7

Ambulatory Care

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LEARNING OBJECTIVES

- Explain what is meant by ambulatory care.
- Explain what is meant by primary care.
- Describe where and how primary care is delivered.
- Describe how the delivery of primary care is changing due to managed care.
- Describe the role of emergency services in the spectrum of ambulatory care.

TOPICAL OUTLINE

Ambulatory care
Primary care
Emergency care
Subspecialty care
Home health care
Complementary and alternative medical care
Patient networks and support groups
Summary and current issues in ambulatory care

KEY WORDS

ambulatory care, primary care, primary care provider, emergency care, specialty ambulatory care, home health care, complementary and alternative care, patient networks, support groups

Improved technology and better management can result in shortened waiting times for appointments and waiting times in the office. Improved communication (e.g., access through email), between patient and provider, and among patients with the same symptoms or diseases, can result for many. Patients can gain access to comprehensive and targeted information through websites on symptoms, diseases, and treatment. Better protocols for service provision and better information can result in improved case management for patients with chronic conditions, such as for those who have difficulty following different regimens prescribed by multiple specialists at the same time.

Research needs to be done to target individuals who are at health risk if untreated, and on ways to give such individuals better access to appropriate care. How can we predict which individuals are mostly likely to be at risk for conditions that if untreated will have serious health and cost impacts? Once such individuals are identified, how can resources be best allocated so that the people can actually receive needed health care?

Cost Containment

The costs of ambulatory care are rising significantly as more treatment is done outside of hospitals and nursing homes, and the costs of drugs and new technologies continue to rise. Promising ways to contain the costs of ambulatory care include the following: patients leading healthier lives, less costly provision of more primary care through providers other than physicians, and better disease management. Standardized insurance forms and payment protocols can reduce ambulatory care billing costs. So can collecting payments up front rather than billing for care on a per-episode basis.

Costs in the secondary and tertiary sectors of the health care services system can be reduced, thus allowing shifts to greater investment in primary and preventive care. Should hospital-based ambulatory care be phased out and replaced by more efficient alternatives? Less secondary and tertiary care can be provided in the last 12 months of life. Hospital beds can be closed and jobs eliminated through reducing hospital capacity, a process that, of course, has been under way in some parts of the country for the last 20 years.

Research needs to be done, with the best practices disseminated, on the ways to make sure that patients receive certain cost-effective services, such as counseling to stop smoking. Patients must also be helped to follow regimens, for example, through development of computerized systems for patients to enter what behaviors they practice and do not practice daily, for review by providers.

Research needs to be conducted concerning what behavioral practices pay off in improved health outcomes. How can we best help patients and members to improve literacy, eat more balanced diets, exercise more, and

Ambulatory Care

Ambulatory care is personal health care provided to individuals, or a population of individuals, who are not occupying a bed in a health care institution or at home. It encompasses all health services provided to individual patients, including community services, such as general information about the hazards of smoking or substance abuse, and some of the services delivered by public health departments, such as information about immunizations and sexually transmitted diseases. Primary care, emergency care, and ambulatory subspecialty care, including ambulatory surgery, are all subsets of ambulatory care. They are provided in a variety of settings—freestanding provider offices, hospital-based clinics, school-based clinics, public health clinics, and neighborhood and community health centers.

Current practice is to attempt to provide health care services in the least costly setting available. This has led to a decrease in hospital admissions, hospital length of stay, and hospital days, and increased utilization of nonemergent ambulatory facilities. There has not been, however, decreased utilization of emergency services; in fact there was no change in emergency department utilization between 1995 and 1998 (U.S. Department of Health and Human Services [USDHHS], 2000, Table 83). The types and severity of those illnesses that physicians and other providers are able and willing to treat in ambulatory settings have also increased. Patients admitted to hospitals are therefore sicker on admission and stay for shorter periods than they did formerly. At discharge they often require support services for variable lengths of time after they leave the hospital. Some of these services are provided in the home, others in ambulatory care settings. This has changed the principal locus of care for certain services, such as rehabilitation services (physical therapy, etc.), and invasive diagnostic and surgical procedures from the hospital to ambulatory facilities and to the home.

What has been the standard of practice, but is now beginning to change, is the single episodic encounter, usually between a physician and a patient, driven by the patient's perceived need for medical care. For example, an individual with a rash that has not responded to usual remedies sees a dermatologist to whom he has been referred by a friend, not by the patient's personal physician. No record of the encounter is communicated by the dermatologist to another physician. The rash recurs, and the patient seeks advice from another dermatologist, with the same result—improvement followed by recurrence. The third physician encounter may be with the personal physician, who may recognize the cause of the rash as related to a condition that the patient has but that was not communicated to the previous two dermatologists. Though the patient has had the luxury of ultimate choice, it may not have been in the patient's best interests to exercise that choice. On the other hand, care by a subspecialist for such conditions such as chronic illnesses may be associated with improved outcomes and decreased costs.

A major problem facing us in this rapidly changing health care delivery system is how to maintain an individual's ability to choose while containing

costs, providing quality care, and maintaining satisfaction with the care received. In this latter regard, an aspect of these changes deals with the need to preserve the pleasure that both providers of care and patients derive from establishing long-term relationships. It is similar to the pleasure one gets from maintaining long-term friendships, friendships that are built of shared experiences that allow people to connect easily even after long absences. Long-term relationships between patients and their physicians are involuntarily ruptured when a patient changes jobs and the new employer has a health insurance contract that does not include the patient's physician. This has the effect of diminishing the effort both physicians and patients will make in building trusting relationships.

The need to reduce the costs of health care has had a number of other effects. Primary care providers have taken on patient responsibilities previously referred to specialists. This, in turn, has decreased the reliance on specialists and is one cause of the apparent oversupply of specialists found in some parts of the United States. Consumers have become concerned that controlling costs leads to a decrease in the quality of care. Abuses of the system in the name of controlling costs are difficult to document, but the health care marketplace is adjusting to the concerns of consumers, either through legislation or through market pressures (Bodenheimer, 1996).

This chapter looks at how ambulatory services are provided—who provides those services and where—with particular emphasis on the characteristics of the provision of primary care. The intent is to give the reader an understanding of how and where individuals receive the great bulk of their health care in the United States. The chapter will not discuss mental health, public health, or rehabilitative services.

Ambulatory Care Statistics

In 1997 close to 960 million visits were made to doctors' offices, emergency departments, and to hospital-based outpatient departments. The average person made 3.6 visits to a physician (Schappert, 1999) and spent 0.72 days in an acute care hospital (American Hospital Association [AHA], 2000, Table 3, p. 9). Thus, there were 5 times more ambulatory care episodes than hospital days of care in 1997. Though this ratio has not changed much since 1980 (4.7 ratio in 1980), the number of hospital days has fallen from 1,163 per 1,000 population in 1980 (USDHHS, 1982, Tables 35, 43), to 796 per 1,000 in 1994 to 708 per 1,000 in 1998 (AHA, 2000, Table 3, p. 9). The shift away from inpatient care of the last 2 decades has had an enormous impact on the organization, staffing, and financing of ambulatory services in the United States. The number of Americans who reported a visit to a physician in the past year increased slightly, from 75% in 1980 to 79.1% in 1996 (Markowitz, 2000, p. 212). Meanwhile, the average length of stay in nonfederal acute care hospitals decreased from 7.3 days in 1980 to 6.0 in 1993 (USDHHS, 1982, Table 42; 1995, Table 85)

to 5.3 days in 1998 (AHA, 2000, Table 3, p. 9). Thus, in sum, the shift from the focus on the hospital inpatient encounter to ambulatory patient-physician contact continues.

The rates of visits to physicians vary by age, gender, race, and socioeconomic status (see Figure 7.1). Rates for females are higher than for males (4.2 visits versus 3.0 visits) mainly because of the marked difference in the 15–24-year-old and 25–44-year-old categories (3.1 and 3.9 visits for females versus 1.5 and 2.1 for males, respectively). In most other age categories gender rates are similar. Individuals 75 years and older have the highest visit rate, 7.5 per year. This group also visits emergency departments more frequently—0.62 visits per year. There was little difference between the visit rates for whites (3.7) and blacks (3.4), and the rates by age did not differ either (see Figure 7.2). There was a black/white difference in the sites of visits. Blacks were more likely to go to an emergency department—17.6% of total visits, or to a hospital outpatient department—15.7% of total visits, and only 66.7% of total visits were to a physician's office. For whites 84.1% of visits were to a physician's office, with about 7% to hospital outpatient departments and 9% to emergency departments. The rate for total visits for Asians/Pacific Islanders and American Indians/Eskimos/Aleuts was lower—2.6 per year, with 86% of visits being in a physician's office and the rest split evenly between the emergency department and a hospital outpatient department (Schappert, 1999). The eradication of the gap observed between the races also occurred with differences of physician use by the rich and the poor (see Figure 7.3). In 1964, 58.6% poor families reported seeing a physician within the last year; 73.6% of nonpoor families did so. In 1998 these rates had increased to 79.7% and 86%, respectively

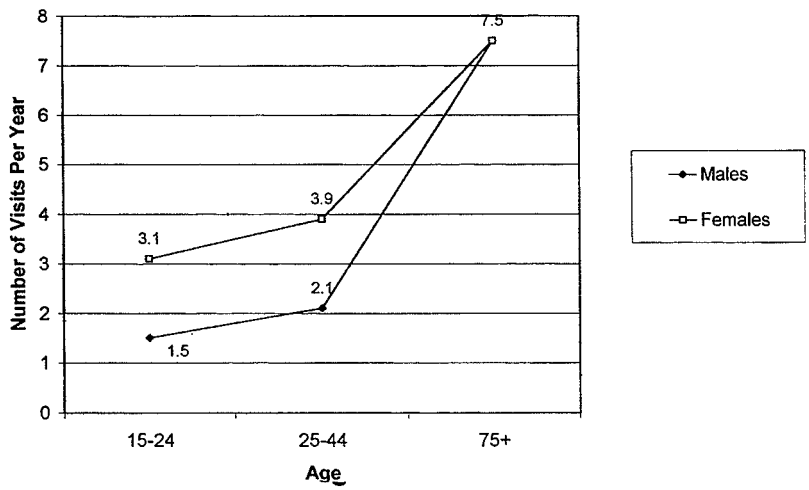


FIGURE 7.1 Physician visit rates by gender.

Source: Schappert, S. M. (1999). Ambulatory Care Visits to Physician Offices, Hospital Outpatient Departments, and Emergency Departments: United States, 1997. *Vital and Health Statistics, 13*(143).

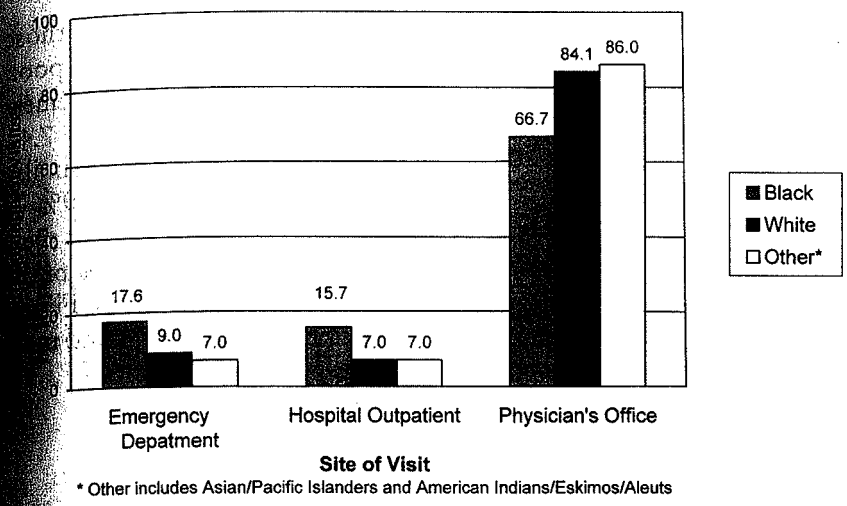


FIGURE 7.2 Physician visit rates by race.

Source: Schappert, S. M. (1999). Ambulatory Care Visits to Physician Offices, Hospital Outpatient Departments, and Emergency Departments: United States, 1997. *Vital and Health Statistics, 13*(143).

(USDHHS, 1995, Table 77; 2000, Table 71). The enactment of Medicaid and Medicare accounts for much of the increased use of physicians by lower-income groups.

If, however, one looks at individuals with and without health insurance, similarities disappear. In 1998, 36.8% of the uninsured poor, 35.8% of the near poor, and 29.1% of the nonpoor had no visits to a doctor's office or

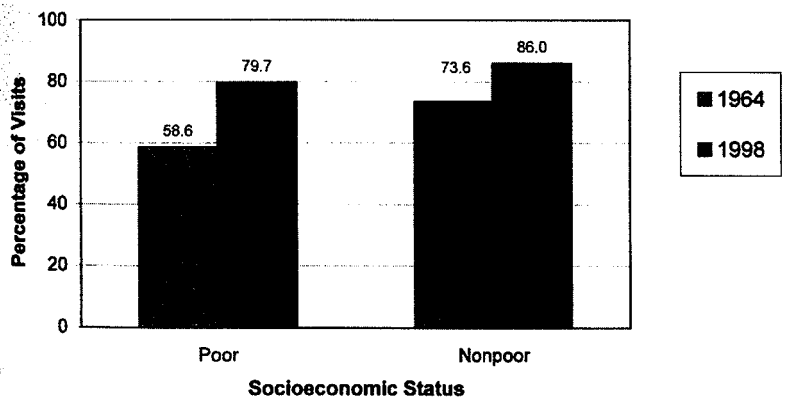


FIGURE 7.3 Physician visit rates by socioeconomic status.

Sources: U.S. Department of Health and Human Services. (1995). *Health United States, 1995* (DHHS Publication No. PHS 96-1232). Washington, DC: U.S. Government Printing Office, Table 77; U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office, Table 71.

to an emergency department. For families with health insurance thos numbers change drastically; 13.7% of the poor, 15.6% of the near poo and 13.4% of the nonpoor did not visit either a doctor's office or an emer gency department in 1998 (USDHHS, 2000, Table 71) (see Figure 7.4 Lack of health insurance for children under 6 years of age yielded simila disparities in access to care in 1998; 20% of poor children and 16.9% c near poor children under 6 years without health insurance did not see doctor or emergency department, versus 6.6% of the poor and 3.8% of th near poor with health insurance (USDHHS, 2000, Table 75) (see Figur 7.5). This is the group of children most in need of immunizations and mos in need of psychosocial, neurological, and behavioral assessments.

Organization of Ambulatory Care Services

There are two major categories of ambulatory care. The dominant form i provided by private physicians in solo, partnership, or private group prac tice on a fee-for-service basis or through contracts with managed car organization. The other categories are hospital-based ambulatory service including clinics, walk-in, and emergency services; hospital-sponsore group practices and health promotion centers; freestanding "surgi-centers and "urgi-" or "emergi-centers"; health department clinics; neighbor hood and community health centers (NHCs and CHCs); organized hom care; community mental health centers; school and workplace health serv ices; and prison health services. In 1998 there were a total of 1,005,101,00 ambulatory visits (includes physicians offices and hospital outpatient an

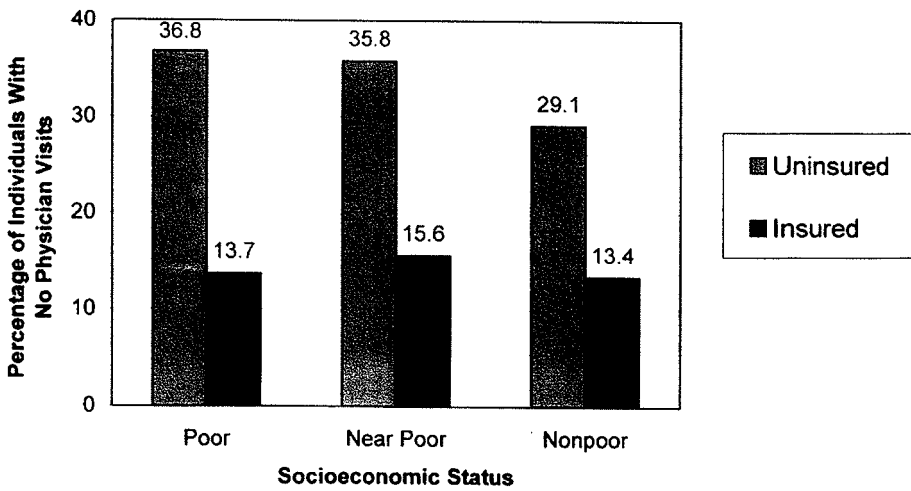


FIGURE 7.4 Physician visit rates based on insurance status.

Source: U.S. Department of Health and Human Services. (2000). *Health United State 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printin Office, Table 71.

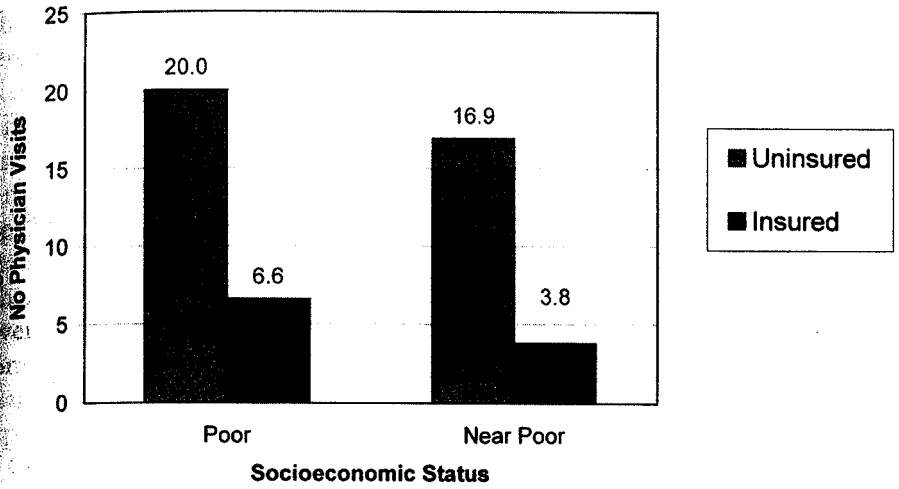


FIGURE 7.5 Physician visit rates of children under 6 years of age based on insurance status.

Source: U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office, Table 75.

emergency departments) (see Figure 7.6). Of these about 83% were to physician offices (829,280,000), about 10% to emergency departments (100,408,000) and about 7% to hospital outpatient departments (75,412,000). The number of ambulatory visits per 100 persons increased from 334 per 100 in 1995 to 378 per 100 in 1998 (see Figure 7.7). Similarly, the number

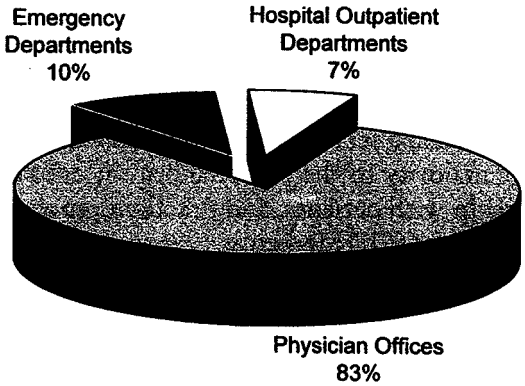


FIGURE 7.6 Composition of total ambulatory visits: 1,005,101,000 visits in 1998.

Source: U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office, Table 83.

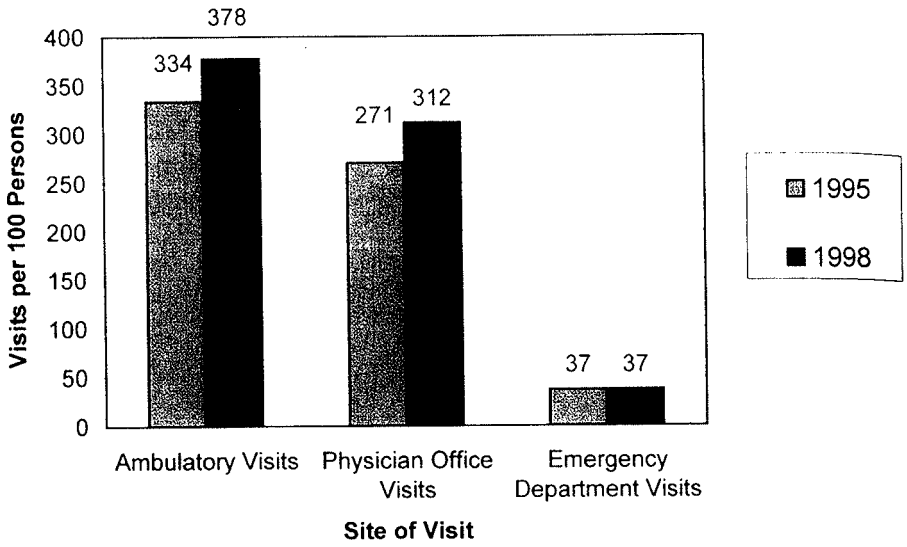


FIGURE 7.7 Increase in ambulatory care services (1995–1998).

Source: U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office, Table 83.

per 100 persons visiting physicians' offices increased from 271 per 100 in 1995 to 312 per 100 in 1998, while the visiting emergency departments remained constant from 1995 to 1998 at 37 per 100 persons (USDHHS, 2000, Table 83). It is apparent from these numbers that while the trend is toward greater ambulatory visits, there has not been a corresponding decrease in the rate of emergency department usage.

Primary Care

Primary care, as defined by the Institute of Medicine, is "the provision of integrated, accessible care services by clinicians who are accountable for addressing a large majority of the personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community" (Institute of Medicine, 1996, p. 1). Embedded within this definition is the concept that a primary care clinician should be able to address an individual's health needs over an extended period, that the health needs will vary over time, and that the individual may sometimes need others to care for those health needs (e.g., physician subspecialists, physical therapists, social workers, etc.). It is also implicit in this definition that the primary care provider must act as a coordinator for those health needs. It is obvious that primary care, when defined in this way, is much broader than the provision of the primary health care needs of patients in an ambulatory setting.

Primary care differs from "first contact" care. First contact care occurs when an individual, faced with a new symptom or sign, whether real or perceived, asks some other individual for advice. That person can be a friend or family member who has medical expertise beyond that of the general population—nurses, pharmacists, physical and occupational therapists, respiratory therapists, and the like. It can also be advice sought from someone who has had personal or family experience with an illness that seems to be related to the symptoms or signs at hand. These types of interchange are everyday occurrences. The situation may be as mundane as when the parent of a first child seeks help for what to do about the infant's diaper rash, cold, or diarrhea from a neighbor with several children. It can be as complex as seeking advice from a friend about the possibility of serious heart disease or cancer, when that friend's family member has had a recent experience with cancer or heart disease.

On the other hand, with more and more of the population becoming computer literate, lay access to complex information about health and disease has become commonplace. The Internet is an amazing source of up-to-date information easily available to anyone with access to it. The National Institutes of Health (NIH) maintain a section called "Health Information" (www.nih.gov/health). It lists publications on a variety of subjects but also provides information on a number of special programs, dietary supplements, complementary and alternative medicine, women's health, and rare diseases. The NIH has a quarterly publication, "The NIH Word on Health," that is accessible from the above site.

Hospitals have also entered the consumer information field, offering advice on wellness as well as on illness, and providing information on how to access care at their own institutions. Although clearly a marketing attempt, the information is useful and readily available. Many people use these sources of information on health care prior to calling their primary care provider. Rather than speaking with family members or friends, people can search for health information sites or chat rooms on the Internet to ask questions of experts or to "speak" with others on a variety of subjects dealing with everyday issues, such as ear infections in children, parenting problems, work-related stress, and depression, as well as major life-threatening problems such as cancer.

With increasing numbers of Americans receiving their health insurance through managed care organizations (MCOs), the responsibilities of primary care providers have changed. In a fee-for-service model, the primary care provider is responsible only for those patients who happen to come into his or her office. The provider's practice is viewed as being made up of individual patients, not as a discrete population. In managed care settings, especially when the provider is paid through a capitation system rather than by a modified fee-for-service system, the provider can be held responsible for providing appropriate health services to the entire population of patients assigned to him or her. The MCO can perform an audit of the provider's practice to see if standards of care have been met. Thus, the

provider is held responsible for all the patients in his or her panel, even if they have never shown up for a visit. For example, if the standard of care set by the MCO for a pediatric practice requires 90% of children to have received all their immunizations by 2 years of age, the denominator used is the total number of children 2 years of age and older in the provider's panel, not just those that have actually been seen in the office. Standards of care, benchmarks against which the adequacy of care provided by the primary care practitioner is judged, exist for preventive services such as blood pressure screening, breast cancer screening (mammogram, self-breast-exam education), diabetes screening, and colorectal cancer screening, as well as for the appropriateness of illness management. Although quality assurance measures have been required in hospital settings for a long time, it is only since 1991, with the advent of standards for accreditation of MCOs by the National Committee on Quality Assurance (NCQA), the accrediting body for MCOs, that standards of care in ambulatory settings have begun to be monitored.

Primary Care Providers

The providers of primary care fall into four major disciplines: physicians, nurse practitioners (NPs), midwives, and physician assistants (PAs). Although they take very different pathways to become primary care providers, at the completion of their training they are very similar in their capabilities in ambulatory primary care settings. It is estimated that NPs and PAs can typically perform 75% of services that physicians provide in adult practices and 90% in pediatric practices (Scheffler, 1996). Despite this, in 1997 physicians saw 95.2% of all patients presenting to an ambulatory site (physician offices, hospital outpatient departments, and emergency departments), whereas physician assistants saw 2.6%, nurse practitioners saw 1.2%, and midwives saw 0.1% (Schappert, 1999) (see Figure 7.8). In 1998, primary care visits made up 52.7% of all ambulatory care visits, a decrease from 1980 (56.6%) and 1990 (54.9%) (see Figure 7.9). The percentage of visits to general/family practitioners dropped from 33.5% in 1980, to 29.9% in 1990, to 24.2% in 1998. Primary care visits to internists increased from 12.1 % in 1980, to 13.8% in 1990, to 17.1% in 1998. Visits to pediatricians increased slightly from 1980 to 1998 (10.9% to 11.4%) (USDHHS, 2000, Table 85).

Sites for the Provision of Primary Care Services

Primary care in the United States is provided in a number of settings, with private physician offices continuing to be the dominant site even in this era of increasing penetration of MCOs. On the other hand, many states have received waivers from the Health Care Financing Administration (HCFA) to introduce mandatory Medicaid managed care. Neighborhood and

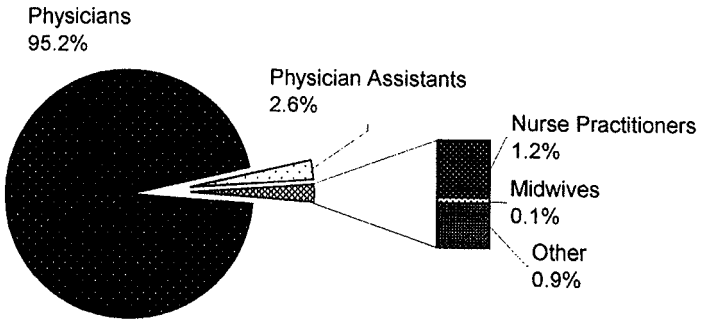


FIGURE 7.8 Percentage of services delivered by primary care providers to patients presenting to an ambulatory site, 1997.

Source: Schappert, S. M. (1999). Ambulatory Care Visits to Physician Offices, Hospital Outpatient Departments, and Emergency Departments: United States, 1997. *Vital and Health Statistics, 13*(143).

community-based organizations, and hospital-based primary care clinics have expanded their primary care capabilities in response to increased numbers of children becoming eligible for subsidized health insurance through the federally funded State Children's Health Insurance Program (S-CHIP), and because of the expansion of mandatory Medicaid managed care waivers (Forrest & Whalen, 2000). These organizations have been the traditional providers of care to patients with Medicaid-financed insurance and wish to continue to be. They have expanded services to cover evening, night, and weekend hours for their patients, and they are to developing the necessary information systems. In the main, however, they have not developed the economic efficiency seen in the private for-profit sector.

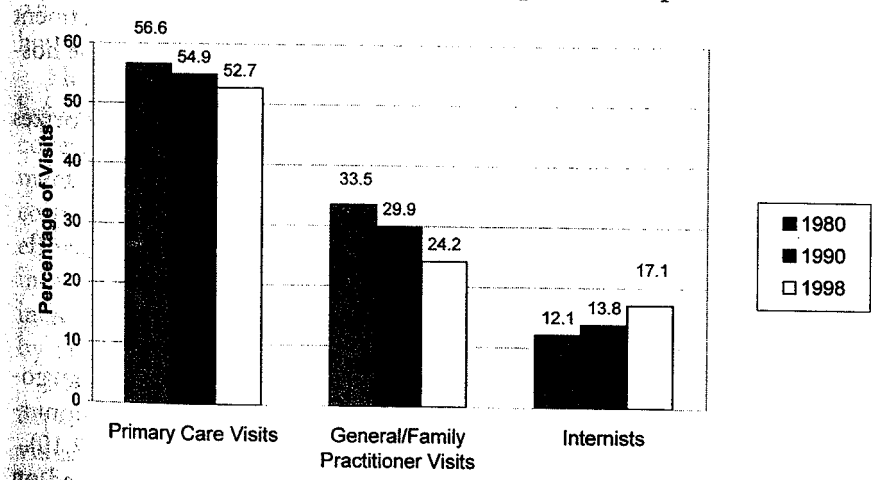


FIGURE 7.9 Change in composition of ambulatory care visits.

Source: U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office, Table 85.

Academic medical centers (AMCs), those teaching hospitals that are closely aligned with medical schools, have also been aggressive in expanding their primary care operations into the community. They have done so in order to maintain their traditional patient base, to educate physicians-in-training and medical students, and to support their clinical research.

Emergency Care

The United States has developed a complex system of emergency care for its citizens, beginning with the national 911 emergency response system, and continuing with hospital-based emergency services and specialized emergency services such as Level I trauma centers. These centers have 24-hour, 7-day availability of a complete array of medical and surgical specialists, diagnostic imaging, and operating rooms. They are complemented by well-staffed and well-equipped intensive care units.

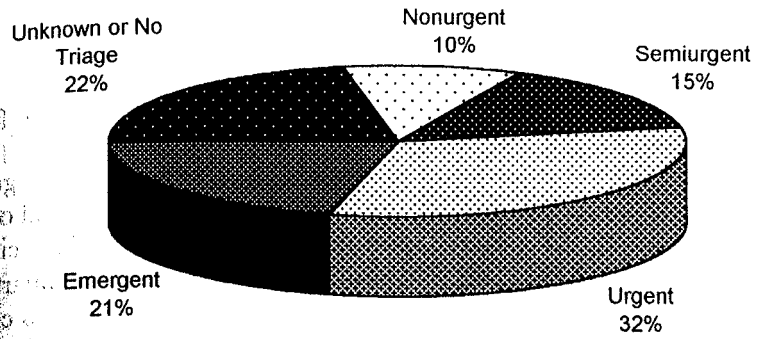
Most U.S. hospitals provide emergency services; over 92.6 % of community hospitals have emergency departments (AHA, 2000, Table 7, p. 154). These units serve several functions, from caring for the acutely ill or injured patient to providing walk-in services to less acutely ill patients. Many physicians on the hospital staff also use the emergency room as a setting to assess a patient with a problem that either may lead to inpatient admission or require equipment or diagnostic imaging facilities not available in the physician's office. Extended care facilities such as nursing homes and chronic disease hospitals may use the emergency services of an acute care facility for evaluation of a patient with a sudden change in medical status. Emergency services are a major source of admissions to hospitals; in 1997 they constituted about 42% of the close to 31 million admissions to acute care hospitals. Of the almost 95 million emergency department (ED) visits in 1997, about one in seven or 13.5% were admitted to the hospital (AHA, 2000, Table 3, p. 9; Nourjah, 1999, p.11).

The National Center for Health Statistics (Nourjah, 1999) categorizes patients based on the immediacy with which they should be seen:

Nonurgent. Patient should be seen within 2–24 hours.
Semi-urgent. Patient should be seen within 1–2 hours.
Urgent. Patient should be seen within 15–60 minutes.
Emergent. Patient should be seen in less than 15 minutes.

Based on these definitions, Nourjah (1999) found that 21% were categorized as emergent, 32% as urgent, 15.4% as semi-urgent, 9.7% as nonurgent, and 21.9% were listed as "unknown or no triage" (see Figure 7.10).

These terms derive from a professional perspective and are based on medical diagnoses. Most patients cannot make these distinctions and err in both overinterpreting and under-interpreting the gravity of symptoms. Most patients presenting to an emergency service feel that they need immediate



URE 7.10 Percentage of patients receiving emergency care: Categorized by immediacy of condition, 1999.

Source: Nourjah, P. (1999, May). National Hospital Ambulatory Medical Care Survey: 1997 Emergency Department Summary. *Advance Data from Vital and Health Statistics,* (No. 304). Hyattsville, MD: National Center for Health Statistics.

attention, regardless of what the professional staff may think. Others know that they do not have an urgent or emergent problem. They simply use the emergency service because it is all that is available to them.

Some hospitals have developed walk-in units to relieve the emergency services of the burden of the nonurgent patients and to respond to the competition from freestanding walk-in services or urgi-centers. By organizing group practices in the outpatient clinics hospitals have been able to provide "add-on" slots in the appointment schedule to accommodate the nonurgent patient demanding urgent attention. Financial incentives are forcing hospitals to make every effort to reduce the costly care of nonurgent patients in the emergency setting. These efforts include evening and weekend hours for walk-in units and after-hours telephone access for clinic patients.

Managed systems of care often require subscribers to get prior approval before authorizing emergency services, and unauthorized use may not be covered. Many states have implemented or are in the process of implementing mandatory Medicaid managed care in an attempt to decrease costs, with emergency room usage being a particular target. To date these efforts have failed to decrease ED usage—the number of ED visits increased from 90.5 million in 1994 to 94.8 million in 1998, a 4.75% increase, while the population as a whole was estimated to have increased by only 3.8%.

Emergency medical services extend beyond the hospital emergency department to include other services provided to accident victims or individuals suffering acute, life-threatening illnesses such as acute myocardial infarction or stroke. The goals of these services are to preserve life and reduce disability by providing prompt treatment and transportation to comprehensive treatment facilities. The intended recipients of care are patients with emergent or urgent problems.

Subspecialty Care

Subspecialty care is defined as care given by physicians who are not generalists, and is practiced in ambulatory sites by a large variety of disciplines. Generalists are defined as individuals practicing family medicine, general pediatrics, general internal medicine, geriatric medicine, and general obstetrics and gynecology. All others fall into the categories of subspecialists. Patients can be referred to specialists for conditions that their primary care providers feel they cannot or should not handle. Patients can also choose to bypass the generalist physicians and go directly to a specialist. This route has become less common because of financial penalties associated with self-referral to specialists, imposed by managed care health insurance plans. Despite this, the proportion of ambulatory care visits to other than generalist physicians (about 40%) does not appear to have changed since 1985 (USDHHS, 1995, Table 80; Woodwell, 1999, Table 1). This may be explained by the observation that more services, both medical and surgical, can and are being performed on an ambulatory basis.

Surgical ambulatory care is defined as surgical procedures performed on patients not admitted to an inpatient bed. From 1994 to 1998 ambulatory surgeries rose from 50.5 per 1,000 population to 57.7 per 1,000 population, whereas the rate per 1,000 population of inpatient surgeries fell from 47.8 in 1994 to 36.0 in 1998 (AHA, 2000, Table 3, p. 9) (see Figure 7.11). The percentage of outpatient surgeries (of the total number of surgeries performed) rose from 16.4% in 1980, to 54.9% in 1993 (USDHHS, 1995, Table 90), and 61.7% in 1998 (AHA, 2000, Table 3, p. 9) (see Figure 7.12). This marked

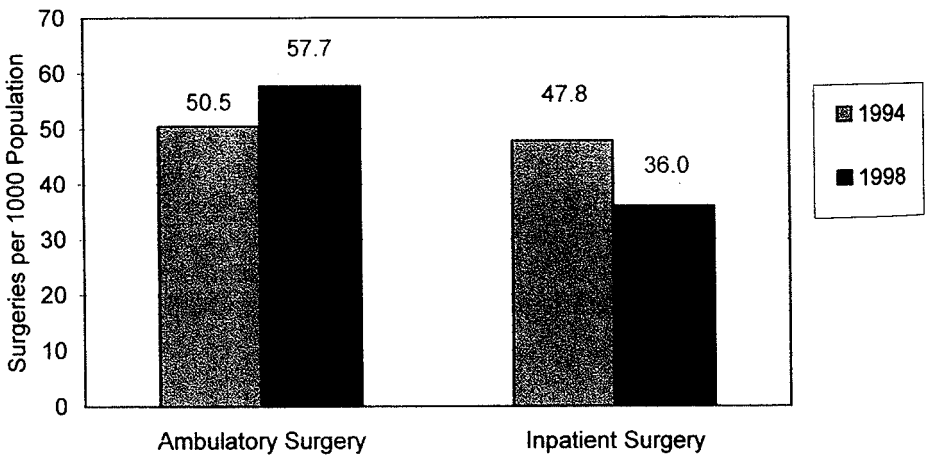


FIGURE 7.11 Changes in surgical ambulatory care procedure rates from 1994 to 1998.

Source: American Hospital Association. (2000). *Hospital Statistics 2000.* Chicago: Health Forum LLC, Table 3, p. 9.

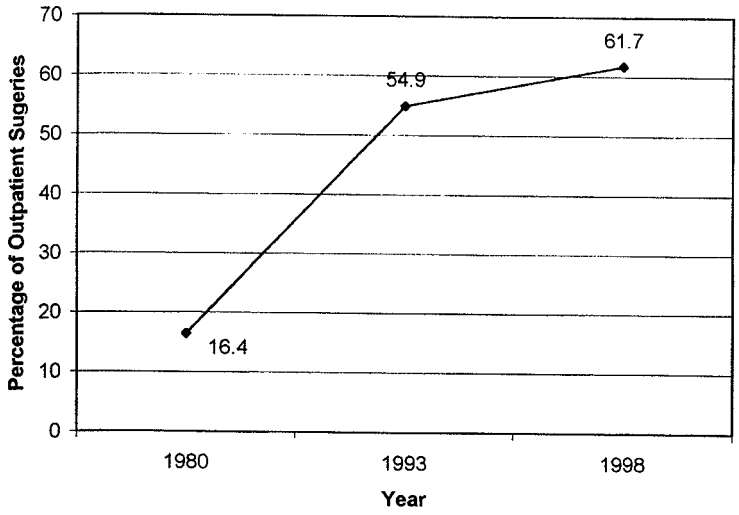


FIGURE 7.12 Growth in percentage of outpatient surgeries (1980–1998).
Sources: U.S. Department of Health and Human Services. (1995). *Health United States, 1995* (DHHS publication No. PHS 96-1232). Washington, DC: U.S. Government Printing Office, Table 90; American Hospital Association. (2000). *Hospital Statistics 2000.* Chicago: Health Forum LLC, Table 3, p. 9.

change can be attributed to improved technology, economic pressures, and the demands of both patients and third-party payers. Patient satisfaction and outcomes appear to be good for all forms of ambulatory surgery.

Imaging procedures can be performed in ambulatory imaging facilities located in hospitals, be part of a large multi-specialty group practice, or be freestanding. All offer similar services, such as standard radiographic studies—X rays, ultrasound, echocardiography, nuclear medicine studies (bone scans, thyroid scans), computed axial tomography (CT scans), and magnetic resonance imaging (MRI). Some of the more esoteric imaging techniques, such as positron emission tomography (PET scans), and most imaging associated with invasive techniques (like cardiac and cerebral angiography), is done in hospitals, the latter as inpatient studies.

Subspecialist physicians in their own offices also do imaging procedures. There are many gastroenterologists, urologists, orthopedists, cardiologists, and radiologists who perform diagnostic imaging in their private offices rather than use the local hospital's facilities. Pulmonary specialists may be set up to perform a whole array of diagnostic tests in their own offices, including radiographic studies.

All this causes competition among the various providers and, although competition may keep costs down in usual markets, it does not necessarily appear to be true of the health marketplace. These facilities require expensive equipment and rely on referrals from other physicians to succeed. Ethical, legal, and financial problems emerge, especially when some of the referring physicians have financial interests in the success of the

freestanding imaging centers. On the other hand, this competitive market makes life convenient for patients because some of the centers are open for business 24 hours a day, 7 days a week.

Home Health Care

Home health care services were the fastest growing sector of Medicare by percentage of increase in expenditures per year until 1996. In 1997, 1998, and 1999 total expenditures for home-based services fell because of changes in Medicare reimbursement. The primary reason for the initial increase was economic pressure—the need to get patients out of the hospital quicker. This did not cause a general outcry from the public, as did "drive-through" mastectomies and 24-hour hospital stays after delivery. This was likely related to three factors: patients prefer to be cared for in their own homes; most patients, no matter how complex their medical problems, can be cared for as well in the home as in a rehabilitation or skilled nursing facility; and outcomes of home care are similar to other settings for similar conditions (P. Rosenfeld and M. Mezey, personal communication, January 25, 2001).

In addition, in 1989, following a lawsuit, Medicare rules for home care services were clarified, making it easier for Medicare recipients to receive home health services, with expenditures increasing at an average annual rate of 40% between 1988 and 1991, reaching $5.4 billion (Bishop & Skwara, 1993). Overall home health care expenditures in 1993 were estimated to be $23 billion, increasing at an annual rate of 19.1% between 1982 and 1992, and 12.9% between 1992 and 1993 (National Institute for Health Care Management [NIHCM], 1996).

Patients are eligible to receive home health services from a qualified Medicare provider if they are homebound; if they are under the care of a specified physician who will establish a home health plan; and if they need physical or occupational therapy, speech therapy, or intermittent skilled nursing care. Skilled nursing care is defined both as technical procedures, such as tube feedings or catheter care, and as skilled nursing observations. Intermittent is defined as up to 28 hours per week for nursing care and 35 hours per week for home health aide care. Many hospitals have formed their own home health care agencies, finding this a useful way to increase revenues while enabling them to discharge patients from the hospital earlier. In most communities, however, the bulk of home health services are still provided by not-for-profit agencies, such as the Visiting Nurse Service of New York.

Complementary and Alternative Medical Care

In 1992, Congress established the Office of Alternative Medicine (OAM) at the National Institutes of Health (NIH) with the stated purpose of evaluating

complementary and alternative medical treatment modalities to determine their effectiveness and to integrate these treatments into mainstream medical practice. A number of OAM centers were established, including those at the Universities of Minnesota, Texas, and California (Davis), and Stanford and Columbia Universities. The OAM has become the National Center for Complementary and Alternative Medicine (NCCAM). Its home page states "The National Center for Complementary and Alternative Medicine at the National Institutes of Health is dedicated to exploring the complementary and alternative practices in the context of rigorous science; training CAM researchers; and disseminating authoritative information" (NCCAM, 2001b). The NCCAM defines Complementary and Alternative Medicine (CAM) as "those treatments and healthcare practices not taught widely in medical schools, not generally used in hospitals, and not usually reimbursed by medical insurance companies" (NCCAM, 2001a).

The NCCAM has divided CAM practices into five major groups:

1. Alternative Medical Systems (ayurveda, homeopathy, naturopathy).
2. Mind-Body Interventions (certain uses of hypnosis, dance, music and art therapy, prayer, and mental healing).
3. Biological-Based Therapies (herbal, special dietary, orthomolecular, and individual therapies).
4. Manipulative and Body-Based Methods (chiropractic, some osteopathic practices, massage therapy).
5. Energy Therapies (Qi Gong; Reiki; therapeutic touch; bioelectromagnetic-based therapies such as pulsed fields, magnetic fields, AC and DC current).

It appears that there is a growing use of complementary and alternative medicine in the United States, with an estimated 629 million visits to CAM providers in 1997, of which one third were to chiropractors. Eisenberg and colleagues (1993) showed that 34% of 1,539 adults surveyed reported using one or another form of alternative medicine. In two studies of HIV-infected gay or bisexual men, over half stated that they used complementary or alternative treatments (Anderson, 1993; O'Connor, Lazar, & Anderson, 1992). In a more recent study from South Carolina, 44% of adults had used CAM in the year prior to the survey, of which 60% perceived CAM as very effective. Physicians were unaware of CAM use in 57% of their patients (Oldendick, Coker, Wieland, Raymond, Probst, Schell, et al., 2000).

Patient Networks and Support Groups

Patient networks and support groups exist for virtually every illness. They can be accessed in a variety of ways—through the Internet, through the social work department of the local hospital, through community organizations such as the YMCA, or through organizations established for

specific diseases or need (e.g., AIDS/HIV disease, diabetes mellitus, blindness, breastfeeding, cancer, colostomies, multiple sclerosis, and cardiovascular diseases). They are a useful adjunct to care, allowing patients to share experiences and concerns. Internet chat rooms allow two or more individuals to "speak" to each other about issues of mutual concern. This method of patient networking and support will likely increase markedly, offering as it does a combination of the convenience of remaining at home, the flexibility of the hours of use, and perhaps the advantage of anonymity.

Summary and Current Issues in Ambulatory Care

In this chapter we have attempted to give the reader a picture of the status of ambulatory care available to the average American. We have emphasized the provision of primary care because we believe that it is through a continuous, mutually trusting relationship between the individual and the provider of primary care that health and emotional needs will best be served. We have tried to show how that continuum starts when an individual, concerned about a specific problem, tries to deal with it. There are a number of options available: asking a knowledgeable relative or friend; using resources available in print or on the Internet, or discussion with a health care provider, either a practitioner of alternative medicine or a traditional practitioner, over the telephone, by email, or in person

The Primary Care Provider of the Future

The definitions of the providers of primary care will expand to include individuals other than those described in the section on primary care. There are, for example, infectious disease specialists—internists with specialty training in infectious disease—who act as primary care practitioners for individuals with infection due to human immunodeficiency virus (HIV). HIV disease was initially recognized as an acute infection but has become a chronic infection with the advent of new and improved therapies. These infectious disease specialists are recognized as the primary care providers for a subset of patients with special needs.

The above is true of diseases such as cancer and of genetic diseases such as cystic fibrosis and sickle cell disease. The list will grow as medical knowledge and effective treatments for many disease entities expand. As the management of patients with mental illness has become more dependent upon the use of psychopharmacological medications, its treatment will become an effort managed by primary care teams that will include psychiatrists, psychologists, social workers, and nurse practitioners or physician assistants, with internists or family practitioners acting as consultants rather than as primary care providers in this setting. The use of primary care provider teams will expand to cover a whole host of diseases now primarily cared for by single practitioners.

Current practice is for patients to access their primary care provider when deciding that they need more information than is available to them through other means. This trend was initially driven by health cost considerations; it has now gone beyond that to the recognition that everyone should have a medical "home," a place one can go to for the full spectrum of care, both for wellness and for sickness, for advice and education about remaining healthy, and for advice about returning to a prior level of health. This primary care medical home will, in the future, consist of teams of individuals with overlapping areas of expertise, offering a spectrum of services—from the management of minor acute illness and advice about diet, exercise, and vitamin supplements to the management of psychosocial issues such as domestic violence, alcoholism, and substance abuse and the coordination of care for serious life-threatening or chronic conditions. Individuals may be referred to health care providers outside their primary care teams, but the responsibility for the coordination and monitoring of their care will continue to rest within their medical homes.

Drivers of Change

This change in how primary care is delivered will be driven by how health care is financed and by the need for efficiency in managing large numbers of patients with changing demands. Thirty years ago husbands were rarely, if ever, allowed into delivery rooms to give comfort to their wives and to witness the birth of their children. Today it is more the rule than the exception. Families drove this change; the health care professions did not drive it. Whether or not capitation payments dominate health care financing, whether or not the capitation is for primary care or full-risk, consumers of health care will demand more health care providers, especially in the areas of health maintenance and health education. They will also demand easier access—same day or next day appointments with their own team of providers—than they currently have (Murray & Tantau, 2000). They will be less likely to accept long waits when arriving at the primary care office. Successful practices will be able to provide health care for a large population of individuals, offering three things: efficient management—prompt appointments, accurate billing; high patient satisfaction—courteous staff, easy telephone access, pleasant surroundings, extended hours; and medical outcomes that meet or exceed expected benchmarks—rare medication errors, adherence to health management guidelines, strict follow-up on medical protocols. To do this, they will need to employ real teamwork and health care managers will have to be trained to function effectively in this new paradigm. Physicians will need to learn to behave as members of a health care team. The culture of medical practice as a cottage industry has already changed in the management of diseases and conditions requiring sophisticated technology and medical protocols. Primary care will be the last frontier.

These changes will occur, but they will occur slowly, driven by changes in the education of primary care physicians. The requirements for the accreditation of primary care residency programs are changing. Experience in the continuity of care of panels of patients in community-based settings, as opposed to hospital-based outpatient clinics, is being developed. Primary care residency programs are required to develop a formal curriculum that documents training in diverse aspects of medicine, such as biomedical ethics, medical legal issues, cost management of health care, and the responsibility of health care providers for an entire population of individuals, as opposed to episodic care. This will become the educational standard for all primary care providers.

Benefits of Change

Care of populations or panels of patients responds to both cost and health concerns. Giving influenza vaccine to an entire population of elderly patients, for example, might save money by decreasing the seasonal number of admissions for pneumonia and other influenza-related complications. Strict adherence to yearly mammograms for women over the age of 40 or 50 might save money by allowing earlier detection of breast cancer and therefore less costly interventions. Early recognition of illness might also decrease the costs of care for prostate cancer, colorectal cancer, and adult-onset diabetes. Emphasis on wellness programs, such as decreasing the incidence of obesity; education on the importance of exercise for weight control; decreasing the risk for the development of, for example, osteoporosis and heart disease; and promotion of smoking cessation to decrease the incidence of lung and heart disease, will become standard features of the care offered by primary care providers, either directly or indirectly, to their populations of patients. Early recognition for conditions that currently have no or minimally effective treatments, for example Alzheimer's disease, will become more important as our ability to treat them improves.

The data on whether or not these practices do save money for specific groups of people insured by a single HMO are not clear, but accrediting organizations like the NCQA are demanding that HMOs adhere to these recommendations. And HMOs, in turn, are demanding that practitioners listed on their panels adhere to these standards as well. In the early 1990s the majority of medical school deans responsible for the oversight of residency education were concerned about the impact that managed care was having on their training programs. That has changed. In the 1997 meeting in Santa Fe, New Mexico, of the Group on Residency Affairs (GRA) of the Association of American Medical Colleges (AAMC), the tone of the discussion changed. There was an emphasis on how to teach the "new medicine" to residents, not based on cost of care concerns but based on the best interests of patients.

Each year approximately 12,000 residents complete training in generalist specialties in the United States. It will be from this group of individuals, trained in a different paradigm of what constitutes primary care that the changes in how ambulatory care is delivered will come. They will be joined by other providers of primary care—nurse practitioners, midwives, physician assistants, and social workers—and formed into primary care teams. They will have profound influences on all aspects of care because these primary care providers/teams have the greatest number of patient contacts. They will demand that their surgical and medical subspecialist colleagues pay attention to their concerns. This will occur irrespective of the way health care is financed.

Current Issues in Ambulatory Care

Ambulatory care issues include: access to care (see chapter 15), cost containment (see chapter 16), and quality improvement (see chapter 14).

Access to Care

There is a lack of access to ambulatory care for the over 40 million Americans who lack health insurance coverage, and for millions of other Americans whose access to care is limited because of where they live, the language they speak, limited insurance coverage, and their inability to read, among other reasons. Regarding the first issue, assuming there are no sizeable improvements in insurance coverage, what should providers of care do about this situation, other than urge the enactment of a national health insurance system or of other coverages leading toward national health insurance? Regarding the second issue, when people can pay for service, what are the responsibilities of provider outreach and for being accessible, for example by providing after hours services or having a system that can handle different languages?

Organizations can respond in several ways. With regard to coverage, they can hold that they are responsible only for paying customers or for providing those services, such as emergency care, where they are required by law to do so. A second approach is to provide medically appropriate services to all who live within the organization's catchment area, or who come for care, and then to attempt to raise money from government or philanthropy or through cross-subsidization from profitable services, to meet the medical needs of those who can not pay for care. A third approach is to bring down the price of health care, either by organizing care in new ways or by recruiting volunteers to provide services at no cost.

Strategies to respond to lack of access among those with more adequate health insurance coverage include more extensive and improved outreach, better health education in the schools and on the job, and enhancing cultural sensitivity and linguistic capability among frontline providers.

consume less alcohol and cigarettes? Research dollars can be reallocated away from measuring how smoking causes cancer, and toward how to prevent persons from beginning to smoke in the first place.

Quality Improvement

There are significant variations in the quality of medical care due to, for example, underuse of known treatments that can improve health outcomes, overuse of treatments that have no predictable positive impact on patient health, and misuse of treatments, such as preventable adverse drug reactions. Improvements can be made regarding the technical quality of ambulatory care and regarding the service amenities provided to patients and members. Care currently ranges widely in quality. The Institute of Medicine has recommended six redesign imperatives in delivering care as follows: redesigning care processes; making more effective use of information technologies; improving knowledge and skills through evidence-based management; developing effective patient care delivery teams; coordinating care across patient conditions, services, and settings over time; and using performance and outcome measurement for continuous quality improvement and accountability (Institute of Medicine, 2001).

Research needs to be conducted regarding the impact on providers and patients of incentives to improve health treatments and healthy behavior. How can we optimize the use of provider time to better communicate with patients? How can patients gain confidence to share information more fully with their providers, not only about disease symptoms, but also about gaining help with the difficulties patients have in leading healthier lives?

Improving access, containing costs, and improving quality will sometimes result in tremendous dislocations for the system and for those it gives care alike. For example, if coverage is improved without lowering costs, this means that health care expenditures will increase and that it will be more difficult to invest in improved schools, environment, and welfare. If hospitals and medical schools are closed, this can result in thousands of health workers losing their jobs, and in patients and students having less access to desired services. Improving quality costs money too. Think of the investment required for better information systems to link all patients electronically with their providers and to educate providers, patients, and members to be able to use systems that will be made available to them. Political leadership is required by government, health care providers, and consumer advocates to facilitate more cost-effective ambulatory care that still allows for some autonomy of providers and some choice for patients and members.

CASE STUDY

You are a health care consultant and Dr. Irving Freedom, the senior partner in a primary care group of six internists and three nurse practitioners practicing in an affluent suburb of a large eastern U.S. city, has asked for your advice. His practice has seen a 10% decline in the number of patient visits and a 12% decline in revenue in the past year. The adult population of the area has actually seen an increase of 10% in the last 5 years. There has not been a significant increase in either the number of internists or family practitioners in the community in the last 5 years. Dr. Freedom would like to see his practice grow.

You investigate and learn the following: Patient calling for an appointment frequently get a busy signal or are put on hold. When patients do get through they are always asked whether or not they have been seen in the office before, told that the next available routine appointment is at least 4 weeks in the future and may not be with the primary care provider who is their usual source of care. The practice's information system is set up only for billing purposes and is not available to either the receptionists that answer the telephone or to the office nurses that do the bulk of the triage. The practice has never conducted a patient satisfaction survey.

What should you advise him to do? Include in your answer a discussion of what Dr. Freedom can do in the short and long term to improve how his practice functions. Include what you believe Dr. Freedom needs to learn in order to function effectively in this new work environment.

DISCUSSION QUESTIONS

1. What factors are driving the delivery of health care away from emergency care and inpatient hospital stays?
2. How has the role of the primary care practitioner expanded?
3. For what groups of patients do medical specialist its primary care providers?
4. In the context of this chapter, what is meant by the integrated delivery of health care services?
5. What are three factors that have contributed to the increase in patients learning to provide more of their own health care?

REFERENCES

American Hospital Association (AHA). (2000). *Hospital statistics 2000.* Chicago: Health Forum LLC.

Anderson, W. H. (1993). Patient use and assessment of conventional and alternative therapies for HIV infection and AIDS. *AIDS, 74,* 561–564.

Bishop, C., & Skwara, K. C. (1993). Recent growth of Medicare home health. *Health Affairs, 12,* 95–107.

Bodenheimer, T. (1996). Sounding board: The HMO backlash—righteous or reactionary. *New England Journal of Medicine, 335,* 1601–1603.

Eisenberg, D. M., Kessler, R. C. Foster, C., Norlock, F. E., Calkins, D. R., & Delbanco, T. L. (1993). Unconventional medicine in the United States: Prevalence, costs, and patterns of use. *New England Journal of Medicine, 328,* 248–252.

Forrest, C. B., & Whalen, E.-M. (2000). Primary care safety-net delivery sites in the United States: A comparison of community health centers, hospital outpatient departments, and physician offices. *Jounral of the American Medical Association, 284,* 2077–2083.

Institute of Medicine. (1996). *Primary care: America's health in a new era.* Washington, DC: National Academy Press.

Institute of Medicine. (2001). *Crossing the quality chasmi: A new health system for the 21st century.* Washington, DC: National Academy Press.

Markowitz, D. B. (Compiler). (2000). *Health care almanac and yearbook, 2000.* New York: Faulkner and Gray.

Murray, M., & Tantau, C. (2000). Same day appointments: Exploding the access paradigm. *Family Practice Management, 7,* 45–50.

National Center for Complementary and Alternative Medicine (NCCAM). (2001a). *Frequently asked questions* [On-line]. Available: http://nccam.nih.gov/nccam/fcp/faq/index.html

National Center for Complementary and Alternative Medicine (NCCAM). (2001b). *NCCAM home page* [On-line]. Available: http:/nccam.nih.gov

National Institute for Health Care Management. (1996). *Health care system data source.* San Francisco, CA: Institute for Health Policy Studies, University of California.

Nourjah, P. (1999). National Hospital Ambulatory Medical Care survey: 1997 emergency department summary. In *Advance Data from Vital and Health Statistics,* (No. 304). Hyattswville, MD: National Center for Health Statistics.

O'Connor, B. B. Lazar, J. S., & Anderson, W. H. (1992, June). *Ethnographic study of HIV alternative therapies.* Poster presented at the Eighth International Conference on AIDS, Amsterdam.

Oldendick, R, Coker, A. L., Wieland, D., Raymond, J. I., Probst, J. C., Schell, B. J., & Stoskopf, C. H. (2000). Population-based survey of complementary and alternative medicine usage, patient satisfaction, and physician involvement. South Carolina Complementary Medicine Program Baseline Research Team. *Southern Medical Journal, 93,* 375–381.

Schappert, S. M. (1999). Ambulatory care visits to physician offices, hospital outpatient departments, and emergency departments: United States, 1997. *Vital and Health Statistics, Series 13*(143).

Scheffler, R. M. (1996). Life in the kaleidoscope: The impact of managed care on the U.S. health care workforce and a new model for the delivery of primary care. In M. S. Donaldson, F. D. Yordy, K. N. Lohr, & N. A. Vanselow (Eds.), *Primary care: America's health in a new era* (pp. 312–340). Washington, DC: National Academy Press.

U.S. Department of Health and Human Services. (1982). *Health United States, 1982* (DHHS Publication No. PHS 83-1232). Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services. (1995). *Health United States, 1995* (DHHS Publication No. PHS 96-1232). Washington, DC: U.S. Government Printing Office.

U.S. Department of Health and Human Services. (2000). *Health United States, 2000* (DHHS Publication No. PHS 01-1232). Washington, DC: U.S. Government Printing Office.

Woodwell, D. A. (1999, May). National Ambulatory Medical Care Survey: 1997 summary. In *Advance Data from Vital and Health Statistics,* (No. 305). Hyattsville, MD: National Center for Health Statistics.