inclusion of health-promotion strategies to improve the quality and delivery of health-care services to older women, incorporating the dimensions of ethics and human rights (Schick et al., 2000). Women predominate the geriatric population, surviving males by 8.6 years (Cohen & Cahan, 1993; Hazzard, 1994). In 1995, there were 145 elderly women (19.8 million) for every 100 men (13.7 million) within the same age-group. Increasing with age, the gender ratio in 1995 varied from 120 for those aged between 65 and 69 years to 257 for those 85 years of age and older (AARP, 1995). Cohen and Cahan project that the proportion of elderly females will double by the year 2030. It is the responsibility of all human beings—individuals, communities, and society as a whole—to ensure justice, human rights, and the provision of efficient and effective health care for all people (Aday, 1993, 1994).

Summary

A debt is owed to all of the elderly participants and caregivers in this study who shared so willingly of their experiences and perceptions regarding their ability to obtain health-care services in a group-model HMO. The majority of the informants participating in this research endured two separate interview sessions in the interest of protecting their vulnerable energy levels. Many confirmed the interpretations of the interview data via follow-up telephone calls when clarification of the content and meaning of portions of the interview data was necessary. Their contributions to the advancement of nursing knowledge regarding the process of accessing health-care services is invaluable.

The findings of this study indicate a need to improve the scope of gerontological education in all programs of training for health-care professionals, as well as the quality and delivery of health-care services to elderly individuals. If accessibility of these services is incongruent with the ability of frail elders to negotiate the process for needed services, older HMO enrollees will be unable to benefit from the first three measures. Nursing care for the elderly can be traced back to 131 A.D. According to Galen, a physician born in Asia Minor,

> These and other things are very easy, but to take charge of an old man, safeguarding his health, is one of the most difficult; as it is also of those convalescent from disease. This latter portion of the art is called by younger physicians analepsy; and that which concerns the old man, gerontology (cited in Green, 1951, p. 202).

No conclusion to this study could be more poignant than the words of one elderly woman who stated,

> Please help me! I just don't know what to do anymore. You know, with those message phone things and this new call center; I just can't do it! I can't get through!!! My husband is dead, and I really don't like to bother my son, even though he gets upset when he finds out that I've been sick and haven't been able to reach my doctor. He works and has a family, and I think that he deserves to enjoy them and rest at the end of the day, not bother with his old mother. I enjoy their visits and want them to be happy times, and not be a burden to him or my daughter-in-law, but it is comforting to know that they live nearby. Sometimes, when I'm really feeling bad, it's a bit frightening because I can't seem to get through on the phones [to the doctor or nurse], and I just don't know what to do. To be old is not such a good thing—nothing really good about the golden years. Your loved ones die, your friends die one by one, and it gets kinda lonely. Even your doctors die, and you keep having to get younger ones—ones with "peach fuzz" on their faces, younger than my grandchildren. Life is so much more difficult when you are old, and no one seems to care what happens to old people. Please, help me!

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APPENDICES

APPENDIX A

PILOT-STUDY FINDINGS

Appendix A

Pilot-Study Findings

Factors Influencing Access to Health Care as Perceived by Frail, Elderly Participants of Health-Maintenance Organizations

A Pilot Study

By

Jennings, D. L., & Clarke, A. E. (1997). Unpublished research study. University of California, San Francisco.

Sample Population

Inclusion Criteria: Frail elders (n = 10), 75 years of age and older
Group-Model HMO enrollees
Residing independently within the community
One or more chronic diseases and/or functional impairment
Emergency department or hospital admission within the 6 months preceding the study

Barriers to Health-Care Access

* Ageism
* Female gender bias
* Lack of transportation to medical center
* Provider knowledge deficit regarding illness presented
* Difficulty in obtaining, or delayed, referrals for specialized services
* Automated telephone-answering devices
* Long waiting times for appointments or pharmacy service
* Lengthy referrals for specialized services
* Fear of independence loss through hospitalization or nursing-home placement
* Fear of retaliation by provider if consumer health-related decision is incongruent with provider recommendation

Facilitators to Health-Care Access

* Consumer assertiveness
* Family RN/MD advocacy
* Community resources [transportation]
* Knowing "how to use the system"

(Note: Wealth or education did not facilitate access for this sample.)

APPENDIX B

COMMITTEE OF HUMAN RESEARCH APPROVAL, UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

Appendix B

Committee of Human Research Approval, University of California, San Francisco

COMMITTEE ON HUMAN RESEARCH
OFFICE OF RESEARCH AFFAIRS, Box 0962
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO
http://www.ucsf.edu/ocn

CHR APPROVAL LETTER

TO: Jeanie Kayser-Jones, Ph.D.
Box 0610

Diana L. Jennings, M.S.N., R.N.
19099 Crest Avenue
Castro Valley, CA 94546

RE: Perceptions of Frail Elders in HMO's on Factors that Influence Health Care Access

The Committee on Human Research (CHR), the UCSF Institutional Review Board (IRB) holding Department of Health and Human Services Multiple Project Assurance #M-1169, has reviewed this application to involve humans as research subjects. All items attached to the blue original copy of this letter were reviewed. The study was approved with the conditions described below.

CONDITION: Please respond in writing in a timely manner. Please correct the first sentence in the Purpose section of the consent form to read ". . . elderly people, age *75* . . . ." You may enroll a limited number of subjects if needed before you make this change. However, the members prefer you make the change before enrolling any additional subjects. Please submit two copies of your revised consent form to Box 0962. Once these copies have been received and accepted, the status of this protocol will be changed from Conditional Approval to Approval.

APPROVAL NUMBER: H721-13191-04.This number is a UCSF CHR number and should be used on all correspondence, consent forms and patient charts as appropriate.

APPROVAL DATE: October 14, 1999. Expedited Review

EXPIRATION DATE: October 1, 2000. If the project is to continue, it must be renewed *by the expiration date*. See reverse side for details.

ADVERSE EVENT REPORTING: All problems having to do with subject safety must be reported to the CHR within ten working days. All deaths, whether or not they are directly related to study procedures, must be reported. Please review Appendix A of the CHR *Guidelines* for additional examples of adverse events or incidents which must be reported.

MODIFICATIONS: Prior CHR approval is required before implementing any changes in the consent documents or any changes in the protocol which affect subjects.

QUESTIONS: Please contact the office of the Committee on Human Research at (415) 476-1814 or campus mail stop, Box 0962, or by electronic mail at chr@itsa.ucsf.edu.

Sincerely,

Arthur Ablin

Arthur R. Ablin, M.D.
Chairman
Committee on Human Research

APPENDIX C

INFORMATIONAL FLYER

Appendix C

Informational Flyer

Are you

75 YEARS OLD OR OLDER?

Do you

HAVE PROBLEMS WITH YOUR HEALTH?

Are you

A MEMBER OF A HEALTH MAINTENANCE ORGANIZATION (HMO)?

And

Would you be willing to speak privately with a nurse researcher about your illness experiences?

Why???

I would like to find out about the experiences that older adults have when trying to get health care when they are ill. This study will provide valuable information to HMOs so they can improve their services.

INTERVIEW:
- ♦ Will last about one hour or so.
- ♦ Will take place at a location of your choice.
- ♦ Will be kept confidential.

PAYMENT:
- ♦ You will be offered $10.00 for your time.

If you are interested or know someone who might be, please call Diana Jennings, RN, PhD(c) at (510) 278-9419.

APPENDIX D

INFORMED CONSENT FORMS

Appendix D

Informed Consent Forms

University of California, San Francisco
Consent to Participate in a Research Study
Individual Interviews

Project Title: **FACTORS INFLUENCING ACCESS TO HEALTH-CARE SERVICES: PERCEPTIONS OF FRAIL, ELDERLY ENROLLEES OF HEALTH-MAINTENANCE ORGANIZATIONS.**

Purpose:
Diana L. Jennings, RN, Ph.D.(c), and Jeanie Kayser-Jones, RN, Ph.D., FAAN, of the school of nursing, are conducting a study about the factors that influence the ability of frail, community-dwelling elders insured by Health Maintenance Organizations to obtain health care services. You have been referred to us as a possible candidate for our research study. We would like to ask you to participate in this research project. Because you are 75 years of age or older, have at least two chronic diseases and/or some difficulty with walking, or have had a recent hospitalization or emergency department visit, your opinions are valuable to us.

Procedures:
If you agree to participate, an informal interview will be held in your home or a quiet place of your choosing, such as a conference room or senior center. The interview will last approximately one hour and will include only you and Diana Jennings. The purpose of this interview is to gather information about your thoughts and feelings about health, illness, and the experiences that you have had when calling the medical center for appointments or telephone advice. The interview will be tape recorded, if you agree.

Risks/Discomforts:
Talking about your experiences may be difficult or unpleasant. However, you are free to talk about only those aspects you want to and you may terminate the process at any time. Participation in the study will involve a loss of privacy. All of the tapes and transcriptions obtained during the private interviews will be coded to protect your identity and confidentiality; your name is not marked on the data, only code numbers are used. Tapes and transcriptions are locked in a cabinet; only Diana Jennings and Dr. Kayser-Jones will have access to the cabinet. All dated will be destroyed within two years after completion of the study. Your identity will not be disclosed in the event the results of the study are published.

Benefits:
There are no direct personal benefits to you. However, the information you provide may help health care providers to better understand your concerns and health care needs.

Costs:
There will be no costs to you for being in the study. There is a $10.00 reimbursement fee for participating in the interview and focus group.

Questions:

You have talked with Diana Jennings about this study and have had your questions answered. If you have any further questions about the study, you may contact either of us at:

Researcher: Diana Jennings, RN, Ph.D.(c)
School of Nursing, Department of Physiological Nursing
University of California, San Francisco
San Francisco, California 94143-0606
Home Telephone: (510) 278-9419

Supervisor/Researcher: Jeanie Kayser-Jones, RN, Ph.D., Professor
Department of Physiological Nursing
and Medical Anthropology
University of California, San Francisco
San Francisco, California 94143-0610
Office Telephone: (415) 476-4280

If you have any comments or concerns about participation in this study, you should first talk with one of the researchers. If for some reason you do not wish to do this, you may contact the Committee on Human Research, which is concerned with the protection of volunteers in research projects. You may reach the committee office between 8:00 a.m. and 5:00 p.m., Monday through Friday, by calling (415) 476-1814, or by writing to: Committee on Human Research, Box 0616, University of California, San Francisco, CA 94143. The Approval Number for this project is H721-13191-04.

Consent:
You will be given a copy of this consent form to keep.

Participation in research is voluntary. You are free to decline to be in this study, you may refuse to answer any questions at any time. You may stop the interview at any time, without affecting your health care in any way.

DATE_____ Signature of Participant_____

DATE_____ Signature of Researcher_____
Obtaining Consent

Address (only if you wish to receive a copy of the final report of this research):

_____

_____

Thank you for your time and effort.

University of California, San Francisco
Consent to Participate in a Research Study
Focus Group Interviews

Project Title: **FACTORS INFLUENCING ACCESS TO HEALTH-CARE SERVICES: PERCEPTIONS OF FRAIL, ELDERLY ENROLLEES OF HEALTH-MAINTENANCE ORGANIZATIONS.**

Purpose:
Diana L. Jennings, RN, Ph.D.(c), and Jeanie Kayser-Jones, RN, Ph.D., FAAN, of the school of nursing, are conducting a study about the factors that influence the ability of frail, community-dwelling elders insured by Health Maintenance Organizations to obtain health care services. You have been referred to us as a possible candidate for our research study. We would like to ask you to participate in this research project. Because you are 75 years of age or older, have at least two chronic diseases and/or some difficulty with walking, or have had a recent hospitalization or emergency department visit, your opinions are valuable to us.

Procedures:
If you agree to participate, you will be invited to attend a small group meeting with Diana, a research assistant, and approximately 6-8 other elderly people. The meeting will take place in a quiet location, such as a conference room or senior center, that is agreeable to you. The purpose of this group meeting is to gather information about your thoughts and feelings about health, illness, and the experiences that you have had when calling the medical center for appointments or telephone advise. We want to see if there are similarities in your viewpoints and experiences. The focus group conversations will be tape recorded, if you agree.

Risks/Discomforts:
Talking about your experiences may be difficult or unpleasant. However, you are free to talk about only those aspects you want to and you may terminate the process at any time. Participation in the study will involve a loss of privacy. Researchers will ask you and the other people in the group to use only first names or initials during the group sessions. They will also ask you not to tell anyone outside the group what any particular person said in the group. However, the researchers cannot guarantee that everyone will keep the discussions private. All of the tapes and transcriptions obtained during the private interviews and focus group sessions will be coded to protect your identity and confidentiality; your name is not marked on the data, only code numbers are used. Tapes and transcriptions are locked in a cabinet; only Diana and Dr. Kayser-Jones will have access to the cabinet. All dated will be destroyed within two years after completion of the study. Your identity will not be disclosed in the event the results of the study are published.

Benefits:
There are no direct personal benefits to you. However, the information you provide may help health care providers to better understand your concerns and health care needs.

Costs:

There will be no costs to you for being in the study. There is a $10.00 reimbursement fee for participating in the interview and focus group.

Questions:
You have talked with Diana Jennings about this study and have had your questions answered. If you have any further questions about the study, you may contact either of us at:

Researcher: Diana Jennings, RN, Ph.D.(c)
School of Nursing, Department of Physiological Nursing
University of California, San Francisco
San Francisco, California 94143-0606
Home Telephone: (510) 278-9419

Supervisor/Researcher: Jeanie Kayser-Jones, RN, Ph.D., Professor
Department of Physiological Nursing
and Medical Anthropology
University of California, San Francisco
San Francisco, California 94143-0610
Office Telephone: (415) 476-4280

If you have any comments or concerns about participation in this study, you should first talk with one of the researchers. If for some reason you do not wish to do this, you may contact the Committee on Human Research, which is concerned with the protection of volunteers in research projects. You may reach the committee office between 8:00 a.m. and 5:00 p.m., Monday through Friday, by calling (415) 476-1814, or by writing to: Committee on Human Research, Box 0616, University of California, San Francisco, CA 94143. The Approval Number for this project is H721-13191-04.

Consent:
You will be given a copy of this consent form to keep.

Participation in research is voluntary. You are free to decline to be in this study, you may refuse to answer any questions at any time. You may stop the interview at any time, without affecting your health care in any way.

DATE_____ Signature of Participant_____

DATE_____ Signature of Researcher_____
Obtaining Consent

Address (only if you wish to receive a copy of the final report of this research):

_____

_____

Thank you for your time and effort.

APPENDIX E

SUGGESTED INTERVIEW AND FOCUS-GROUP GUIDES

Appendix E

Suggested Interview and Focus-Group Guides

Suggested Interview & Focus Group Guides For Elder

Project Title: Factors Influencing Access to Health-Care Services: Perceptions of Frail, Elderly Enrollees of Health-Maintenance Organizations

Researcher/Doctoral Candidate: Diana Jennings, RN, Ph.D.(c), Department of Physiological Nursing, University of California, San Francisco
and
Principle Investigator/Supervisor: Jeanie Kayser-Jones, RN, Ph.D.
Professor, Department of Physiological Nursing and Medical Anthropology
University of California, San Francisco

The following questions may be utilized to solicit additional information from the participants. Their use and how they are actually stated will be dictated by the respective story of the individual.

Would you please tell me a little bit about:

A. Routine Care:

1. When you call for an appointment, how long do you usually have to wait for an appointment? Is it usually (a) a same-day appointment, (b) within a week, or (c) longer than one week?

2. Your last visit with a doctor or a nurse; the visit before that.

3. Have you ever received a referral for specialized services, such as a doctor who specializes in heart or blood pressure problems? If so, how long have you had to wait before being seen? (A) one week, (b) one month, (c) several months, (d) one year, (e) or longer than one year?

4. What do you have to do to get your prescriptions refilled?
   (a) How do you get your prescription medications, and where do you get them filled? (b) Do you have difficulty in terms of cost to fill all of the prescription medication that you take each month? (c) Has the doctor or nurse explained what you're taking the medications for?

5. When you need to see a doctor or a nurse, how do you get to and from the doctors office and/or the medical center?

6. Does your HMO provide transportation or shuttle service for you?

B. Response to Crisis Care:

7. Your last two experiences of telephoning the medical center for advice or assistance.

8. When you needed to speak to somebody about a problem, were you able to speak with a registered nurse or a physician?

Suggested Interview & Focus Group Guide For Elder (continued):

9. When you are ill, do you tell any of your family members or friends about your illness? Do you have any family members or friends who can help you when you are sick? If not, who does help you?

C. Institutional Care for Serious Problems:

10. Tell me about the last time that you were hospitalized, or had to go to the emergency room for help.

(a) How long were you in the hospital?

(b) When you were discharged, did you go home, or to a nursing home?

Suggested Interview & Focus Group Guide For Primary Caregiver

Project Title: Factors Influencing Access to Health-Care Services: Perceptions of Frail, Elderly Enrollees of Health-Maintenance Organizations

Researcher/Doctoral Candidate: Diana Jennings, RN, Ph.D.(c), Department of Physiological Nursing, University of California, San Francisco
and
Principle Investigator/Supervisor: Jeanie Kayser-Jones, RN, Ph.D.
Professor, Department of Physiological Nursing and Medical Anthropology
University of California, San Francisco

The following questions may be utilized to solicit additional information from the participant's primary caregiver. Their use and how they are actually stated will be dictated by the respective story of the individual.

Would you please tell me a little bit about:

A. Routine Care:

1. When you call for an appointment, how long do you usually have to wait for an appointment? Is it usually (a) a same-day appointment, (b) within a week, or (c) longer than one week?

2. The last visit with a doctor or a nurse; the visit before that.

3. Has the elderly patient ever received a referral for specialized services, such as a doctor who specializes in heart or blood pressure problems? If so, how long have they had to wait before being seen? (A) one week, (b) one month, (c) several months, (d) one year, (e) or longer than one year?

4. What do you have to do to get their prescriptions refilled?
   (a) How do you get their prescription medications, and where do you get them filled? (b) Do you have difficulty in terms of cost to fill all of the prescription medication that they take each month? (c) Has the doctor or nurse explained what they're taking the medications for?

5. When the elderly patient needs to see a doctor or a nurse, how do they get to and from the doctors office and/or the medical center?

6. Does the HMO provide transportation or shuttle service for them?

B. Response to Crisis Care:

7. The last two experiences of telephoning the medical center for advice or assistance.

8. When you needed to speak to somebody about a problem, were you able to speak with a registered nurse or a physician?

Suggested Interview & Focus Group Guide For Primary Caregiver (continued):

9. When the elderly patient is ill, do you tell any of their family members or friends about their illness? Do they have any family members or friends who can provide help when the patient is sick? If not, who does help them?

C. Institutional Care for Serious Problems:

10. Tell me about the last time that the elderly patient was hospitalized, or had to go to the emergency room for help.

(a) How long was the elderly patient in the hospital?

(b) When the patient was discharged, did they go home, or to a nursing home?

APPENDIX F

DEMOGRAPHIC QUESTIONNAIRE

Appendix F

Demographic Questionnaire

ID#_____
Code_____
Date_____

Please place an x by, or write in, the correct answer.

1. What is your gender?

_____A. Female
_____B. Male

2. What is your age?_____

_____A. 65-74 years old
_____B. 75-84 years old
_____C. 85 years old and older

3. What is your race/ethnicity?

_____A. African American
_____B. Asian [Chinese, Filipino, Japanese]
_____C. Caucasian
_____D. Hispanic
_____E. Multi-ethnic_____
_____F. Other_____

4. What language/s do you speak?

_____A. English
_____B. Spanish
_____C. Italian
_____D. Filipino
_____E. German
_____F. Portuguese
_____G. Other_____

5. What is the last year of school that you completed?

_____Elementary School (grades 1 through 8)_____
_____High School (grades 9 through 12)_____
_____Trade or Vocational School_____
_____College (years 1-4)_____
_____Graduate School

6. What is your marital status?

_____A. Married
_____B. Divorced
_____C. Separated
_____D. Single (never been married)
_____E. Widow/Widower
_____F. Partnered

7. Do you have any living children?

_____A. No
_____B. Yes

8. If the answer to question 7 is yes, how many do you have?_____

9. Do any of your children live nearby? [Probe-if you need help, is there anyone you can turn to?]

_____A. No
_____B. Yes

10. If the answer to question 9 is yes, are any of them available to drive you to the medical center should you be unable to drive?

_____A. No
_____B. Yes

11. (a) Do you currently have a Driver's License in the State of California?

_____A. No
_____B. Yes

(b) Are you able to drive a car?

_____A. No
_____B. Yes

12. What is your religious affiliation?

_____A. Atheist
_____B. Catholic
_____C. Jewish
_____D. Other_____
_____E. Non-denominational
_____F. Protestant

The following questions pertain to your residence, who you live with, and aspects of the community in which you reside.

13. Do you live alone?

_____A. No
_____B. Yes

14. If you do not live alone, who do you live with, and what is your relationship?

_____A. Spouse or Significant Other
_____B. Sister or Brother
_____C. Son or Daughter
_____D. Niece or Nephew
_____E. Friend
_____F. Other_____

15. Do you have to climb stairs to get to your residence and, if so, how many stairs are there?

_____A. No
_____B. Yes _____

16. Are there stairs to climb inside your residence and, if so, how many are there?

_____A. No
_____B. Yes_____

17. Do you feel safe in the neighborhood in which you reside?

_____A. No
_____B. Yes

18. Is public transportation available to you within walking distance of your residence?

_____A. No
_____B. Yes

19. Do you live within walking distance of a grocery or drug store?

_____A. No
_____B. Yes

20. Do you live within walking distance of a senior center?

_____A. No
_____B. Yes

21. Is there low-cost transportation for seniors in your community?

_____A. No
_____B. Yes

The following questions pertain to your beliefs regarding your general health status.

22. Do you have any major health problems (i.e., chronic illness)?

The following questions pertain to your health care insurance.

23. (a) What HMO do you belong to? _____

(b) Where do you obtain your health care services?

_____A. Outpatient clinic (e.g., medical clinic, urgent care clinic)
_____B. Emergency department
_____C. Other _____

24. How long have you belonged to an HMO?

25. Do you have a regular medical doctor at the HMO?

_____A. No
_____B. Yes

26. If the answer to question 25 is yes, are you able to get a same-day appointment with your primary medical doctor when you suddenly become ill?

_____A. No
_____B. Yes

27. Who do you see if you can't get an appointment with your primary medical doctor?

_____A. Another medical doctor.
_____B. An advice nurse.
_____C. Nurse Practitioner_
_____D. Physician Assistant
_____E. Other_____

APPENDIX G

THE MEDICAL OUTCOMES STUDY 36-ITEM SHORT-FORM HEALTH SURVEY (SF-36)

Appendix G

THE MEDICAL OUTCOMES STUDY
36-ITEM SHORT-FORM HEALTH SURVEY (SF-36)

ID#_____
Code_____
Date_____
Score_____

INSTRUCTIONS: This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

Answer your question by marking the answer as indicated. If you are unsure about how to answer a question, please give the best answer you can.

1. In general, would you say your health is (circle one)

Excellent.....1

Very good.....2

Good.....3

Fair.....4

Poor.....5

2. Compared to one year ago, how would you rate your health in general now?

(circle one)

Much better now than one year ago.....1

Somewhat better now than one year ago.....2

About the same as one year ago.....3

Somewhat worse now than one year ago.....4

Much worse now than one year ago.....5

THE MEDICAL OUTCOMES STUDY 36-ITEM SHORT-FORM HEALTH SURVEY [SF-36] - continued:

3. The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

(Circle one number on each line)

ACTIVITIES	Yes, Limited A Lot	Yes, Limited A Little	No, Not Limited At All
a. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	1	2	3
b. Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf.	1	2	3
c. Lifting or carrying groceries	1	2	3
d. Climbing several flights of stairs	1	2	3
e. Climbing one flight of stairs	1	2	3
f. Bending, kneeling, or stooping	1	2	3
g. Walking several blocks	1	2	3
h. Bathing or dressing yourself	1	2	3
i. Walking one block	1	2	3
j. Bathing or dressing yourself	1	2	3

4. During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

(Circle one number on each line)

	YES	NO
a. Cut down the amount of time you spend on work or other activities	1	2
b. Accomplished less than you would like	1	2
c. Were limited in the kind of work or other activities	1	2
d. Had difficulty performing the work or other activities (for example, it took extra effort)	1	2

THE MEDICAL OUTCOMES STUDY 36-ITEM SHORT-FORM HEALTH SURVEY [SF-36] - continued:

5. During the past 4 weeks, have you had any of the following problems with your work or other regular activities as a result of any emotional problems (such as feeling depressed or anxious?

(Circle one number on each line)

	YES	NO
a. Cut down the amount of time you spend on work or other activities	1	2
b. Accomplished less than you would like	1	2
c. Didn't do work or other activities as carefully as usual	1	2

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?

(circle one)

Not at all.....1

Slightly.....2

Moderately.....3

Quite a bit.....4

Extremely.....5

7. How much bodily pain have you had during the past 4 weeks? (circle one)

None.....1

Very mild.....2

Mild.....3

Moderate.....4

Severe.....5

Very severe.....6

THE MEDICAL OUTCOMES STUDY 36-ITEM SHORT-FORM HEALTH SURVEY [SF-36] - continued:

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

(circle one)

Not at all..... 1

A little bit..... 2

Moderately..... 3

Quite a bit..... 4

Extremely..... 5

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks -

(circle one number on each line)

	All of the Time	Most of the Time	A Good Bit of the Time	Some of the Time	A Little of the Time	None of the Time
a. Did you feel full of pep?	1	2	3	4	5	6
b. Have you been a very nervous person?	1	2	3	4	5	6
c. Have you felt so down in the dumps that nothing could cheer you up?	1	2	3	4	5	6
d. Have you felt calm and peaceful?	1	2	3	4	5	6
e. Did you have a lot of energy?	1	2	3	4	5	6
f. Have you felt downhearted and blue?	1	2	3	4	5	6
g. Did you feel worn out?	1	2	3	4	5	6
h. Have you been a happy person?	1	2	3	4	5	6
I. Did you feel tired?	1	2	3	4	5	6

THE MEDICAL OUTCOMES STUDY 36-ITEM SHORT-FORM HEALTH SURVEY [SF-36] - continued:

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

(circle one)

All of the time..... 1

Most of the time..... 2

Some of the time..... 3

A little of the time..... 4

None of the time..... 5

11/ How TRUE or FALSE is each of the following statements for you?

(circle one number on each line)

	Definitely True	Mostly True	Don't Know	Mostly False	Definitely False
a. I seem to get sick a little easier than other people	1	2	3	4	5
b. I am as healthy as anybody I know	1	2	3	4	5
c. I expect my health to get worse	1	2	3	4	5
d. My health is excellent	1	2	3	4	5

Note: From "The MOS 36-Item Short-Form Health Survey (SF-36). I. Conceptual Framework and Item Selection," by J. E. Ware and C. D. Sherbourne, 1992, *Medical Care, 30,* pp. 473-483. Copyright 1992 by John E. Ware. Reprinted with permission.

APPENDIX H

MENTAL STATUS QUESTIONNAIRE

Appendix H

MENTAL STATUS QUESTIONNAIRE

ID# _____
Code_____
Date_____
Score_____

MENTAL STATUS QUESTIONNAIRE (MSQ)

To estimate impairment, ask the following questions:

1. Where are we now? (Do you know the name of this place or can you tell me the name of this place? Place orientation)

2. Where is this place located? (Do you know where? Place orientation)

3, 4, 5. Do you know the date? (Time orientation)

(3) month? _____
(4) date? _____
(5) year? _____

6. What day of the week is it?_____

7. How old are you? (Would you mind telling me how old you are? Memory)

8. When were you born? (Memory)_____

9. Who is the President of the United States? (If you wish, precede by: Have you had an interest in politics or do you watch the news on television or, whatever else you are comfortable with. General information & Memory)

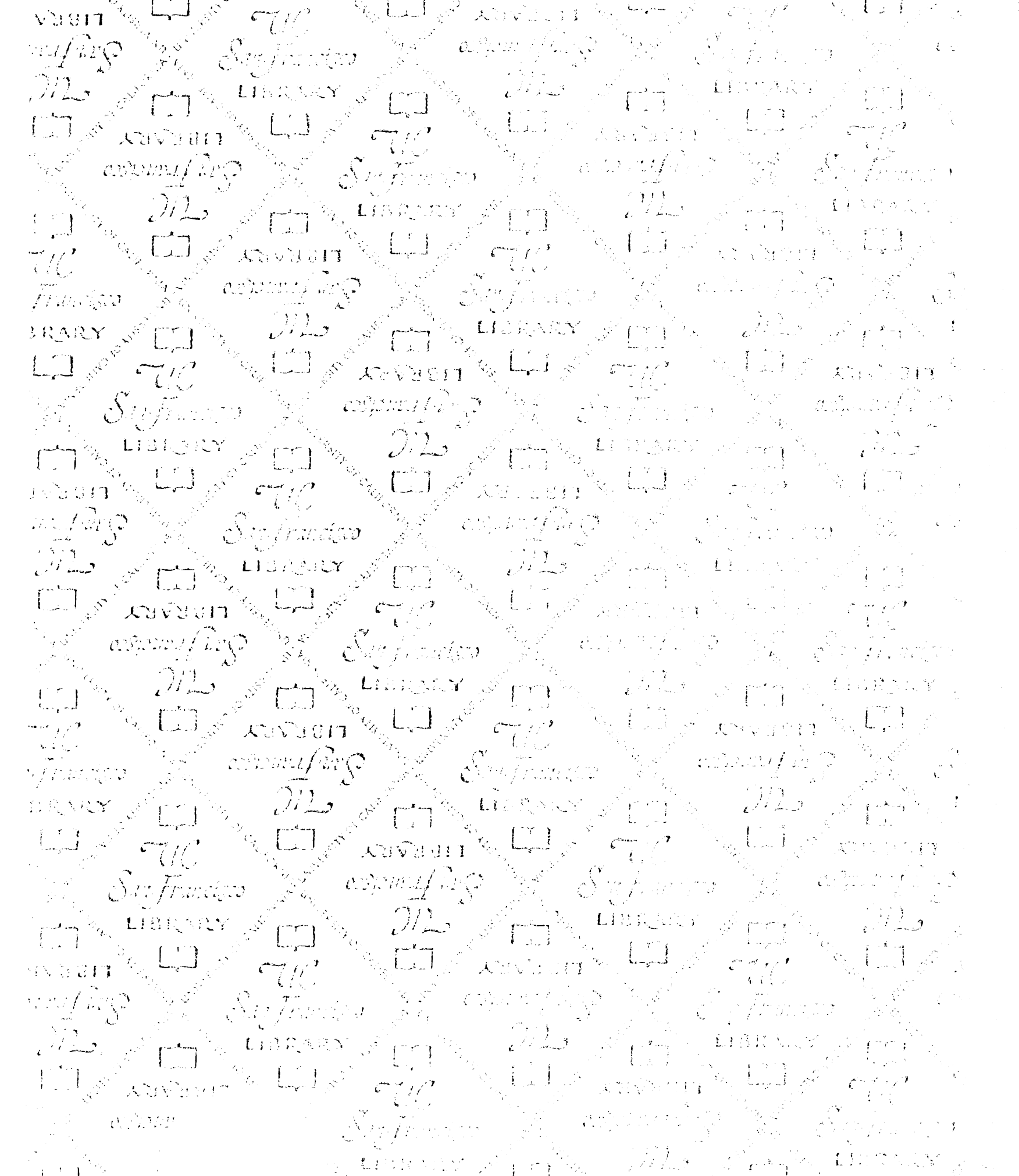
10. Who was President before him? (General information & Memory)

Score shows severity of brain syndrome:

1 - 2 errors = none or minimal
3 - 8 errors = moderate
9 - 10 errors = severe

The test should be given in a comfortable atmosphere by an individual with whom the person feels comfortable. The anxiety of a test situation may block responses. Environmental cues must be available in the setting: (i.e., clocks and calendars, etc.). The test should be given two or three times if the responses are not accurate. In these cases, you may want to try another time of day and another setting.

Note: From "Brief Objective Measures for the Determination of Mental Status in the A," by R. L. Kahn, A. Goldfarb, and M. Pollack, 1960, *American Journal of Psychiatry, 117,* pp. 326–328. Copyright 1960 by the American Psychiatric Association. Reprinted with permission.


The San Francisco Public Library