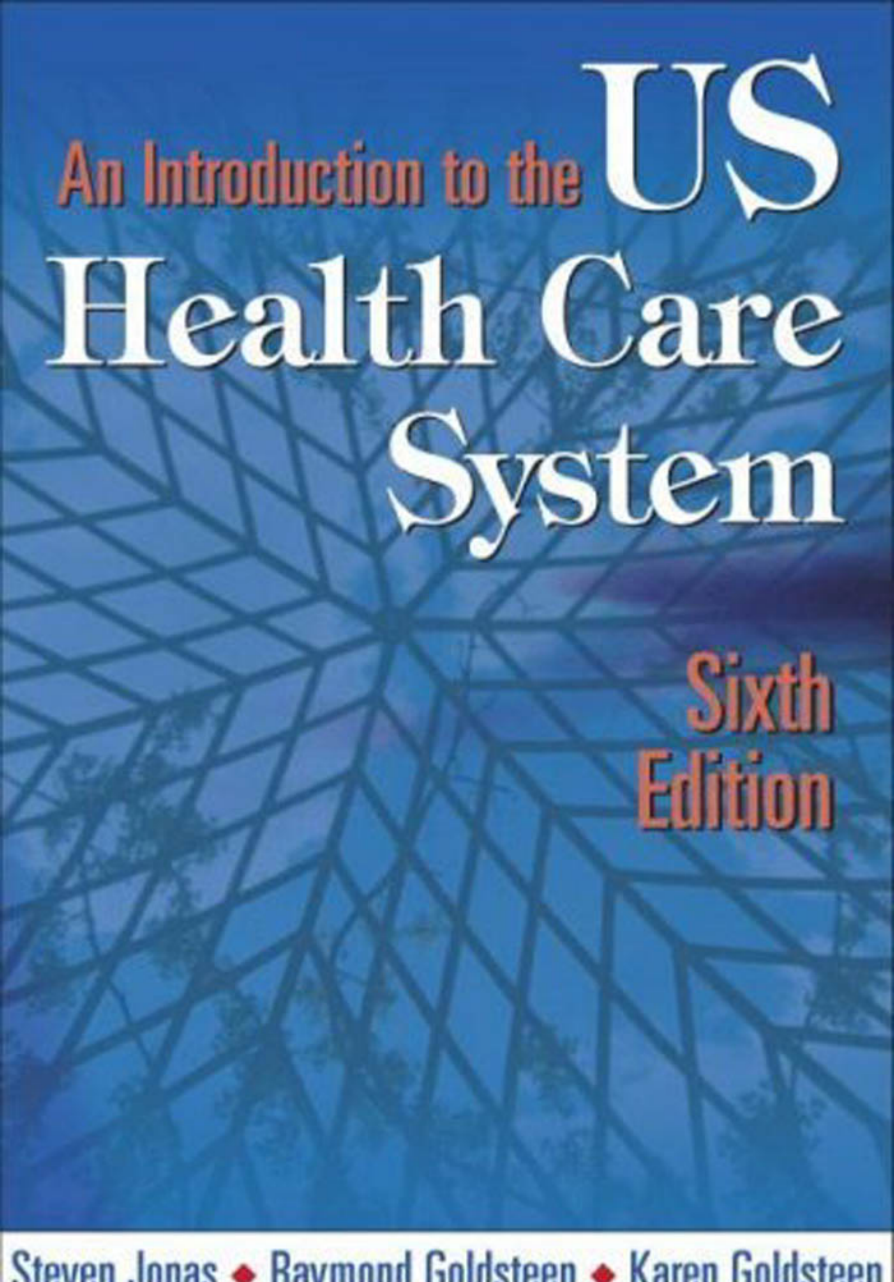

An Introduction to the US Health Care System

Sixth Edition

Steven Jonas ◆ Raymond Goldsteen ◆ Karen Goldsteen

Steven Jonas, MD, MPH, FACPM, is Professor of Preventive Medicine, School of Medicine, and Professor, Graduate Program in Public Health, at Stony Brook University (NY). He is a Fellow of the New York Academy of Sciences, the American College of Preventive Medicine, the New York Academy of Medicine, and the American Public Health Association. In 2006, he received the Duncan Clark Award for lifetime achievement granted by the Association for Prevention Teaching and Research (formerly the Association of Teachers of Preventive Medicine). He is Editor-in-Chief of the *American Medical Athletics Association Journal* and a member of the Editorial Board of *ACSM's Health and Fitness Journal*.

Over the course of an academic career that began in 1969, his research has focused on health care delivery systems analysis, preventive medicine and public health, and personal health and wellness. He has authored, coauthored, edited, and coedited more than 25 books and published more than 135 papers in scientific journals, as well as numerous articles in the popular literature. He is and has been a regular columnist for a number of scientific and lay publications in the health and health-related arenas and also publishes regularly on several Web magazines on the subject of politics. It was in the mid-1970s that, having been given the opportunity to do so by Dr. Ursula Springer, he created *Health Care Delivery in the United States*. He was actively involved with the first seven editions of that book. He is very proud that his name will continue to be associated down through time with that book, as it will be with this one, as it moves on to future editions under the able stewardship of the Drs. Goldsteen.

Raymond L. Goldsteen, DrPH, is the founding Director of the Graduate Program in Public Health and Professor of Preventive Medicine in the School of Medicine at the State University of New York at Stony Brook. He is a Fellow of the New York Academy of Medicine. He received his bachelor's degree in urban studies from Columbia University, Master's degree from Brown University in sociology, and doctoral degree from the Columbia University School of Public Health. He has an extensive background in the study of the U.S. health care system through his scholarly work, teaching, and service during his professional career as a university professor and director of health policy research centers at the University of Illinois in Urbana–Champaign, University of Oklahoma College of Public Health, and the West Virginia University School of Medicine.

He is particularly interested in public policy related to vulnerable populations and (1) investigating the structural and situational factors that improve or maintain the health status of vulnerable populations; (2) determining the factors that lead to public support for policies that improve or maintain population health; and (3) providing information to vulnerable populations that they can use in their own behalf as a development tool. His scholarly work integrates elements of sociology, social psychology, and political science and relates them to the health and well-being of populations.

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She has contributed to a number of major community health research projects focusing on underserved populations. She has extensive training and experience in clinical outcomes research, survey research design and analysis, and the analysis of large administrative databases such as Medicaid claims and hospital discharge data.

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Contents

Foreword

The book that follows is called *An Introduction to the U.S. Health Care System.* It now is in its sixth edition. My long-time friend and colleague Dr. Steven Jonas has been the coauthor, then author, of this fine introduction since its third edition. When speaking of him, I always like to note that in addition to holding degrees in medicine and health care management, Dr. Jonas is a person who, still a regular triathloner at age 70, himself leads a healthy life. For this edition, Dr. Jonas has brought on to the authorship the team of public health and health policy experts and his good friends, Drs. Raymond and Karen Goldsteen. They have done an admirable job of producing this edition with Dr. Jonas and will be taking over full responsibility for the book in the future.

What we know about the American health system is that we are getting exactly what we pay for. Every dollar of health expenditures is a dollar of health revenue for someone. This is why although observers say we don't have a "health system" in this country, even though it does not make sense to most observers, we do. Just try changing it! We spend enough to provide decent health care for all Americans, but not all Americans get decent health care. We don't lead healthy lives, going on 50 million of us don't have health insurance, health care costs too much for what we do get, and quality and service are uneven.

Don't blame Dr. Jonas or the Drs. Goldsteen for any of this. They have been voices in the wilderness preaching sense about both health and health services for many years. The answer isn't the government or for-profit private enterprise taking over everything. In this edition of *An Introduction to the U.S. Health Care System,* Jonas and the Goldsteens patiently explain what the evidence is for what is; the reader can come to his or her own conclusions about what works, what doesn't, and what should be done about it. They clearly, but briefly, explain the health characteristics of the American population; the health care delivery components (including personnel, institutions, commodities, and research); health economics and financing; management; quality assurance; and the role of government, voluntary agencies, and for-profit enterprises.

They identify the problems and issues facing the system and its beneficiaries, based on the evidence they have carefully marshaled for the reader. These include too much spending for what we get in return; highly variable access by geography, economic status and other factors; lack of priority for public health and prevention; lack of full, or only partial, insurance coverage for many; competing goals beyond simply the provision of the best medical care for the nation's people as a whole; and uneven quality. Finally, they challenge the reader to make sense of the facts so generously provided, understand the evidence within an historical and international context, and come up with judgments on needed changes and how to go about making them.

This book before you offers an excellent short introduction to the U.S. health care system. I hope that after you master its contents you will be part of the solution to reforming health care in the United States rather than just standing by the wayside—perhaps even working to improve access, improve quality and contain cost.

ANTHONY R. KOVNER, PHD
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New York University/Wagner School of Public Service
Editor-in-Chief, *Jonas-Kovner's Health Care Delivery in the United States,* 8th edition
February 2007

Preface

This is the sixth edition of *An Introduction to the U.S. Health Care System.* It was my privilege, and indeed it was an honor, with the third edition to have succeeded the late Dr. Milton Roemer as the principal author of this book. In 1966, then a student at the Yale School of Public Health, I went to my first American Public Health Association Annual Meeting, held that year in Los Angeles. My mentor, the late Dr. E. Richard Weinerman, had me in tow and introduced me to all the greats, the luminaries of the field that was then called "medical care." None shone more brightly than Dr. Roemer. As I said in a letter to him after we came to a final agreement on doing the third edition of this book together, I felt like a kid who idolized the superstar baseball player and then grew up to play on the same team with him.

The third edition of *An Introduction* was a substantial revision of Dr. Roemer's previous work, but it drew significantly on that work. The bulk of the writing in the fourth edition and even more so in the fifth edition is mine. Any of Dr. Roemer's text from the second edition of *An Introduction* still remaining in this edition is used with the kind permission of the late Dr. Roemer, and with my thanks to him. Earlier versions of certain portions of the text written by me for this book appeared in parts that I wrote of the second, third, and, to a very limited extent, the fourth, editions of *Health Care Delivery in the United States.*[1]

With the publication of this edition, the book is taking yet another turn in its authorship. I am delighted that my colleagues Drs. Raymond and Karen Goldsteen, Director of and Associate Professor in, respectively, the Graduate

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[1] *Health Care Delivery in the United States (HCDUS)* provides in-depth description and analysis of the subject, in contrast with the introductory approach that this book takes. I edited the first, second, and third editions of *HCDUS*, published in 1977, 1981, and 1986, respectively. The fourth and fifth editions were edited by my friend and colleague, Anthony Kovner, PhD, and published by Springer Publishing in 1990 and 1995, respectively. That text is used with the permission of the publisher and copyright holder, Springer Publishing. (The sixth and seventh editions of that book, coedited by Dr. Kovner and myself, were published in 1999 and 2002, respectively. The eighth edition, coedited by Dr. Kovner and Dr. James Knickman, was published in 2005.)

Program in Public Health here at Stony Brook University, have agreed to take over responsibility for the book for the foreseeable future. The Goldsteens bring to the book many years of research and practical experience in the fields of public health and health policy and management. My active participation in the book will end with the publication of this edition. Just as the third edition marked a transition from Dr. Roemer's work to mine, so does this edition mark a transition from my work to that of the Goldsteens. I look forward to seeing their own completion of this next transition with the publication of the seventh edition in several years.

This book describes the U.S. health care delivery system in broad outline. It does not go into great detail. It focuses on principles, basic structures, and important unsolved problems. It is not concerned with specifics of current legislative proposals and programs and how they are or are not being implemented. It takes primarily a qualitative rather than a quantitative approach. Thus, although it uses some numbers, it uses them lightly. It is referenced, but it does not have a profusion of citations. For a more comprehensive approach, readers are referred to the eighth edition of *Health Care Delivery in the United States.*

As were the first five editions of this book, this one is intended primarily for use in undergraduate courses on the U.S. health care delivery system, in graduate survey courses, for teaching the subject to medical students (who usually do not cover it in any depth, if they cover it at all), and for the practicing health professional who simply wants a relatively brief overview of the system.

Although *An Introduction* is not a policy book, Dr. Roemer, I, and the Goldsteens have elsewhere published a great deal on policy. Thus, this book has a political and philosophical point of view. Although it always attempts to be objective, it is not neutral. Its primary social value is that the principal purpose of the U.S. health care delivery system, taking precedence over any other purpose, should be to meet and serve the health care needs of the American people. If other purposes, such as the production of private profit, power, prestige, and political advantage, are achieved at all, they should very much take a back seat to the stated primary purpose.

At various points in the book, especially in chapters 1 and 9, proposals for U.S. health care delivery system policy and program changes, old and new, are described. Very occasionally, some are recommended. I hope that, after assimilating the factual material presented, you will be able to come to your own conclusions about what is to be done, if anything. I am certain that, if nothing else, you will agree with the majority of the American people that something must be done to reform both the structure and the functions of the system.

Chapter 1 provides an overview of the system. Chapter 2 presents the people who provide the care. Chapters 3 and 4 cover its primary inpatient and outpatient institutional forms. Chapter 5 covers governmental roles and functions. Financing is reviewed in chapter 6, and in chapter 7 the principles and practices of quality assurance are presented. Chapter 8 is devoted to the subject of managed care, beginning with an examination of its historical forebear, prepaid group medical practice. The history of and prospects for national health insurance and health care system reform in the United States are covered in chapter 9.

I am pleased to acknowledge the support of my wife, Mrs. Chezna Newman, for this project. For their assistance in preparation of the manuscript, the Goldsteens thank Judith Greene, MPH; Tad Ruckert, Jamie Romeiser, MPH; Bobbi Jo Rose, and Dmitri Coupet. Benjamin Goldsteen, MBA, provided substantial support in the preparation of Chapter 6. At Springer, we thank Jennifer Perillo, Acquisitions Editor, and the Senior Vice-President, Editorial, Sheri W. Sussman, for their enthusiastic support of this project and technical expertise in seeing it through, swiftly as it has turned out. Last, but never least, thanks to the woman without whom none of this work would ever have seen the light of day, Dr. Ursula Springer, Honorary Chair and Senior Consultant to Springer Publishing, and as well to Theodore Nardin, CEO and Publisher, who is shepherding it so well into the 21st century.

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February 2007

Abbreviations

AALL — American Association for Labor Legislation
AAMC — Association of American Medical Colleges
AHA — American Hospital Association
ALOS — Average Length of Stay
AMA — American Medical Association
ANA — American Nurses Association
ASTHO — Association of State and Territorial Health Officials
CAT — Computerized Axial Tomography
CCMC — Committee on the Costs of Medical Care
CDC — Centers for Disease Control and Prevention
CHC — Community Health Center
CHSS — Cooperative Health Statistics System
CME — Continuing Medical Education
CMS — Centers for Medicare and Medicaid Services
CPO — Combined Provider Organization
DHHS — Department of Health and Human Services
DO — Doctor of Osteopathy
DOD — Department of Defense
DRG — Diagnosis-Related Group
DVA — Department of Veterans Affairs
EAP — Employee Assistance Program
ED — Emergency Department
EMS — Emergency Medical Service (or System)
EMT — Emergency Medical Technician
EPA — Environmental Protection Agency
EPO — Exclusive Provider Organization
FDA — Food and Drug Administration
GAO — General Accounting Office
GPO — Government Printing Office
GDP — Gross Domestic Product
GMENAC — Graduate Medical Education National Advisory Committee

GNP — Gross National Product
GPEP — General Professional Education of the Physician Panel
HCFA — Health Care Financing Administration
HIV — Human Immunodeficiency Virus
HMO — Health Maintenance Organization
HRSA — Health Resources and Services Administration
IDS — Integrated Delivery System
IPA — Individual or Independent Practice Association
IPO — Independent Practice Organization
JCAHO — Joint Commission on Accreditation of Healthcare Organizations
LCME — Liaison Committee on Medical Education
LPN — Licensed Practical Nurse
MC — Managed Care
MCH — Maternal and Child Health
MCO — Managed Care Organization
MEPS — Medical Expenditure Panel Survey
MHS — Marine Hospital Service
MMWR — *Morbidity and Mortality Weekly Report*
MRI — Magnetic Resonance Imaging
MVSR — *Monthly Vital Statistics Report*
NCHS — National Center for Health Statistics
NHANES — National Health and Nutrition Examination Survey
NHIS — National Health Interview Survey
NIH — National Institutes of Health
NIMH — National Institute of Mental Health
NIOSH — National Institute of Occupational Safety and Health
NLN — National League for Nursing
NP — Nurse Practitioner
OMB — Office of Management and Budget
OPD — Outpatient Department
OSHA — Occupational Safety and Health Administration
PA — Physician Assistant (or Associate)
PHO — Physician–Hospital Organization
PHS — Public Health Service
POS — Point of Service
PPGP — Prepaid Group Practice
PPO — Preferred Provider Organization
RBRVS — Resource-Based Relative Value System
RN — Registered Nurse
SAMSHA — Substance Abuse and Mental Health Services Administration
UR — Utilization Review

USDA — United States Department of Agriculture
USPHS — United States Public Health Service
VA — Veterans Administration
WHO — World Health Organization
WIC — Women, Infants, and Children (federal nutrition program)

Chapter 1

Introduction

A colleague once said of health maintenance organizations (HMOs), "When you've seen one HMO, you've seen one HMO." The same could be said of the health care systems of the nations of the world. No two are exactly the same. However, there are certain features and goals that all health care systems share. Primarily, a health care system is organized to provide the diagnosis and treatment of health problems. Therefore, each nation or society defines what constitutes and signifies a health problem. Each has diagnostic and treatment theories, practices, and tools, where treatment can take many forms on a continuum from cure, to rehabilitation, to stabilization, to comfort care.

In the language of sociology and political science, all societies designate some persons or positions as legitimate providers of health care. These designated healers are empowered in their society to determine the causes of ill health and provide alleviation or cure. Some providers are designated as dominant, or vie with others for dominance. There is also a defined role for the recipients of health care services: for example, the "sick role" as defined by Parsons (1951), which posits the rights and obligations of sick persons in Western societies. And the sum of all the institutions and processes that support the work of diagnosis and healing can be called the health care system of that society. The system is organized around and for the legitimized healers.

However, we know that conditions that may be defined as health problems may differ from society to society. In the United States today, people who are obese are considered in poor health, and they are treated by everything from diet to bariatric surgery. In other societies, obesity is a desirable trait, emulated if possible by those who are thin. Diagnosis and treatment models may differ between societies. The social position, training, and authority of healers may differ. The organization of the system and the expected outcomes may differ among countries and among cultures.

Let us consider, as an example, traditional Chinese Medicine (Liu, 1988). It presents an entirely different perspective on health and health care than does the model originally developed in the Western European countries. Written records of origins of traditional Chinese medicine can be traced back further than 200 B.C.E. According to these teachings, in order to maintain a state of health the human body must maintain homeostasis, that is, an internal, bodily balance, between two inseparable and opposing forces of nature: yin and yang. Yin represents the cold, or passive, principle, whereas yang represents the hot, or active, principle. Any imbalance of these two forces can lead to a blockage of flow in the qi (vital energy) or in the blood, both of which run along interconnected channels in the body called meridians. When there is a disturbance in the energy flow, the appropriate type of treatment is selected to unblock the flow through the meridians: materia medica (herbology), acupuncture, bodywork (massage and manipulation), or health-benefiting exercises (exercising the body–mind connection). This is rather different from the Western approach to the understanding of disease, its diagnosis and treatment, and the maintenance of health.

The focus of this book is the U.S. health care system, with some comparisons to certain peer industrialized countries including Western European nations, Canada, Australia, and Japan. The United States shares with these nations (as well as many others around the globe) the same basic understanding of health and health care, including what constitutes a health problem; what are legitimate and effective diagnostic and treatment theories, methods, and tools; and the persons designated as healers, with physicians dominant. This system, which originated over a period of centuries in Western Europe, is generally referred to as “Western medicine.” It is also called allopathic medicine after the medical faction (allopaths) that gained dominance in the 19th century over groups including homeopaths, chiropractors, and osteopaths (Starr, 1982). Among the countries that utilize Western medicine as their primary means of dealing with the problems of health and disease, there are also certain similarities in the basic structures and organization used to deliver health care. The United States and its peer nations have similar economies and abilities to finance their health care systems. However, as we will discuss, there are very real differences between the United States and its peer nations relating to the methods of paying for health care, the equity and efficiency of health care as provided, and population health outcomes. These differences make the U.S. health care system unique, even among its peer nations.

HEALTH AND HEALTH CARE

What Is Health?

The most famous and influential definition of health is the one developed by the World Health Organization (WHO): “Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

It was adopted in 1946 and has not been amended since 1948 (WHO, 1946). Many subsequent definitions have taken an equally broad view of health, including that of the International Epidemiological Association:

> A state characterized by anatomical, physiological and psychological integrity, ability to perform personally valued family, work, and community roles; ability to deal with physical, biological, psychological and social stress; a feeling of well-being; and freedom from the risk of disease and untimely death.

Both definitions exemplify the tendency over the second half of the 20th century to enlarge the definition of health beyond morbidity, mortality, and disability to include sense of well-being, ability to adapt to change, and social functioning. However, in practice, the more limited view of health usually guides the provision of health services and efforts to improve health status. As Young (1998) writes: "Indeed, the WHO definition is 'honored in repetition, rarely in application.' Health may become so inclusive that virtually all human endeavors, including the pursuit of happiness, are considered within its domain" (p. 2).

Determinants of Health

Individual and population health are determined by many factors, only one of which is health care. It is generally accepted that the determinants of health include genetic inheritance, the physical environment—natural and built—and the social environment. The impact of these factors on health is mediated by an individual's response to them, both behavioral and biologic. This concept is argued well by Evans and Stoddart (1994). Note that although we talk about the "determinants of health," they are usually discussed in terms of how they are related to poor health. A brief overview of the determinants of health follows.

Genetic Inheritance

Our knowledge about the effects of genetic inheritance on health is growing rapidly. It is understood that, with few exceptions, disease processes are

> determined both by environmental and by genetic factors. These often interact, and individuals with a particular set of genes may be either more or less likely, if exposed, to be at risk of developing a particular disease. These effects can be measured by showing that the relative risk of exposure to the environmental factor is significantly greater (or lesser) for the subgroup with the abnormal gene, than the risk in those without. (Pencheon, Guest, Melzer, & Gray, 2001, p. 544)

Physical Environment

Physical environment factors include health threats from exposure to toxins and unsafe conditions, particularly in occupational and residential settings. Many occupations can expose workers to disease-causing substances, high risk of injury, and other physical risks. For example, the greatest health threats to U.S. farm workers are injuries from farm machinery and falls that result in sprains, strains, fractures, and abrasions (Myers, 2001). There are well-documented health threats to office workers from indoor air pollution, found by research beginning in the 1970s, including passive exposure to tobacco smoke, nitrogen dioxide from gas-fueled cooking stoves, formaldehyde exposure, "radon daughter" exposure, and other health problems encountered in sealed office buildings (Samet, Marbury, & Spengler, 1987; U.S. Environmental Protection Agency, 2006). In residential settings, exposure to pollutants from nearby industrial facilities, power plants, toxic waste sites, or a high volume of traffic presents hazards for many. In the United States, these threats are increasingly known to have a disproportionately heavy impact on low-income and minority communities (Centers for Disease Control and Prevention [CDC], 2003; Institute of Medicine, 1999).

Social Environment

Sociodemographic characteristics, particularly race, ethnicity, and socioeconomic status, are associated with significant variations in health status and risk for health problems. There is a large literature demonstrating the relationship between low socioeconomic status and poor health, including a gradient in which the higher the socioeconomic status, the better the health (e.g., Lynch & Kaplan, 2000; Williams, 1990).

Similarly, much research indicates that disparities in health status exist between racial and ethnic groups. Minority Americans including African Americans, Hispanic/Latinos, Native Americans, and Pacific Islanders generally have poorer health outcomes than do whites. The preventable and treatable conditions for which disparities have been shown include cardiovascular disease, diabetes, asthma, cancer, and HIV/AIDS (Department of Health and Human Services, 1998). Although race and ethnicity do not "explain" these disparities, they point to the need for explanations. Discrimination and its consequences are a recent focus for investigations attempting to explain racial and ethnic disparities (Krieger, 2000; Mays, 2007).

Nonphysical occupational factors also affect health. For example, a great deal of research demonstrates the relationship between poor health outcomes and the psychosocial work environment. The demand-control model is one well-known theory, hypothesizing that employees with the highest psychological demands and the lowest decision-making latitude are at the highest risk for poor health outcomes (Theorell, 2000). In addition, job loss and threat of job loss have a negative impact on health (Kasl & Jones, 2000).

Another large body of research on the social environment and health focuses on social integration, social networks, and social support (Berkman & Glass, 2000). For example, numerous studies over the past 20 years have found that people who are isolated or disengaged from others have a higher risk of premature death. Also, research has found that survival of cardiovascular disease events and stroke is higher among people with close ties to others, particularly emotional ties. Social relations have been found to predict compliance with medical care recommendations, adaptation to adverse life events such as death of a loved one or natural disaster, and coping with long-term difficulties such as caring for a dependent parent or a disabled child.

Health Behavior

The term *health behavior* can refer to behaviors that are beneficial to health. However, the term is generally used in the negative to refer to behaviors that harm health, including smoking, abusing alcohol or other substances, failing to use seat belts or other poor safety behaviors, making unhealthy food choices, and not engaging in adequate physical activity.

The effect of health behaviors on health status has been widely studied and found to be an important determinant of health. For example, most of the leading causes of death in the United States can be explained largely in terms of health behaviors that relate to them. Consider the 10 leading causes of death, as of 2003, as characterized by diagnosed disease or condition: diseases of the heart, malignant neoplasms, cerebrovascular diseases, chronic lower respiratory diseases, unintentional injuries (accidents), diabetes mellitus, influenza and pneumonia, Alzheimer's disease, nephritis, nephrotic syndrome and nephrosis, and septicemia. The next five leading causes of death were intentional self-harm (suicide), chronic liver disease and cirrhosis, essential hypertension and hypertensive renal disease, Parkinson's disease, and assault (homicide) (National Center for Health Statistics [NCHS], 2005, Table 31).

In one way or another, personal health behavior has an impact on the occurrence in any given individual of most of the diseases and conditions on this list. Further, looking at the cause of death in a different way, that is, by major contributing cause of the disease to which the death was attributed rather than by the disease itself, in the first study of its kind, McGinnis and Foege (1993) showed that, as of 1990, the leading factors were tobacco use, dietary patterns, sedentary lifestyle, alcohol consumption, microbial agents, toxic agents, firearms, sexual behavior, motor vehicles, and use of illicit drugs. As of 2002, the situation remained the same (McGinnis, Williams-Russo, & Knickman, 2002).

Even though there is widespread agreement that health is a response to the physical and social environments in which the individual lives and is influenced by the individual's genetic inheritance, health behaviors are often seen as the best target for health improvement efforts. For example, the emphasis of *Healthy People 2010* (U.S. Department of Health and Human Services, 2000), which is the U.S. nationwide health promotion and disease prevention agenda, is on health behaviors and medical care (*Healthy People 2010: Environmental Quality*). The leading health indicators cited in *Healthy People 2010* are level of physical activity, overweight and obesity, tobacco use, substance abuse, responsible sexual behavior, mental health, exposure to injury and violence, environmental quality, immunization status, and access to health care. Only the environmental quality indicator deals substantially with factors other than personal behavioral change or the availability of medical care.

Health Care as a Determinant of Health

The central focus of health care is to restore health or prevent exacerbation of health problems. If we argue that health is the product of multiple factors including genetic inheritance, the physical environment, and the social environment, as well as an individual's behavioral and biologic response to these factors, we see that health care has an impact late in the causal chain leading to disease, illness, and infirmity. Often by the time the individual interacts with the health care system, the determinants of health have had their impact on their health status, for better or worse. Thus, the need for health care may be seen as a failure to prevent the determinants of health from adversely affecting the individual patient.

Health care can be categorized in terms of its relationship to prevention—primary, secondary, and tertiary. Fos and Fine (2000) define these terms as follows: "Primary prevention is concerned with eliminating risk factors for a disease. Secondary prevention focuses on early detection and treatment of disease (subclinical and clinical). Tertiary prevention attempts to eliminate or moderate disability associated with advanced disease" (Fos & Fine, 2000, pp. 108–109).

Primary prevention intends to prevent the development of disease or injury before it occurs in individuals, and thus to reduce the incidence of disease in the population. Examples of primary prevention include the use of automobile seat belts, condom use, skin protection from ultraviolet light, and tobacco-use cessation programs. Secondary prevention is concerned with reducing the burden of existing disease after it has developed; early detection is emphasized. Secondary prevention activities are intended to identify the existence of disease early so that treatments that might not be as effective when applied later can be of benefit. Tertiary prevention focuses on the optimum treatment of clinically apparent, clearly identified disease so as to reduce the incidence of later complications to the greatest possible degree. In cases where disease has been associated with adverse effects, tertiary prevention involves rehabilitation and limitation of disability.

Health care is primarily concerned with secondary and tertiary prevention: early detection, diagnosis, and treatment of conditions that can be cured or limited in their consequences (secondary prevention); and (2) treatment of chronic diseases and other conditions to prevent exacerbation, stabilize conditions, and minimize future complications (tertiary prevention).

The health care system undoubtedly has its smallest impact on primary prevention, once again that group of interventions that focus on stopping disease, illness, and injury before they start. And as Evans and Stoddart (1994) argue, other than for immunization, the major focus of the health care system's primary prevention activities is on the behavioral determinants of health, rather than the physical and social environments:

> The focus on individual risk factors and specific diseases has tended to lead not away from but back to the health care system itself. Interventions, particularly those addressing personal life-styles, are offered in the form of "provider counseling" for smoking cessation, seatbelt use, or dietary modification. These in turn are subsumed under a more general and rapidly growing set of interventions attempting to modify risk factors through transactions between clinicians and individual patients.
>
> The "product line" of the health care system is thus extended to deal with a more broadly defined set of "diseases": unhealthy behaviors. The boundary becomes blurred between, e.g., heart disease as manifest in symptoms, or in elevated serum cholesterol measurements, or in excessive consumption of fats. All are "diseases" and represent a "need" for health care intervention. . . . The behavior of large and powerful organizations, or the effects of economic and social policies, public and private, [are] not brought under scrutiny. (pp. 43–44)

The success of any health care system is also affected by the other determinants of health. Genetic predisposition to breast cancer may limit the long-term success rates of cancer treatment. Continued exposure to toxins in the environment or at work may decrease the likelihood that the physician can stabilize an individual with allergies. Health behaviors, such as smoking or substance abuse, may stymie the best health care system when treating an individual with lung disease. The lack of support at home for changes in behaviors or adherence to medical regimens may undermine the ability of the health care system to treat an individual with diabetes successfully. Poverty, race, and ethnicity often limit access to health care, and therefore the ability of physicians to diagnose and treat health problems effectively (Smedley, Stith, & Nelson, 2003). We recognize that health, as well as health care, exist within a biological, physical, and social context, and all of these factors influence the health care system's probability of success.

HEALTH CARE SYSTEMS

Components of Health Care Systems

All health care systems have five major components: the facilities where health care is provided; the workforce that provides health care services; the providers of health care therapeutics such as, in Westernized countries, pharmaceuticals and medical equipment; the educational and research institutions that train the health care workforce and produce knowledge to improve health care services, and the financing mechanisms. In addition, some kind of organizational structure stands at the system's center, like the trunk of a tree. Besides this organizational structure, in any country's health care system there may be other loci of power and control. But where they exist, they are central to the system. They enable the system's components to interact and function to produce health services for the people.

Organization of Health Care Services

The five elements of the system—facilities, workforce, suppliers of therapeutics, knowledge, and money—are organized to produce health services. The forms and proportionate role of each differ among national systems. In the United States, as in most industrialized countries, there are five major types of health services sectors: the principal governmental health authorities, other agencies of government with health care functions, the private health care sector, non–health care commercial enterprises with health care functions, and voluntary health care agencies.

Health Care System Management

If institutions, workforce, and financing are to be brought together in various settings in order to provide health care, they must be managed. System management includes four major activities: administration, planning, regulation, and evaluation. Each is closely related to the others. It should be noted that these terms are not used consistently in the description and analysis of the operations and functions of all the health care system sectors. A given action may be termed deliberate planning in one, normal administration in a second, and official regulation in a third. Additionally, the generic term *management* is often used interchangeably with the technically more narrow term *administration*.

Health Care System Performance

Health care systems can be judged on the following criteria: (1) the quality of the health care provided; (2) the equity achieved in the provision of health care; and (3) the efficiency with which health care is provided.

U.S. HEALTH CARE SYSTEM

We now turn to a brief overview of the U.S. health care system. In many ways, the U.S. health care system is similar to that in countries where the allopathic medical model predominates. Yet it is also unique among those countries in several major ways. It is a truism that "when you've seen the U.S. health care system, you've seen the U.S. health care system." There are many different perspectives from which we could begin an examination of this extremely complex health care system. One is to look at its major features in the context of those of the health care systems of the other major industrialized countries.

In the United States, there is no one central "trunk" of the "tree" mentioned earlier, but multiple ones. For the United States, think of a banyan tree, not an oak. For example, there is no national Ministry of Health or its equivalent playing a central role in either the operation or the financing of health services. In the other industrialized countries, even if a ministry does not operate the health care system directly, at the least it creates and supervises the structure within which the system functions, and it customarily runs the national organization that pays for health care at the personal, institutional, and community-wide levels.

In the United States, the health care system is highly decentralized and fragmented. Its role and function focus significantly on producing outcomes, such as power and profits for providers and payers, in addition to the provision of patient and community health services. Care is provided, and it is paid for. Top-quality health sciences research is carried out, and education is provided. There are certainly loci of power and control. But it is amazing how much money and time these other areas of power and control, such as the pharmaceutical and insurance industries, spend to make sure that the United States does not have a single national structure for paying for, much less operating, its health care system.

The United States has had a private fee-for-service system of medical practice that, certainly since the end of World War II, has produced, among other things, high incomes for many physicians. Although private medical practice is also common in most of the other industrialized countries, in the United States physician incomes have been significantly higher in relative terms than the incomes of most physicians in most other industrialized countries. Since the mid-1980s, however, the U.S. health care system has become a major venue for the generation of corporate profits from the direct provision of health care services (Himmelstein & Woolhandler, 2001). This, too, is a unique feature of the U.S. health care system.

Next we will consider briefly each of the five major operating components of the health care system: workforce, facilities, suppliers of therapeutics and equipment, knowledge and workforce production, and financing, each of which is treated in more detail in later chapters.

Components of the Health Care System

Health Care Workforce

In 2004, about 13.8 million people worked in the health care system (NCHS, 2005, Table 104). As of 2001, the largest groups were nurses, physicians, pharmacists, dentists, and physical therapists (NCHS, 2005, Table 108). The physicians, of whom there were 793,263 active in 2001 (up from 730,000 just 3 years before), by tradition and by license have been the most powerful, dominant group. In the mid-1990s, however, a major change in the locus of control over medical practice did take place, as a significant portion of it moved to the managed care companies. (The health care workforce is covered in chapter 2, and managed care in chapter 8.)

Health Care Facilities

Of the institutions housing and caring for patients in bed (inpatients), acute care hospitals are the most numerous. In 2003, there were about 5,764 acute care hospitals, with 965,256 beds (down from 5,810 and 983,628, respectively, just 3 years earlier; NCHS, 2005, Table 112). Hospitals are categorized in a variety of ways—for example, by ownership, size, function, and average length of patient stay.

There are three principal types of ownership: government (federal, state, and local); private, not-for-profit (also called voluntary); and private, for-profit (also called investor-owned or proprietary). There are four functional categories: general, special, rehabilitation and chronic disease, and psychiatric (Health Forum/ American Hospital Association, 2001, p. A3). The American Hospital Association defines the *community hospital* as a nonfederal, short-term general or other special hospital. This is the predominant type of hospital in the United States. (The topic of hospitals is covered in detail in chapter 3.) Nursing homes and other long-term care institutions, of which there were 16,323, with 1,756,699 beds, in 2003 (NCHS, 2005, Table 116), plus long-term care services, are described briefly in chapter 3.

Various types of institutions and settings provide types of health care services other than inpatient. The most frequently used care is *ambulatory*, which is care provided to patients other than those in institutional beds. There were 1,106,067,000 ambulatory visits in 2004 (NCHS, 2006, Table 89). This represented 383 visits per 100 persons (age adjusted), up from 334 visits per 100 persons in 1995. About 82% of ambulatory care was delivered in private doctors' offices; other categories included hospital outpatient and emergency departments. This was essentially the same as in 1995.

Suppliers of Therapeutics

A variety of therapeutics including equipment are used in the health care system. Many kinds of equipment and supplies for the diagnosis and treatment of disease are produced by the hospital and medical supply manufacturers. These items range from gauze pads, hospital furniture, sterile needles, laboratory chemicals, and anesthetic gases to diagnostic imaging and laboratory equipment, surgical instruments, orthopedic appliances, eyeglasses, hearing aids, and dental prostheses. The other major category of health commodity is pharmaceuticals (see Strongin, 2002). These elements, as important as they are, are not covered in any detail in this book.

The Production of Health Care Workforce and Knowledge

The scientific basis of every health care system is the fund of knowledge about health and disease, as well as the understanding of how to apply that knowledge to prevention and treatment through various interventions. A vast store of knowledge has been accumulated from the observations and experiences of past centuries. In our era, both the scientific knowledge base and our understanding of the best means for applying it to health maintenance and disease treatment are expanding at an ever-increasing rate through evidence-based medical research. The primary function of the biomedical research and medical technology systems is to continue this expansion of knowledge.

Health sciences knowledge and technology are put to use by the large number of people who work in the health care system in its myriad professions and occupations. The health sciences education system educates and trains these professionals and technicians. In health care, how someone carries out a particular set of tasks and the nature of his or her motivation and attitude are sometimes as critical to success as what it is that he or she actually does. “How” can be taught as well as “what” can be. Thus, the health sciences education system plays a role in determining the character of the health care system that goes well beyond the mere technical and scientific content of the educational programs. (Medical and nursing education are discussed briefly in chapter 2.)

Health Care Financing

In 2003, the United States spent over $1.679 trillion on health services, close to 15.3% of the Gross Domestic Product (GDP) (U.S. Census Bureau, 2005, Tables 118, 119). Since the creation in 1965 of the federal Medicare program (see chapter 6), inflation in health care costs has usually outstripped general inflation by a factor of 2 to 3. Although during the 1990s the disparity between the two narrowed considerably (U.S. Census Bureau, 2005, Table 128), as the new millennium dawned, the relative rate of health services cost inflation began to grow again (Heffler et al., 2002).

Ultimately, all the money paid for health services comes from the general population. There are three major means by which money is transferred from consumers to providers for the delivery of health services: (1) via government (in 2003, over 46% of total expenditures), (2) via "insurance"[1] and managed care companies (about 36% of the total), and (3) via direct out-of-pocket payment (about 14% of the total) (U.S. Census Bureau, 2005, Table 119). Government expenditures are for both services that it operates directly and services patients receive from independent providers. In this case, government is a "third-party payer" (counting the patient as the first party and the provider, whether an individual or an institution, as the second).

The two major payers in the private insurance sector are Blue Cross/Blue Shield (in most instances to date not-for-profit, although some of them are converting to for-profit status; Stocker, 1997; Thorpe & Knickman, 2002, p. 54) and the commercial (for-profit) companies. With the growth of for-profit managed care, the commercial companies are becoming more of a factor in the private insurance sector. The major recipients of funds in 2002 were the hospitals (33%), physicians (23%), the pharmaceutical and "other medical non-durables" sectors (13%), nursing homes (7%), dentists (5%), government public health services (3%), and government administration and net cost of private health insurance (7%) (U.S. Census Bureau, 2005, Table 120).

Most health care personnel, for example, nurses and other hospital employees, are paid by salary. Traditionally, private health care practitioners, such as physicians, dentists, chiropractors, and psychotherapists, have been paid on a fee-for-service basis. Under managed care, an increasing number of the latter group of health care professionals is receiving at least a portion of their incomes under a "capitation" payment system (see chapter 6). In the past, U.S. health care facilities for the most part operated either on a global budget or on some form of a cost-reimbursement basis. Again, under managed care, a growing number of institutions are receiving a "capitated" payment for each person, for which they agree to provide services as needed by that person. Financing mechanisms,

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[1] The term *health insurance* is customarily applied to a system under which an insurance company is paid money (a premium) in advance for agreeing to pay for the costs or some proportion of them of a specified list of health services provided to a named beneficiary during a specified period of time. Under traditional health insurance, the care is not provided by the insurance company itself. Under managed care, either the "insurance" and the care are provided by the same company, or the insurer and provider are very closely connected, usually by contract.

The reason the word *insurance* is put in quotation marks above is that the customary use of the term *health insurance* is not in accord with the usual meaning of the word *insurance*. Customarily, the term describes an arrangement under which members of a group pay a premium to a financial entity to protect themselves against the financial consequences of the occurrence of a relatively rare event, such as premature death or the loss of a dwelling to fire. The use of health services over a lifetime, by the members of any covered group of beneficiaries, is not a rare event, however. Thus the term *insurance* is inappropriately used in the health care sector. What is going on, rather, is prepayment for at least some services that one can expect to use at some time in the future. Nevertheless, because the term *health insurance* has a customary meaning, defined in the first sentence of this footnote, even though it is at variance with the true meaning of *insurance* we will use it in a similar way.

expenditures, and methods of payment are covered in some detail in chapters 6 and 8.

Organization of Health Care Services

The components of a health care system are organized into health services programs. The forms and proportionate role of each program differ among national systems. In the United States, as in most industrialized countries, there are five major types of health services program sectors: the principal governmental health authorities, other agencies of government with health care functions, the private health care sector, non–health care commercial enterprises with health care functions, and voluntary health care agencies. It is within each of the health services programs in each sector that the five elements of the system—facilities, workforce, therapeutics, knowledge, and money—interact to produce health services.

Government in Health Services

In the United States, each of the three levels of government—federal, state, and local—directly operates certain health services programs. For example, there are the federal Department of Veterans Affairs hospital system, the state mental hospitals, and the local government public hospitals. Furthermore, by being the conduit for almost half of the money paid for health services, by collecting and disseminating health and health services information, by educating and training personnel directly, by providing financial support for many private health sciences educational institutions, and by being the largest player in the biomedical research arena, government is closely involved with virtually all health services programs.

The principal health agency of the U.S. federal government is the Department of Health and Human Services, headed by a Cabinet-level secretary. It is responsible for the federal Social Security program, the (diminishing) federal role in the state-run public assistance programs, and the main federal programs in biomedical research, regulation, financing, and public health. Many of the department's responsibilities are met by allocation of money and delegation of authority to the many other public and private entities throughout the nation that are concerned with health matters.

In each of the 50 states there is a major health agency that is part of state government. As at the federal level, in some states it is combined with agencies for social welfare or other functions. The administrative configuration and scope of functions of the state health care agencies are highly variable. The heads of these agencies are ordinarily appointed by the state's governor. Administratively, they are responsible entirely to the governor and not at all to the U.S. Department of Health and Human Services. Only insofar as certain standards must be met as a condition for receipt of certain federal monies or in times of declared national emergency must the states accept national direction.

Similarly, below the level of state government, there are units of local government—counties, cities, and occasionally special health services districts—that also have major health care agencies. Most of these have a great deal of operational autonomy, although on certain health matters the local health department may carry out functions delegated by the state agency.

Finally, a variety of health-related functions are carried out by non–health care government agencies. For example, at the federal level, the Department of Labor administers the Occupational Safety and Health Administration, and the Department of Agriculture sets national nutrition standards in cooperation with the Department of Health and Human Services. At all three levels of government, environmental protection services are often provided by an independent agency, for example, the Environmental Protection Agency at the federal level. (For a closer look at government activities in health care, see chapters 5 and 6.)

Voluntary Agencies

In all countries there are nongovernmental agencies that play a role in the health care system. They are commonly known as *voluntary agencies*. In the United States, the group includes the American Heart Association, the Red Cross, and the Visiting Nurse Association. Voluntary health agencies have a wide variety of functions: to perform a service not rendered by other health care agencies, to pursue certain research or service objectives with special vigor and dedication, to advance or protect the interests of a certain population subgroup, to engage in public and political education and advocacy, and to carry out certain tasks at the behest of governmental agencies.

Like corporations, in order to stay in business voluntary agencies must take in more money than they spend. In a voluntary agency, however, the excess of income over expenses does not accrue to any individual(s) but rather is used to support the expansion of that agency's work. A voluntary agency is thus labeled "not-for-profit" or "nonprofit." The voluntary agency may be devoted exclusively to health purposes, or health services may be incidental to certain larger purposes, such as those of religious missions (domestic or foreign).

A subset of voluntary health care agencies is that comprising of the health professional organizations, for example, the American Medical Association (AMA), the American Nurses Association (ANA), the American College of Preventive Medicine (ACPM), the American Public Health Association (APHA), the American Hospital Association (AHA), the Association of American Medical Colleges (AAMC), and the American Medical Athletic Association

(AMAA). (In this nation of organizations, they are in fact legion.) They are financed by individual and institutional membership dues, journal subscriptions and advertising fees, and on occasion research grants and contracts. They are primarily concerned with advancing the perceived professional and economic interests of their members, both individual and institutional. They do this through, for example, public education, continuing professional education, litigation, legislative and political action, and, on occasion, trade union–like activity. They also may focus on advancing scientific knowledge and understanding, setting and maintaining professional standards, and educating the public about health and disease.

For-Profit Enterprises Providing Health Services

There are two distinct ways in which for-profit enterprises provide health services. There are for-profit health services providers and suppliers, and there are corporations that deliver health services to their employees as a benefit of employment.

For-Profit, or "Proprietary," Health Service Enterprises. These enterprises are playing an increasingly significant role in the U.S. health care system. There are five subgroups of for-profit health services enterprises. First are those engaged in therapeutics production, as mentioned earlier. Most significant in terms of its impact on national health policy is the pharmaceutical industry (Strongin, 2002). Second are the commercial health insurance companies (see chapter 6), as well as those insurance companies providing professional liability (malpractice) coverage. Third are nursing homes for the aged and chronically ill, which have long been predominantly proprietary, with about 80% of their beds in units operated for profit. Fourth are the for-profit, proprietary, general hospitals, both those that are part of a managed care company and those that are independent. They house about 12% of the nonfederal, short-term hospital beds in the country (NCHS, 2004, Table 109). Fifth is the for-profit managed care sector (the MCOs), which has grown rapidly and is now the dominant nongovernmental actor on the health care system stage. It has developed from three different streams: the proprietary hospital sector, the commercial health insurance sector, and de novo (see chapter 8).

Employee Health Services. In the United States, in-plant employee health services are generally of circumscribed scope, except in large establishments (more than 500 workers). In smaller factories, they are usually limited to the provision of first aid by an industrial nurse or perhaps only a medicine chest for self-use. Large plants or mines may maintain a staff of physicians and nurses who perform preplacement and periodic health examinations, treat any work-related illnesses, disabilities, or injuries, and may engage in work-site wellness activities (O'Donnell & Harris, 1994). Enterprises in isolated locations, such as rural railroad junctions or lumber mills, may operate comprehensive medical care programs. Industrial firms are obligated by law to protect workers from accidents and occupational diseases, although enforcement, carried out by the federal Occupational Safety and Health Administration (OSHA) and in certain states designated state agencies, is often weak.

Private Professional Practice

The U.S. health care system traditionally has been dominated by private medical and other health professional practice, as noted earlier. As of the early 2000s, though system trends have begun changing certain of these relationships, office and in-hospital medical, dental, chiropractic, and medical and nonmedical psychotherapeutic care, pharmacy, optical, speech and audiology services, and the fitting of prosthetic appliances, among other services, are still furnished primarily by private practitioners.

It is especially noteworthy that, even when the financial support for health services in the United States has been collectivized, as in the various public and private health insurance programs and managed care, the direct provision of health services to patients has remained substantially in the markets created by individual practitioners. In private medical practice, for example, whether it is carried out in the physician's office or at a hospital, the service is rendered by an individual physician to a private patient of that physician. The responsible third-party payer, if any, pays a private fee to the provider. The "participation" of the insurance companies in the provision of services is limited to making sure that the payments for care, in whole or in part, for the individual patient are covered by the company's policy, and that the care given is "appropriate" as a covered item of care, in terms of the insurance company's prewritten guidelines.

Thus, true medical group practice or multidisciplinary team practice (see chapter 8) is still relatively rare in the United States. However, one of the intriguing aspects of managed care is that private practicing physicians who formerly contracted directly with their patients are now in one sense becoming collectivized as well. As previously noted, under managed care, the service contract is between the managed care company and the patient (most often through the patient's employer), not between the physician and the patient. The physician also contracts with the company (not the individual patient) to provide care for a set of patients.

Types of Health Services

The several components of the health care system work together to produce health services for individuals (personal health services) and population groups (community health services).[2] To distinguish the personal from other parts of the system, what happens in the former is customarily called the "delivery of health services." These services are usually further categorized as primary, secondary, or tertiary.

Primary Care

In functional terms, primary care is the care that most people need most of the time for most of their health and illness concerns, for patients who are not in institutional beds. Primary care includes a range of personal treatment and preventive measures. Common forms of personal preventive measures are the promotion of personal lifestyle/behavior change (e.g., becoming a regular exerciser), immunization, prenatal care, and periodic health examination for early disease detection. In industrialized countries, both treatment and preventive interventions are usually provided by a physician, although in some parts of the United States nurse practitioners and physician assistants also provide primary care (see chapter 3).

Most of the major causes of acute and chronic morbidity (sickness) are treated in the primary care setting. As of 1996 (the most recent year for which the following data were available at the time of writing), the major causes of acute and chronic morbidity were respiratory conditions, influenza, the "common cold," injuries, other infective and parasitic diseases, hearing impairment, chronic sinusitis, arthritis, hypertension, heart conditions, orthopedic impairments (including low back pain), and asthma and hay fever (Adams, Hendershot, & Marano, 1999, Tables 1, 57).

Secondary and Tertiary Care

Secondary care (the most difficult level to define) includes services that are available in both community hospitals and physicians' offices. Ideally, they are arranged through referral or consultation after a preliminary evaluation by a primary care practitioner. Secondary services include most surgical procedures and the common diagnostic and treatment interventions of such specialists as radiologists, cardiologists, and ophthalmologists.

Tertiary care consists of highly specialized diagnostic, therapeutic, and rehabilitative services, requiring staff and equipment "that transcend the capabilities

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[2] A personal health service is one given directly to an individual—for example, treatment for an upper respiratory infection or the setting and casting of a fractured ankle. The recipient is almost invariably aware that he or she is receiving the service. A community health service is one provided to a group of people as a group. Each group member may be aware that he or she is receiving the service, for example, public health education on smoking cessation, but often the group member is unaware of the service received, for example, as in the provision of pure water supply and sanitary sewage disposal.

of the average community hospital" (Rogatz, 1970, p. 47). Such care, available largely at major medical centers, includes organ transplantation, open heart surgery, and other technically complex procedures, complex chemo- and radiotherapy for cancer, and the preservation of very low birth-weight premature infants.

In the United States, both secondary and tertiary health services are highly developed. That development has not always occurred either in response to a well-documented need or in a planned way so as to make for the most efficient use of scarce resources.

Care of Special Populations and Disorders

In all health care systems there are special programs providing primary, secondary, and tertiary care for certain population subgroups that are defined by age, gender, or occupation, as well as the management of certain specific health disorders in the population as a whole. In the United States, many of the special programs for defined population groups are provided by government, such as those for military personnel and dependents, military service veterans, and Native Americans. Other U.S. population subgroups for which special programs of health care have been created include railroad workers, migrant farm workers, certain industrial workers, schoolchildren, and college and university students.

Special programs can also be organized by type of illness. Mental illness is the most important health disorder for which special subsystems of health care are organized in the United States. Historically, hospitalization for mental illness took place primarily in special mental hospitals, primarily financed and operated by state governments. However, throughout the country the state hospital systems have shrunk drastically since the mid-1960s in both the number and the size of the hospitals, with little replacement by alternative services such as community mental health centers. This long-term development has had increasingly negative effects for both patients and the communities in which they live, as well as for the nonspecialized hospitals to which they are forced to turn when no other alternative is available (Haugh, 2002; Sharfstein, Stoline, & Koran, 2002; U.S. Department of Health and Human Services, 1999).

Ambulatory care for mental illness and emotional problems can be provided in private practice by psychiatrists, clinical psychologists, psychiatric social workers, and other psychotherapists. There are also several thousand public or voluntary mental health clinics serving primarily low-income patients. As noted, a national community mental health center system, for which federal legislation was enacted back in the 1960s to replace the state mental hospital system, has never been developed. Nevertheless, as also noted, the state mental hospital system was sharply and steadily contracted over the last third of the 20th century.

Tuberculosis (TB), before the steep decline in its incidence and prevalence that occurred after the discovery at mid-20th century of antibiotics effective in treating it, also warranted a special network of clinics and hospitals for its detection and care. The current increase in the incidence of tuberculosis related to acquired immunodeficiency syndrome (AIDS), although a serious problem, is not of a magnitude that will lead to the reestablishment of anything like the old TB sanitarium system.

Health Care System Management

Dominant Manager: Changes in the Physician–Patient Relationship

Traditionally, as noted, American physicians control the bulk of the decision-making process concerning the allocation and use of health care system resources, whether through scheduling visits to themselves, or the ordering of diagnostic tests, hospital admissions, surgical interventions, the use of pharmaceuticals, or others. One of the major factors leading to the ever-rising costs of U.S. health care (U.S. Census Bureau, 2005, Table 118) has been this characteristic of independent physician decision making in resource allocation.

With the advent of managed care (see chapter 8), that pattern began to change (Dudley & Luft, 2001; Kassirer, 1995). Traditionally, whether or not the service was paid for by the patient or a third party other than the patient or physician, medical care in the United States has been provided primarily on the basis of a private, direct (usually unwritten) contract between physician and patient. Under managed care, a managed care organization (MCO), usually for-profit (Dudley & Luft, 2001; Fubini, 1996; Smits, 2002), contracts with patients, either directly or through their employers, to provide medical care. In the United States there is a clear distinction between managers and providers.

As MCOs increasingly became the primary contractor with patients for the provision of medical care, they took away from the physicians an increasing amount of the decision-making authority over how health care system resources are used and spent. This led to a degree of cost containment as utilization of certain resources declined (KPMG Peat Marwick, 1996). (By coincidence, the upward march of health care costs significantly in excess of the rise in the Consumer Price Index resumed in the early 2000s; Heffler et al., 2002, Table 2.) But it also led to a rising level of unhappiness and dissatisfaction, for somewhat different reasons, among both doctors and patients ("Can HMOs Help," 1996; "Hillary," 2001). We will return to these themes at various points in this book.

Administration

The administration of health services is a complex matter, itself the subject of many lengthy books (e.g., Shortell & Kaluzny, 2006). Although the principles of good administration and management apply equally, the many different types of health services organizations face different types of administrative problems.

For example, consider an administrative/management problem with which hospitals around the country are wrestling. Its resolution will require major changes in the way hospitals are structured. Those structural changes will in turn require major changes in the way people think and feel. The problem is that, with a few exceptions, hospitals are not used to mounting coordinated programs, but rather to delivering individual services, each component putting in its piece more or less as it judges to be best, and hoping that it fits. Medical staffs in hospitals in particular are often used to functioning independently, not as part of a team ("Hospital Stocks," 2002; Sanderson, 1996/1997).

Many of the contradictions that are evident in the role of service, teaching, and research in hospitals will have to be resolved before these administrative problems can be resolved. Managed care puts special strains on the administration and management of hospitals, although the problems raised by the for-profit and not-for-profit varieties are rather different. (See discussions in chapters 3, 6, and 8.)

Planning

Planning may be defined as any deliberate action to determine unmet needs, set goals and objectives, design a program to meet them, and allocate resources for implementing the program in a systematic way. In this sense, health and health care planning in the United States and elsewhere can be said to have occurred with the establishment of the first hospital or the organization of the first governmental office of public health.

Even though virtually all health care entities engage in some form of health services planning at some time or other, as customarily used the terms *health care planning* and *health services planning* refer to the actions of a governmental or quasigovernmental agency in carrying out the functions just described. The results of the activity can be applied at any health care system level, from the local to the national.

The findings and decisions of health care planning agencies have only infrequently been backed by the force of law. Thus, health care planning in the United States has, for the most part, been very weak. Legally enforced planning has been largely confined to hospital construction. From the mid-1990s onward in many parts of the United States, there was no official planning function in place at all. With the exception of antitrust considerations, major decisions, even on such matters as medical school mergers, the growth of the managed care approach to the delivery of health services, and the concomitant expansion of profit making in the health care field, for the most part have been left to the institutional/provider parties themselves. (See chapter 8.)

Government Regulation

Somewhat paradoxically, in the U.S. health care system, government regulation of certain aspects of the system, other than prospective system planning, is highly developed. However, U.S. government regulation is primarily a reactive, not a proactive, process. In the health care system it usually occurs, for example, after serious financial problems have developed or serious defects in quality have been encountered. There is also regulation in the public health sector, for example, in response to the undertaking by a corporate entity of an activity that threatens the health, safety, or comfort of some significant group of people in society.

Because of the highly decentralized, primarily private administrative structure and the general absence of planning, many problems and abuses have developed in the system over time. In response, federal, state, and local governments from time to time have imposed health care system regulation in an attempt both to correct existing deficiencies, inefficiencies, and inequities and to prevent the development of new problems in the future. Presently, government regulation of the health care system operates at a modest level. Should the public find that the operations of the free market cannot meet all of their expressed needs, that level could rise again in the future, that is, if the expected opposition of those entities being regulated could be overcome (Blumenthal, 2001; Geyman, 2003).

Evaluation

Program evaluation technique is highly developed in the United States (Horn, 1997, 2002; Institute of Medicine, 2000; Rossi & Freeman, 1993). A good deal of academic program evaluation is carried out. For a variety of public policy reasons, however, not the least of which is the absence of any national health care system or national health planning system, actual applied program evaluation is often not done in the United States. For example, from the mid-1990s onward, managed care development has moved swiftly ahead, with little applied evaluation of the effectiveness of the approach of its several different forms in meeting MCOs' stated goals and objectives, much less the objectively determined societal goals (Kodner, 1996). This may be changing with the development of "pay for performance," in which reimbursement rates are based on outcomes achieved. If the Medicare program adopts this strategy for improving health care outcomes, there will be a ripple effect on all providers, including managed care organizations (Rosenthal, Landon, Normand, Frank, & Epstein, 2006).

The Population Served

It can be argued that those who use the health care system have as great an influence on the system as those who provide health care. What are some of the major characteristics of the U.S. population—the aggregate user of health care—that influence the health care system?

In 2004, the population of the United States was about 294 million (U.S. Census Bureau, 2005, Table 2). Many characteristics of the U.S. population differentiate us from other industrialized countries with more homogenous populations, and these characteristics in turn contribute to shaping our health care system.

Unlike our peer countries such as Germany, the United Kingdom, the Scandinavian countries, and Japan, the United States has a more racially and ethnically diverse population. Sometimes, the lack of cultural competence among providers can lead to a decrease in the quality of care provided, thus contributing to the existing health disparities in minority populations in the United States (Betancourt, Green, Carrillo, & Park, 2005).

There is also broad range of social classes with large income differentials that are becoming wider over time (Institute of Medicine, 2002; Reich, 1998; Smedley et al., 2003; Thurow, 1995; "Who's Winning," 2001). Unfortunately, the United States has the greatest disparity between the rich and poor of all the Western European countries and Japan (*World Factbook*, 5 October 2006). These disparities add to the complexity and fragmentation of the U.S. health care system through effects such as differential care, payment issues, cost sharing, and access problems.

Age structure also affects the U.S. health care system. The population forecast for the year 2020 undoubtedly foreshadows major changes on the system, as the Baby Boomer generation ages into the elderly category. As a result, health care consumption patterns that have remained fairly constant over time will move more unevenly in the direction of elderly care. Physicians will need to spend more time providing services for the elderly, increasing from 32% of patient care hours in 2000 to 39% in 2020 (Bureau of Health Professions, 2003). Health care expenditures are also expected to increase because of the growing elderly population, putting greater pressures on Medicaid and Medicare to provide services for the increasingly large retired population.

Health Care System Performance

For all of its resources, workforce, facilities, skills, knowledge, money, and ability to do wondrous things to and with the human body, the U.S. health care system is plagued with problems. Some observers consider the situation a crisis. "Sudden worsening" is part of the definition of crisis, however, and most of the observed problems have been around for a long time. Thus, it can be fairly stated that the health care system is not in crisis. Rather, it has serious problems, many of which are long-standing, but some of which, especially the increasing dominance of for-profit activities, are of recent origin—in particular, as Schiff and Young (2001, p. 401) put it, "the [modern] transformation of health care from a service into a business." (See also Himmelstein & Woolhandler, 2001; Lasser, Himmelstein & Woolhandler, 2006; Woolhandler & Himmelstein, 2006.) Unfortunately, many of the problems, whether recent or long-standing, are at present, at least, seemingly intractable.

Health care systems performance is generally evaluated on three criteria: (1) quality of health care; (2) equity of health care; and (3) efficiency of health care (Aday, Begley, Lairson, & Balkrishnan, 2004; Aday, Begley, Lairson, & Slater, 1993). Health care performance may be assessed at the micro level—for physician practices, hospitals, or other health care settings—or at the macro level—for regions, states, and nations. We will introduce these concepts here, and discuss them in more detail later in the book.

Quality of Health Care

Beginning with Donabedian and inspired by his work (1980–1985), there has been increasing effort to assess the quality of health care systematically in order to bring about continuous quality improvement. Health care outcomes and their relationship to structure and process are of major importance in health care today (e.g., Institute of Medicine, 2001). In general terms, this kind of quality assessment is performed through the conduct of research that compares the clinical outcomes of providers, institutions, treatments, and procedures, and then translates these research findings into clinical guidelines. In chapter 7 we will discuss clinical outcomes research and evidence-based medicine, as well as the organizations that have been in the forefront of this movement to improve the quality of health care.

In addition, we will briefly discuss the population health orientation and its indicators of health care quality. A health care system can be evaluated on the ultimate health outcome measure, that is, the health status of the population it serves. As David Kindig (1997) wrote:

> Despite the massive resources it consumes, the U.S. health care system remains under stress. While we are global leaders in technical accomplishments in medicine, the amount of health we achieve per dollar invested is far from optimal. . . . [W]e will not maximize the amount of health we achieve until a measure of health outcomes becomes the purchasing standard for both the private and public sectors. (p. 1)

Equity of Health Care

The distribution of and access to health services for the American people are significantly uneven (Institute of Medicine, 2002; Wennberg et al., 1996, 1999). For many persons who live in the right geographic location, have the right health care cost coverage package, and have a disease or condition on which American medicine has chosen to focus, American medicine is, as it is said, "the best in the world." But for the person who lives in the wrong place (Wennberg et al., 1996, 1999), has no health care cost coverage (Schroeder, 2001), is, for example, someone other than a young White male (Institute of Medicine, 2002, Marmot, 2001; Santana, 2002; Stolberg, 2002), and, worse yet, has a disease or condition in which American medicine has limited interest, that may well not be true. Such a person may be in serious trouble in terms of both his or her health care and his or her health.

Efficiency of Health Care

Efficiency is either allocative (attaining the most valued mix of health care services) or production efficiency (producing a given level of health care services at minimum cost). An allocative efficiency issue is how much to invest in preventive versus curative medical services, whereas a production efficiency issue might concern whether and when to substitute relatively low-cost nurses for physicians in the provision of medical care. At the micro level, efficiency is assessed using: (1) production functions; and (2) cost-effectiveness, cost-benefit, and related cost-utility analysis. At the macro level, efficiency analysis is based on comparisons of the performance of health care systems (Aday et al., 2004). On many studies of macro-efficiency, the U.S. health care system is less efficient than those of other nations, spending more, providing fewer basic resources per capita, and having worse population health outcomes such as life expectancy.

FUTURE OF THE U.S. HEALTH CARE SYSTEM

History of Change

As far back as 1932, the findings of the first comprehensive study of health care in the United States were summarized in these terms (Committee on the Costs of Medical Care [CCMC], 1970/1932, p. 2):

> The problem of providing satisfactory medical service to all the people of the United States at costs which they can meet is a pressing one. At the present time, many persons do not receive service which is adequate either in quantity or quality, and the costs of service are inequably distributed. The result is a tremendous amount of preventable physical pain and mental anguish, needless deaths, economic inefficiency, and social waste. Furthermore, these conditions are . . . largely unnecessary. The United States has the economic resources, the organizing ability, and the technical experience to solve this problem.

Reports have been issued ever since; changes have been called for, and some have been made—for example, the enactment of the Medicare and Medicaid legislation to insure health care for older Americans and those without means. These calls for change have set the stage for our present situation as well as the future.

The Present Situation

Today, the problem list for the financing, distribution, and delivery of services has changed little since the time of the publication of the CCMC final report (except that the costs are incredibly higher). Indeed, certain problems considered important by the Committee on the Costs of Medical Care that are still pressing today originated in our country and those of our European forebears well before the CCMC's time, in the 17th, 18th, and 19th centuries (Freymann, 1974, pp. 3–97). This is the case even though the advances in the science and technology of medicine have gone well beyond the wildest dreams of anyone giving thought to possibilities in 1932.

Future Directions

Although this book describes the dominant health care system in the United States today, changes are occurring rapidly. Other health care models, including other models originating in Western countries, such as chiropractic, and those originating in other parts of the world, such as Chinese medicine, are increasingly accepted. These are being developed as parallel systems as well as incorporated into the allopathic health care system. New financing and organizational models and, along with these, new paradigms of dominance and legitimacy are coming about. As a result, it is not clear what the U.S. health care system will look like even 10 years from now. Some of the major changes occurring now will be discussed in the final chapter.

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Chapter 2

Health Care Workforce

OVERVIEW

In 2004, almost 13.8 million people, about 9.9% of all persons employed in the United States, were working in the health care industry (National Center for Health Statistics [NCHS], 2005, Table 104). More than 41% of them worked in hospitals, 13% in nursing and personal care facilities, and more than 14% in physicians' offices. Since 1970, as the number of hospitals has shrunk, there has been a gradual decline in the percentage of health care personnel working in hospitals (it stood at close to two thirds in 1970). There have been concomitant increases in the percentages working in physicians' offices, chiropractors' offices (reflecting the large increase in the number of chiropractors since the 1970s), and especially "other" health services.

The U.S. Department of Labor has identified about 700 categories of skilled health occupations. Among health care professionals in 2004, there were about 2.3 million active registered nurses, more than 750,000 active allopathic physicians (those with an MD degree) and more than 42,000 osteopathic physicians (those with the DO degree), about 193,000 pharmacists, 165,000 dentists, 32,000 optometrists, and 12,000 podiatrists (NCHS, 2005, Table 108). The ratio of other health personnel to physicians reflects the complexity of the U.S. health care system. With close to 800,000 physicians (MD and DO) in active practice, there are more than 15 other health care workers for each physician. (In 1988, there were close to 18 other health care workers for each physician. The drop may be due in part to certain changes in the method of counting the various health worker categories.) This compares to about 3 other health care workers per doctor in 1920 (Donabedian, Axelrod, & Wyszewianski, 1980). Most of these other personnel have skills learned through special training. Only about one fifth are "non–health care"—specifically clerical, custodial, or similar personnel.

Under the laws of most states, only physicians, dentists, and a few other types of practitioners may serve patients directly, without being authorized to do so by another health professional who is licensed for independent practice. Among the other independent health professions are chiropractic, optometry, podiatry, psychotherapy, and, in some states, midwifery and physical therapy. For the most part, nurses work on the orders of physicians, although in certain circumstances, in certain states, some nurses, called "nurse practitioners" or "advanced practice nurses" (see later discussion), can work independently.

Other types of health care providers working on the orders and under at least the general supervision of physicians include clinical laboratory, x-ray, electrocardiographic, and other specialized technicians such as cardiorespiratory therapists, those who operate kidney dialysis machines, and those who work in rehabilitation services. In dentistry, one finds dental hygienists, dental technicians, and dental assistants working under the orders of dentists. Certain other health professionals (e.g., nutritionists and dietitians; physical, occupational, and speech therapists and audiologists; statisticians and statistical clerks; and medical record librarians and information technology specialists) work both under physicians' orders and, in certain circumstances such as school or industrial settings, independently.

Many of these "other health" occupations originally developed out of the nursing profession. Today, in countries less developed than the United States, work done in the United States by a laboratory technician, physical therapist, or dietitian is often done by a nurse (and at times even by a physician). At the same time, in the United States, medical practice itself has become more and more specialized. It is interesting to note that the same phenomenon has occurred within the largest health profession, nursing. Consider, for example, the development of the nurse specialties such as operating room nurse, intensive care nurse, nurse anesthetist, nurse midwife, and nurse practitioner/advanced practice nurse. In the next two sections we consider the two largest health professions, medicine and nursing, in more detail.

PHYSICIANS

Some Historical Background

The profession of medicine has changed dramatically over the course of American history. The role, training, and expectations of pre–Revolutionary War physicians are practically unrecognizable to us today, as the following description of the profession in the 18th century attests:

> [There were] 3,500 practicing physicians in the colonies in 1775. Of these, less than 300 had received a medical degree. Only a handful had graduated from the ten-year-old Philadelphia Medical College. The remainder, mainly from the middle and southern colonies, attended the European medical schools. Admission

> requirements included a knowledge of the classics and a husky bankroll. By the time the graduating thesis had been written in Latin, the student had been exposed to all the latest theories that Edinburgh, London, or the Continent had to offer. Theories aplenty—but the fledgling M.S.'s returned to America without having seen a patient!
>
> The bulk of the practicing physicians in the colonies—including all of the independent New Englanders—were apprentice-trained. Some had undergraduate degrees, while others were no more than fifteen years old when starting their medical careers. Dr. Benjamin Rush noted that the only prerequisite for a 'doctor's boy' was the ability to stand the sight of blood! His teacher was likely to be a prominent physician-surgeon, well qualified to guide the student through the maze of anatomy, osteology, the compounding of medicine, surgery, and the writings of Hippocrates. Toward the end of the three to six years apprenticeship, the doctor's boy was doing his own bloodletting, tooth-pulling, dressing wounds and some minor surgery. His certificate of proficiency gave the same practicing privileges as a medical student from the continent. (Wilbur, 1980, p. 1)

Since then, a vast health care system has developed in the United States to facilitate the practice of the allopathic (MD) physician, whose early days in America are described in the foregoing passage. This section of the chapter describes physician training and practice today.

Licensure

According to the Medical Practice Act of New York State (Article 131, Para. 6521 of the State Education Law) (University of the State of New York [USNY], 1995a, p. 31): "The practice of the profession of medicine is . . . diagnosing, treating, operating or prescribing for any human disease, pain, injury, deformity or physical condition."

In the United States, the medical license is granted by the states. To qualify for a medical license in New York State, for example, one must hold an MD or DO degree or its equivalent from a school meeting the state education department's requirements; have certain postgraduate (residency) practice experience; pass a medical licensure examination as designated by the department; be a citizen or resident alien; be of "good moral character"; and pay a fee (USNY, 1995a, p. 31). (All states have similar requirements.)

In our time, few medical school graduates enter practice before completing at least 3 years of residency training.

Physician Supply

As of 2003, about 84% of the almost 870,000 living, presently or formerly licensed, U.S. allopathic doctors of medicine (MDs) were in active practice (NCHS, 2005, Table 106). About 24% of the active MDs received their medical training outside the United States and Canada. That is quite a remarkable percentage considering the size of and the ongoing investment in the U.S.

medical education system. But as Fitzhugh Mullan has pointed out (1995) in an observation that is still true, despite the output of the U.S. medical schools, physician needs in many medically underserved areas could not be met without a steady influx of so-called international medical graduates (both U.S. citizens and foreign nationals who have attended non-U.S. medical schools) to U.S. residency programs, especially those in hospitals situated in those same underserved areas.

Slightly more than 20,000 of the physicians active in 2002 were in federal government service, most of them in the armed forces or units of what was formerly the U.S. Public Health Service. More than 80% of the federal physicians worked in patient care services. These percentages have varied marginally since 1975. In 2002, about 660,000 (approximately 94%) of all nonfederal physicians worked in patient care. Of those, about 78% were in office-based practice, about 14% were house staff (residents in training), and almost 7% were fully qualified physicians working full time in hospitals (NCHS, 2005, Table 106).

The slightly more than 41,000 nonfederal professionally active physicians who were not engaged in patient care worked in medical teaching, administration, research, state and local health services, the pharmaceutical industry, and the like. Among the several medical specialties, the largest numbers were found in internal medicine (about 96,000), general and family practice (about 72,000), pediatrics (more than 46,000), obstetrics and gynecology (close to 33,000), and general surgery (close to 25,000).

In 2003, the overall MD physician/population ratio was 26.6 per 10,000 (U.S. Census Bureau, 2005, Table 153). This is up from a post–World War II low in 1960 of 14 and from the 1988 figure of 22.6 per 10,000. There was a wide variation in physician/population ratio by geographic area. The state with the highest ratio, Massachusetts (many medical schools, given the population size), had 44 per 10,000, whereas the state with the lowest ratio, Idaho, had 17 per 10,000.

Although there are no known differences in health status that vary consistently with physician/population ratios, utilization of health services is generally higher in those areas that have more physicians (Eisenberg, 1986, pp. 15–17; Wennberg et al., 1996; Wennberg, Fisher, & Skinner, 2004). Among the factors influencing the amount of work physicians do are income goals, desired practice style, personal characteristics, practice setting, and standards established by clinical leadership (Eisenberg, 1986, chapter 2).

Private Medical Practice[1]

The primary mode of organization of physicians in the United States (and, indeed, of most of the other health care providers who are licensed to practice

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[1] Data on physicians are available from two publications of the American Medical Association: *Physician Socioeconomic Statistics*, and *Physician Characteristics and Distribution in the U.S.*

independently) is what is called “private practice.” Traditionally, the private practitioner contracts directly with patients (although almost never in writing) to provide a set of services (usually not spelled out in any detail). In return, the practitioner is paid a fee by the patient directly or, more commonly, by a third-party payer (i.e., an entity other than the practitioner or the patient, such as a health insurance company or the Medicare program). This arrangement is appropriately enough called the fee-for-service system.

Among the major factors that influence what the physician in private practice may do to and for patients are the licensing laws of the state in which the physician is located, the requirements of his or her malpractice insurer, and the stipulations of the hospital to which the physician admits patients, if, indeed, he or she is a hospital staff member. Since the mid-1990s, the era of “managed care,” this mode of physician organization has been changing (Bodenheimer, 1999; Dudley & Luft, 2001; Shortell, Waters, Clarke, & Budetti, 1998). Physician participation in managed care increased between 1988 and 1999, when 91% of all physicians had at least one managed care contract (up from 61%) and 49% of average practice revenue was derived from managed care (up from 23%). Participation in managed care declined, but only slightly, between 1999 and 2001 (Kaiser Family Foundation, 2002). However, it is not clear whether managed care is changing physician practice in the 21st century. Some research shows that it is having no impact on physician propensity to order services since 2000 (O’Neill & Kuder, 2005). On the other hand, some research indicates that managed care patients are less likely to see a specialist than those where there is no physician gatekeeper (Forrest et al., 2003). Chapter 8 describes and discusses managed care in detail.

Over time, the proportion of physicians hired on a salaried basis has increased. This is especially true for younger physicians. Among the reasons for this mode of employment that younger physicians find attractive are receiving a regular income and comprehensive fringe benefits; the provision of medical malpractice insurance by the employer; regular hours and regular night and weekend coverage schedules; avoiding the difficulties associated with entering into private practice in many desirable living areas, many of which have an overabundance of physicians; avoiding the high costs of starting a private practice, a particular burden to so many of today’s new physicians who start professional life with a large debt accumulated during their medical training; and finally, avoiding the tribulations of office practice dealing with managed care company scrutiny. (See chapter 8.)

Indeed, the era of managed care has put many physicians under a great deal of pressure. As Dr. Thomas Bodenheimer noted in an observation that is still valid now in the 21st century (1999):

> As the 20th century closes, the practice of medicine in the United States faces challenges as great as it ever has. On the one hand, medical science and technology have brought unimaginable benefits to the America population. On the other

> hand, these advances have contributed to the escalation of health care costs above what many people are able to pay. Physicians are caught in the middle—pressured by private and governmental purchasers of health care to keep costs down, while driven by the public and their own professional standards to do everything that might be beneficial for each patient. (p. 584)

Patterns of Practice

An important feature of medical practice organization in the United States is that most physicians see patients both on an ambulatory basis in their own offices and as hospital inpatients. (A small percentage of doctors do not have hospital appointments. How many is not known. Most of them are probably in urban areas with a surfeit of hospitals, or rural ones with none within a reasonable distance. Another small percentage belongs to the growing subspecialty of "hospitalist," physicians who, usually working for the hospital, see only hospitalized patients; also see the later discussion.) In most other countries, physicians either see ambulatory patients only or work full-time in hospitals.

In the United States, ambulatory care is the predominant setting for medical care. Most ambulatory care visits are in physician offices, with only about 8% in outpatient departments (Middleton and Hing, 2006).

> During 2004, an estimated 910.9 million visits were made to physician offices in the United States, an overall rate of 315.9 visits per 100 persons. Overall, 58.9% were to physicians in the specialties of general and family medicine, internal medicine, pediatrics, and obstetrics and gynecology. In 2004, primary care specialists provided 87.2% of all preventive care visits.... About 82 percent of office-based physicians were located in metropolitan statistical areas, but they provided 86.8 percent of annual physician office encounters.... Overall 86.9 percent of the visits were to physicians who owned the practice themselves or owned it with a group of other physicians. The majority of office visits (64.9%) were made to physicians engaged in group practice.... Established patients accounted for 88.8 percent of office visits. Four-fifths of office visits (82.1%) were made by established patients who had at least one previous visit in the last 12 months, and 25.4 percent had six or more visits in the previous 12 months. (Hing, Cherry, & Woodwell, 2006, pp. 2–3)

The unusual American arrangement offers some significant advantages to the patient. For example, for the many conditions for which one physician is technically competent to provide both ambulatory and inpatient care, there is continuity of care. In many cases requiring surgery, the nonsurgical referring physician will participate in the pre- and postoperative phases of care in the hospital. With the advent of managed care, however, this system may be changing. Managed care emphasizes the use of the primary care physician. Most plans do not allow beneficiaries to see a specialist without seeing or at least receiving the approval of their primary care physician first (although this pattern is beginning to change; Ferris et al., 2001).

Under managed care, the primary care physician has two main functions (Bodenheimer, Lo, & Casalino, 1999; Shortell, Waters, Clarke, & Budetti, 1998). One is to provide most of the health care that his or her patients need most of the time and coordinate the rest as a "gatekeeper" for what is best for the patient (Somers, 1983). The other, developed as the for-profit managed care industry has spread, is to act as the gatekeeper for the system, controlling the use of hospital and specialist care, at least as much for fiscal as for medical reasons.

Following the first model seems to be leading physicians in the United States to emulate a pattern based on the British system. In Great Britain, primary care physicians, still called "general practitioners," see patients almost exclusively on an ambulatory basis. The specialists, although seeing patients on both an ambulatory and inpatient basis, are virtually the only ones who handle hospitalized patients.

In 1996, Wachter and Goldman coined the term *hospitalist* to describe physicians who see patients solely on an inpatient basis. As they noted (Wachter & Goldman, 1996, p. 514):

> [Taking into account] the realities of managed care [in the United States] and its emphasis on efficiency . . . we anticipate the rapid growth of a new breed of physicians we call "hospitalists"—specialists in in-patient medicine—who will be responsible for managing the care of hospitalized patients in the same way that primary care physicians are responsible for managing the care of outpatients.

Their prediction seems to becoming a reality. This movement has grown in strength over the past decade. Reported advantages of the hospitalists approach include reduced patient length of stay, reduced per-case cost, decreased cost under several different risk-based payment systems, fewer inappropriate admissions through the emergency department, improved patient satisfaction, reduced readmission rates, increased admissions from remote physicians, and standardized care protocols and disease management programs (Haugh, 2002).

Six years after they published their first article on the hospitalist concept, based on a literature review of studies of the new model, Wachter and Goldman concluded (2002, p. 487):

> Empirical research supports the premise that hospitalists improve inpatient [care] efficiency without harmful effects on quality or patient satisfaction. . . . [T]he clinical use of hospitalists is growing rapidly, and hospitalists are also assuming prominent roles as teachers, researchers, and quality leaders. The hospitalist field . . . seems destined to continue to grow.

In August 2006, Dr. Wachter said in an interview:

> We have good data that show that there are about 15,000 hospitalists in the United States today, and the forces for growth are only accelerating. It now seems likely to me that the hospitalist movement will grow to about 30,000 to 50,000 physicians, much more than previously predicted. (Wachter, 2006)

We shall see.

Medical Specialization[2]

Specialization is the most prominent feature of the organization of American medical practice. It is one of the major results of the explosion of biomedical knowledge and technology that began in the last third of the 19th century. In the arenas of complex pathophysiological states and complicated surgery, it has become ever more difficult for a physician to master in depth more than one small area of what biomedical science and technology make possible and have to offer. Thus, even within specialties, there is further subspecialization. For example, certain ophthalmic (eye) surgeons “do only retinas,” and certain orthopedic surgeons “do only hips.”

Whereas the high-tech specialties demand a great depth of knowledge and skill in one particular area, the specialties of family medicine, primary care pediatrics, and primary care internal medicine demand a great breadth of knowledge and competency (Starfield, 1992). It is the case that many of the non–primary care specialties focus on a relatively narrow range of knowledge and skills, although both are developed in great depth. In one sense, then, most of the developments in medical specialization in terms of ever-narrowing focus have made the practice of medicine easier for the physician within each specialty than it is in primary care.

The knowledge-technology explosion is certainly one factor that accounts for the ever-increasing specialization of American medicine. Another is the financial incentive that is part of specialization: There has almost always been more money to be made in the specialties than in primary care. At the same time, there has never been a health personnel planning policy in this country that might exert some external controls on the distribution of physicians between the primary care and specialty sectors and within each specialty sector itself.

Specialization does have its advantages for patients. The high degree of knowledge and skill that specialists possess is beneficial to the patient who has a problem in that particular area of specialization. But it also has its disadvantages.

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[2] A particularly detailed history of the development of specialization in American medical practice is presented by Rosemary Stevens in her still-relevant history, *American Medicine and the Public Interest* (New Haven, CT: Yale University Press, 1971).

Specialists tend to focus on their specialty's organ or organ system to the exclusion of others. Some, when facing a patient, see only the organ of their own specialty, not the whole person first. The patient's overall well-being may suffer if there is no professional who can (1) see the patient as a whole person, (2) put together into one clinical picture observations derived from a variety of patient complaints arising from different organ systems, (3) guide the patient through an intelligent use of the knowledge of several specialists, and (4) set up an organized means for communication among specialists.

This is not an argument against specialization per se; the vast expansion of medical knowledge requires such specialization, at least for a certain proportion of the profession. It is, however, an argument for a more rational approach to the organization of specialists and a significant improvement in the provision of primary care physician services, an argument that has a long history (Colwill, 1986; Geyman, 1986; Starfield, 1992; White, 1968). It is an argument for the "pro-patient" variant of the gatekeeper, as originally described by Somers (1983).

Medical Education

In the United States, including Puerto Rico, there were 126 fully accredited medical schools (Baransky & Etzel, 2005). Allopathic (MD) medical schools in the United States and Canada are accredited by a voluntary agency called the Liaison Committee on Medical Education (LCME). This agency is comprised of representatives from the American Medical Association (AMA) and the Association of American Medical Colleges (AAMC) and their Canadian counterparts. There are also 16 osteopathic (DO) medical schools accredited by the American Osteopathic Association.

All but a few medical schools are attached to a university. In the university, the medical school is invariably a separate college with its own dean (or the equivalent), sometimes loosely linked with other health professional schools in a "health sciences center." About 60% of the medical schools are sponsored by state governments, as part of state public universities; the rest are under private auspices. All the schools have received substantial, although primarily indirect, financial support from the federal government for many years.

Entry to U.S. medical schools usually requires a university bachelor's degree. The standard medical school program lasts another 4 years. It is termed "undergraduate" medical education even though, in the university sense, it is graduate education. This is because, in medical training, the post–medical degree, hospital-based residency experience is considered "graduate medical education."

Admission to medical schools is selective (AAMC, 2006a, Table 6). For the class entering in 2006, there were about 39,108 applicants (down from a peak of 47,000 for the entering class of 1996, but back on the up-swing from 37,000 in 2002), of whom about 18,442 found places, a ratio of about 2:1. The ratio of applicants to places fell steadily through the 1990s from a high of 2.7 in 1995–1996. The proportion of women in medical school has been increasing since the early 1970s. In 2000–2001 women accounted for 47% of the number of applicants, 46% of the entering class, and 43% of the graduating class that entered 4 years before (Barzansky & Etzel, 2001, Tables 1–5). In 2006, women accounted for 49.3% of the applicants, and 48.6% of the accepted incoming class (AAMC, 2006a, Table 6).

Although the record for improving the admission rates for African Americans does not match that for women, some gains have been made in recent years. From the 1970s through 1990, the percentage of African American admissions remained unchanged at about 6%. By 1995, this number had increased to 9%. However, by 2000, it had fallen to 7.5% and is now at 6.6% in 2006. At the same time, Hispanic admissions have remained around 7% in 2006, but Native American admissions fell from 1% in 2000 to about 0.4%. In 2006, Asian Americans accounted for close to one fifth of all admissions (AAMC, 2006b, Table 8).

The ratio of full-time faculty to students is very high, much higher than in virtually any other branch of education. In fact, in medical education the number of faculty actually exceeds the number of students, by a ratio of close to 1.77:1 (Barzansky & Etzel, 2005). This is one of the reasons medical education is so expensive (Krakower, Ganem, & Jolly, 1996). Although tuition and fees account for only about 4.0% of total medical school expenditures, it is not unusual for a student to graduate with upwards of $100,000 in debt accumulated for undergraduate and medical education.

An unusual aspect of U.S. medical education is that a significant number of U.S. citizens are trained to be physicians in off-shore, for-profit medical schools, established for the purpose of providing places for at least some of those applicants to U.S. schools who cannot gain entry to them. These off-shore schools are not recognized by the LCME. A number of states, with New York in the lead (Jonas, 1981, 1984), have over the years established their own programs for certifying graduates of these programs as eligible to take the state licensing examinations, as well as the schools for the purpose of permitting their students to take clinical clerkship training in hospitals in the respective states (Monahan, 2001).

Physician Workforce Projections

In 1986, this author had this to say about the issue of physician supply (Jonas, 1986, p. 65):

> At the same time that geographical distribution is quite uneven and remains a serious problem, the nation is confronting a general oversupply of physicians. . . . This situation creates a different set of problems [from that created by the former

> perceived undersupply of physicians]. To determine rationally the size of the physician manpower pool, some measure of need or demand for services is necessary . . . but need and demand alone cannot be the base for determining manpower [supply]. Patterns of practice vary . . . productivity varies . . . and supply affects demand. . . . One can try to rely on the force of an economic market to [manage] the size of the pool, or one can regulate supply, or do some of both. This is, in general, what has been tried to date; it has [obviously] not been very effective.

And so it seemed at that time that there was an impending oversupply of physicians.

Now turn to 2002. The leading journal of health policy analysis, *Health Affairs*, devoted a goodly portion of its January–February 2002 issue to eight articles on the subject (see *Health Affairs*, 21[1]:140–171). The lead article (Cooper, Getzen, McKee, & Laud, 2002) held that the nation was moving back to a stage of undersupply. However, that position was disputed strongly (e.g., Weiner, 2002).

The fact is the answers still are not clear. Of course, proper supply cannot be determined until demand and its relationship to supply are understood; some controls over what doctors do and do not do and what other health professionals could do just as well are established; and some arrangements for rationalizing the geographic distribution of physicians are made (see Mullan, 2002). But that would require a national physician supply and distribution policy and a planning program to implement it. Historically, as previously noted, neither has ever existed in the United States, despite the fact that the first national study on the issue that recommended that such a policy be created was published in 1959 (Fordham, 1980). Given our national aversion to health services planning, it is unlikely that one will be implemented in the foreseeable future.

Despite what has just been said about the total absence of organized health care services planning in the United States, forecasting is a function that is still engaged in. Trying to forecast how many and what types of physicians are needed to meet the health care needs of the U.S. population as it grows and ages over the next several decades is a complex process. One major factor that must be considered is the trends in health care usage. Over the past 50 years, the adequacy of the future supply of physicians in the United States has been analyzed regularly. This has been done in order to provide for timely changes to be made to educate future generations of physicians efficiently and effectively. However, the changes that have been made have been the result of medical schools, and in certain cases, state governments, acting independently. Previous physician workforce planning analyses have resulted in the improvement of and changes to the medical education infrastructure, and prompted government increases in funding of medical education resources. In the 1950s and 1960s, for example, reactions to projections of physician shortages prompted U.S. medical schools to expand their programs, and immigration of physicians trained at foreign medical schools was promoted successfully to increase physician supply.

In the 1980s and 1990s, with the increase in health care costs mounting sharply, and the advent of managed health care promising greater efficiency and cost containment, there was an increased reliance on the use of primary care physicians, that is, family practitioners, pediatricians, and internists. This shift led health care analysts to forecast a surplus of specialists and a corresponding need for more generalists. This projection, however, did not take into account the public's strong response against health maintenance organizations' (HMOs)/managed care industry measures to inhibit health care usage. It also failed to consider the implications of "out-of-plan usage" by those covered under HMOs. In addition, analysis of physician supply needs was complicated by fundamental differences between the health statuses of those receiving health care from an HMO and those obtaining health care on a fee-for-service basis.

Physician Supply Model

In 1993 the Health Resources and Services Administration's Bureau of Health Professions (BHPr) developed the Physician Supply Model, a demographic utilization-based computerized system, to forecast the supply and specialization areas for 18 medical specialties required to maintain a high quality of physician services in the United States through 2020 (Cooper, 1995). Since 2000, the Physician Supply Model (PSM) has modeled physician supply needs utilizing figures obtained from the National Center for Health Statistics, the American Medical Association, and the America Osteopathic Association regarding the supply of physicians in the workforce in a given year, the number of newly graduated medical doctors from U.S. and international medical schools during that year, and the depletion of that year's physician supply due to death, disability, retirement or career change.

The PSM calculates the number of active physicians in a given year, with breakdowns by demographic characteristics including age, gender, type of medical degree (MD or DO), medical specialty, whether the medical degree was earned in the United States or internationally (USMG or IMG), and the physician's primary activity. The PSM also determines the number of full-time equivalent physicians (where one FTE equals the average annual patient care hours per physician in the year 2000), varying by specialty. The PSM estimated that as of 2005 there were about 818,000 active physicians under the age of 75 in the United States.

Since calculation of PSM FTEs began in 2000, gender and age have been found to influence the estimate of FTEs, with women and older physicians tending to work fewer FTEs. Accordingly, as the population of active physicians has aged and more women have become physicians, the number of FTEs per active physician has decreased over the past several years (Bureau of Health Professions, 2006).

As of 2005, the PSM estimated that of the 818,000 active physicians under age 75 in the United States, about 95% have an MD, and 5% have a DO degree. Approximately 94% of active physicians are involved primarily with patient care; the other 6% teach, conduct research, or serve as administrators. About one third are general internists, pediatricians, or family practitioners. Interestingly, approximately 25% are women. The proportion of females among active physicians has increased steadily over time, as the percentage of women in the entering medical school class each year over the past several decades has increased from 10% to approximately 50%. As noted, women tend to provide patient care for fewer hours per year, tend to retire earlier, and have different areas of specialization than men. These differences are likely to affect future physician services supply needs. Estimates of attrition from the physician workforce are calculated based on long-term rates of physician retirements and mortality using mortality rates for college-educated U.S. men and women from the Centers for Disease Control and Prevention.

Physician productivity, which must be taken into account when forecasting the supply of physician services, is estimated on the basis of several factors, including the number of hours during which patient care is provided, and the number of patients seen. The PSM takes into consideration trends in the average number of hours worked and whether changes in health care delivery can alter the duration and number of patient visits, thereby affecting physician supply needs (National Center for Health Workforce Analysis, 2006).

Another measure on which the PSM relies is called the Relative Value Unit (RVU). It is a component of the Resource-Based Relative Value Scale, which measures physicians' work based on their skill level and amount of time needed to perform a certain task. The RVU is used to estimate physician supply needs. Physician productivity has increased about 1% per year from 1996 to 2002, according to Medical Group Management Association data, as the number of support staff has increased (Bureau of Health Professions, 2006).

New Entrants and Choice of Medical Specialty

Nearly 24,000 physicians complete their medical training through programs of graduate medical education (GME) each year (Bureau of Health Professions, 2006). Before entering residencies and fellowships, new physicians must complete the 4 years of medical education. About 80% of physicians completing GME are graduates of U.S. medical schools, and most of those are schools of allopathic medicine, which graduate about 16,000 MDs annually. This number has been relatively stable since 1980, and the baseline projections assume that that it will remain stable through 2020. Schools of osteopathic medicine graduate approximately 3,000 DOs per year, and baseline supply projections assume this number will increase to 4,000 per year by 2020.

More than 5,000 international medical graduates (IMGs) are accepted annually to GME programs. An increasing percentage of these are U.S. citizens who graduated from medical schools in other countries. IMGs who are not U.S. citizens or permanent residents can enter GME programs under the temporary work (H) or training (J) visa programs. Those IMGs with a J visa can participate in the J-1 visa waiver program, which allows physicians to remain in the United States if they provide primary care in federally designated health professional shortage areas (HPSAs) for at least 3 years after completing their GME program.

NURSING[3]

Some Historical Background

Women have provided the basic caring function in Western health care institutions since these institutions first developed in Europe during the first millennium C.E. The development of the modern nursing profession is customarily dated to 1854, when the English nurse Florence Nightingale traveled to the Russian Crimea in response to a British government mandate to improve hospital care during the Crimean War.

To accomplish this objective, the first task Nightingale needed to deal with was finding qualified nurses. The second was convincing the military physicians that the care she and her nurses proposed to provide would not spoil the soldiers by “coddling the brutes.” Third, Nightingale had to show that she had special skills and knowledge that, when incorporated into the management of sick and wounded soldiers, would lead to positive outcomes that could benefit the war effort. The nursing reforms she introduced eventually reduced hospital mortality from 60% to about 1%. This did not prevent repeated attempts on the part of her male military and medical superiors to undermine the program and eliminate the nurses, despite the fact that she had been sent to the Crimea by the British government.

In the United States Army, in the Spanish-American War and World War I, sick and wounded soldiers suffered unnecessarily while nurses struggled for the right to provide high-quality nursing care. It was not until 1944 that nurses in the military forces were granted temporary status as officers. Only in 1947

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[3] For more discussion on nursing, see Kovner and Salsberg (2002) and the Springer series *Advanced Practice Nursing*.

did Congress establish permanent Army and Navy Nurse Corps (Kalisch & Kalisch, 1978).

Definition

The definition of nursing changes as medical care changes. More than 15 years ago, nursing was defined by the American Nurses Association (ANA, 1990, p. 8) as:

> assessment, diagnosis, planning, intervention, and evaluation of human responses to health or illness; the provision of direct nursing care to individuals to restore optimum function, or to achieve a dignified death; . . . the provision of health counseling and education; the establishment of standards of practice for nursing care in all settings, including the development of nursing policies, procedures, and protocols for specific settings; . . . collaboration with other independently licensed health care professionals in case finding and the clinical management and execution of interventions identified to be appropriate in a plan of care; and the administration of medication and treatments as prescribed by those persons qualified under the provision of the [law].

In 1995, the ANA added the concept that the "authority of the profession is based on a social contract between society and the profession" (Kovner & Salsberg, 2002, p. 73). According to the Nursing Practice Act of New York State (Article 139, Para. 6902 of the State Education Law) (USNY, 1995b, p. 41):

> The practice of the profession of nursing as a registered professional nurse is defined as diagnosing and treating human responses to actual or potential health problems through such services as case finding, health teaching, health counseling, and provision of care supportive to or restorative of life and well-being, and executing medical regimens prescribed by a licensed or otherwise legally authorized physician or dentist. A nursing regimen shall be consistent with and not vary [from] existing medical regimen.

Furthermore the act states (Para. 6901) (USNY, 1995b, p. 41):

> "Diagnosing" in the context of nursing practice means the identification of and discrimination between physical and psychosocial signs and symptoms essential to effective execution and management of the nursing regimen. Such diagnostic privilege is distinct from medical diagnosis. "Treating" means selection and performance of those therapeutic measures essential to the effective execution and management of the nursing regimen, and execution of any prescribed medical regimen. "Human responses" means those signs, symptoms and processes which denote the individual's interaction with an actual or potential health problem.

According to the ANA (1995, p. 8), the areas of concern include care and self-care processes; physiological and pathophysiological processes in areas ranging from rest and sleep to nutrition and sexuality; physical and emotional comfort, discomfort, and pain; emotional difficulties; decision and choice making; perceptual orientation; relationships and role performance; and social policies. Nurturing is basic to all nursing functions.

Nursing is currently defined by the American Nurses Association (ANA, 2003, pp. 25–26) as follows: "Nursing is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations."

The essential features of professional nursing are considered to be:

- Provision of a caring relationship that facilitates health and healing.
- Attention to the range of human experiences and responses to health and illness within the physical and social environments.
- Integration of objective data with knowledge gained from an appreciation of the patient's or group's subjective experience.
- Application of scientific knowledge to the processes of diagnosis and treatment through the use of judgment and critical thinking.
- Advancement of professional nursing knowledge through scholarly inquiry.
- Influence on social and public policy to promote social justice.

This definition emphasizes the current importance of understanding the patient's social context, promoting social justice, and advancing scholarship to the practice of nursing. Although these activities may always have been understood to be important to nursing practice, the current definition makes their importance explicit.

Categories of Nurses and Nursing Education

Nurses comprise the largest group of health professionals. There were about 2,240,000 active registered nurses in the United States in 2005 (NCHS, 2005, Table 108). Close to 1,300,000 of them had associate degrees or hospital-based nursing school diplomas, about 731,200 had baccalaureate degrees, and almost 235,000 had graduate degrees. The registered nurse/population ratio was about 83 per 10,000. The heterogeneity of the U.S. health care system has created a need for nurses in many different types of service. About half of all registered nurses work in hospitals. The balance work primarily in nursing homes for the chronically ill, public health agencies, schools, industrial clinics, nursing education, private medical or dental offices, and other private duty positions.

There are three major groups of nurses: registered nurses (RNs), licensed practical nurses (LPNs), and nurses' aides. RNs have the highest level of education, the most responsibility under the states' nurse practice acts, and the most authority. Generally, LPNs and aides function under the supervision of an RN. "Registration" in nursing was originally a voluntary function of the nursing profession. It now means licensure by the states, at a significantly higher level of responsibility and authority than that accorded to the "licensed practical" nurse. To be a registered nurse, one must have a high school diploma and a diploma from a hospital-based program or a Bachelor of Science in Nursing (BSN) degree from a college or university, or, since 1952, an Associate Degree in Nursing (ADN) from a 2-year college program. There are also master's and doctoral programs for registered nurses. The 4-year Bachelor of Science in Nursing (BSN) degree is preferred by most nursing leaders and provides strong job opportunities.

Currently, there are more than 674 baccalaureate programs in the United States. Total enrollment in all nursing programs leading to a baccalaureate degree was 102,000 in 2005. A report from the National Advisory Council on Nursing Education recommends that at least two thirds of the nursing workforce hold a baccalaureate degree or higher by 2010, compared to the current 40%.

Compared to the BSN programs, the 2-year programs leading to an ADN focus more on technical skills than theory, and they are often used as a stepping stone to the BSN. The diploma path is a 2- to 3-year experience, and it is usually hospital-based. There are about 100 diploma programs at present. Graduates of all three types of programs are eligible through state licensing exams to become registered nurses (RNs).

There are more than 330 master's degree programs accredited by the Commission on Collegiate Nursing Education (CCNE) or the National League of Nursing Accrediting Commission (NLNAC). There is a wide variety of master's degree programs including the Master of Science degree in nursing (MSN), the Master of Nursing degree (MN), the Master of Science degree with a major in nursing (MS), and the Master of Arts degree with a major in nursing (MA). Advancing from the RN to the MSN usually takes about 3 years. There are 137 programs at present that offer this option. Proceeding from an RN to a BSN takes 1 to 2 years. There are more than 600 RN-to-BSN programs nationwide with more than 30,000 students enrolled (All Nursing Schools, 2006).

Licensed practical nurses (LPNs), also called licensed vocational nurses, may or may not have completed high school before entering a 12- to 18-month training program. LPN programs are operated by a variety of institutions including hospitals, adult schools, junior colleges, and technical schools. Like RNs, LPNs must pass a state-supervised examination to become licensed. But their work requires a significantly lower level of skill and knowledge than does that of the RN.

The education of the nurses' aides group is highly variable. Some aides take a formal educational program. For others, training is primarily on the job. In the work setting, the mix of RNs, LPNs, and aides is determined by the nature of patient care provided, government regulation, budget, and available personnel. In certain states, financial incentives have been provided to encourage facilities such as nursing homes to employ better qualified nursing staff, following findings that doing so improved the quality of patient care (Wunderlich, Sloan, & Davis, 1996).

From Nursing Shortage to Nursing Oversupply, and Back Again

Like the supply of physicians, over time the supply of nurses has rarely been in tune with either the real or the perceived need. Nursing shortages have occurred periodically in the United States (Aiken, 1982). One shortage in the early 1950s led to the formalization of licensed practical nurse training and the requirements previously mentioned. In the early 1990s, another shortage appeared to be on the horizon (Aiken & Mullinix, 1987; Secretary's Commission on Nursing, 1988). In 1990, the U.S. Department of Health and Human Services estimated the nursing shortage to be about 200,000 (Moses, 1992). It predicted shortages of about 350,000 in the year 2000, 520,000 in 2010, and 875,000 in 2020.

In 1988, the RN position vacancy rate in hospitals was over 11%. Nevertheless, nursing school enrollments were actually declining, and minority recruitment was lagging. However, one striking feature of the nursing profession is that a significant number of its members of working age were not employed in nursing. If half of the approximately 400,000 RNs not working in nursing in 1990 (Moses, 1992) had been employed, there would have been no nursing shortage. In the 1980s, authorities on the subject cited many reasons to account for this employment gap (Igelhart, 1987). Among the reasons were low salaries (the average starting salary for a staff nurse in 1988 was $25,000), limited chances for significant increases in pay over the life of a career (the average maximum salary for a head nurse in 1988 was $45,000), poor working conditions (high-tech work creates much stress, and shift work is a serious problem), poor professional image, and greater career opportunities for women.

Among steps suggested to solve the nursing shortage at that time were more creative solutions to the nights-and-weekends shifts problem, giving nurses more control over their own work, expanding nurse participation in hospital decision making, improving continuing professional education, restructuring the work of the nurse, and developing better career ladders for nurses (Helmer & McKnight, 1989).

Another key factor in the nursing shortage (especially given the fact that so many nurses of working age were not employed in nursing) was the doctor–nurse relationship and what was wrong with it from the nurses' point of view (Stein, Watts & Howell, 1990). As Aiken and Mullinix pointed out in

1987, “Much of the dissatisfaction of nurses with hospital practice is related to the absence of satisfying professional relationships with physicians” (p. 645). At the center of the nursing shortage, then, remained the need to change the rules of the “doctor–nurse game” (Stein, Watts, & Howell, 1990), the source of much of the dissatisfaction noted by Aiken and Mullinix. After all, not all of those 400,000 RNs who in 1990 were not in nursing chose to leave the profession simply because they were burned out, were too old, were having children, wanted to stay at home, or thought some other line of work would be better.

But suddenly the nurse supply situation seemed to change. What a difference managed care seemed to make (Lumsdon, 1995). There were both closures and size shrinkages of hospitals. By the mid-1990s, not only was there no longer a nursing shortage, but nurse layoffs were occurring in certain areas of the country (Rosenthal, 1996). The University of California’s Pew Center for the Health Professions (CHP, 1999) predicted that 200,000 to 300,000 hospital nurse positions could be eliminated by the year 2000. Suddenly, a vast surplus appeared to be on the horizon. Regardless of what the true situation was, however, as with physician supply, no comprehensive national planning was occurring to deal with the supply, distribution, and role and function of either the existing nurse pool or the nursing education system.

But then, the situation changed rapidly once again. The new nursing shortage appeared as quickly as had the apparent oversupply of the mid-1990s. Once again, the predictions of future severe nursing shortages made in the late 1980s seemed to be at least somewhat on target. In 2001, the American Hospital Association (AHA) reported that for hospitals alone there were about 126,000 RN vacancies (Parker, 2002). But this time, the shortage problem went beyond just nurses.

A *New York Times* headline reported “Worker Shortage in Health Fields Worst in Decades” (Steinhauer, 2000). The president of the AHA, Dick Davidson (2001), proclaimed: “The single greatest challenge for hospitals today and in the future is the recruitment and retention of high quality staff across many disciplines.” According to data compiled by the AHA, the reasons for these shortages echoed those of earlier times (Selvam, 2001). In 2004, the American Association of Colleges of Nursing (AACN) published the “Nursing Shortage Fact Sheet,” which documents the continued shortage of nurses in the United States. For example, the number of first-time candidates for the National Council Licensure Examination for Registered Nurses (NCLEX-RN) declined significantly from 1995 to 2003 for BSNs, ADNs, and diploma nurses. The overall decline for all categories was 96,438 to 76,618 (AACN, 2004).

One important issue for job satisfaction and retention among nurses is hours worked. The working hours of RNs in hospitals have changed. The use of extended work shifts and overtime has escalated as hospitals cope with a shortage of registered nurses.

> While systematic national data on trends in the number of hours worked per day by nurses are lacking, anecdotal reports suggest that hospital staff nurses are working long hours with few breaks and often little time for recovery between shifts. Scheduled shifts may be eight, twelve, or even sixteen hours long and may not follow the traditional pattern of day, evening, and night shifts. (Rogers, Hwang, Scott, Aiken, & Dinges, 2004, p. 202)

Another issue is the nurse-to-patient ratio. In 1999, California became the first and only state—at this point—to set a minimum nurse-to-patient ratio. The California hospitals and the California Healthcare Association have fought the law on the basis of cost, other performance activities, and the nursing shortage. The governor issued an emergency regulation to void the law, but the California Superior Court voided the governor's order. To deal with the nursing shortage, hospitals have used a variety of tactics including competitive compensation and the use of temporary staff. However, hospitals are unsure whether they can maintain or meet future needs and the increased costs associated with these tactics (May, Bazzoli, & Gerland, 2006).

Both long working hours and high nurse-to-patient ratios are a concern from a patient safety perspective. According to a 1997 outcome study covering 6 million discharges from 800 hospitals in 11 states (Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002), "[A] higher proportion of hours of nursing care provided by registered nurses and a greater number of hours of care by registered nurses per day are associated with better care for hospitalized patients."

Nurses are justifiably concerned about patient safety and their own well-being. For example, a study conducted for AFT Healthcare, a union, found that nurses view understaffing as a serious problem for nurse burnout and the quality of care that patients receive:

> Not surprisingly, nurses perceive a serious staffing shortfall. Fully three in five (61%) hospital nurses say the nurses at their hospital are responsible for too many patients, whereas only 2% believe that the nurses at their hospital could safely provide care for more patients. . . . Fully four in five (82%) hospital nurses support legislation that would establish a maximum number of patients that nurses can be required to care for at one time, with 57% strongly favoring and 25% somewhat favoring such legislation. Just 13% say they are opposed. . . . (Hart & Research Associates, 2003)

A third looming issue is that of worker protection for nurses. In 2006, the National Labor Relations Board exempted registered nurses from union membership if they have certain kinds of supervisory duties. In the majority decision, the board's three Republicans adopted a broad definition of *supervisor*, which included those who assigned others to location, shift, or significant tasks, such as a nurse overseeing a shift who might assign another nurse to a particular patient.

The board's majority ruled that workers should be considered supervisors, exempt from union membership, if they oversaw another employee and could be held accountable for that subordinate's performance. The board's majority also ruled that workers could be considered supervisors if supervisory duties were only 10% to 15% of their total work time. In dissenting, the board's two Democrats said, "Today's decision threatens to create a new class of workers under federal labor law: workers who have neither the genuine prerogatives of management, nor the statutory rights of ordinary employees" (Greenhouse, 2006).

At the beginning of the new millennium, at least some members of all health care occupations have been found to be dissatisfied with their current working conditions. For example, 40% or more of hospital employees other than physicians wanted better pay, a better work environment, better benefits, and more advancement opportunities. One third of all health care employees were disappointed both in physician leadership and in the quality of institutional management and supervision. The problems for nurses in particular, however, seemed not to be new, except that they appeared to be getting worse (Steinbrook, 2002). As Dr. Steinbrook put it, "Nursing is an embattled profession" (p. 1757).

A particularly chilling fact reflecting on the nursing shortage and its projected future was that in 2004 only 16.6% of RNs were under the age of 35, compared to 40.5% in 1980. Further, the percentage of nurses over 54 years of age was 25.5% in 2004, compared to only 17.1% in 1980 (Bureau of Health Professions, 2005). One possible solution to the nursing shortage was summed up in a cartoon that appeared in the American Hospital Association's journal, *Hospitals and Health Networks* (March 2002). In it, a doctor is introducing a patient in a hospital bed to a robot. In so doing, he says: "Meet Nurse X-2002. She [sic] will be handling your recovery. If you have any questions, call Radio Shack."

Nurses in Expanded Roles

The scope of nurse practice has expanded on many occasions since the days of Florence Nightingale. Each expansion first occurred along the route of on-the-job experience and training. Only later would such developments be formalized into an educational program. Thus, for example, the first public health nurses, who appeared during World War I, the first maternal and child health nurses, who also came on the scene in the early 1920s, the first nurse anesthetists, nurse midwives, clinical nurse specialists, and ultimately nurse practitioners were all first prepared outside of any formal educational system.

In each instance, the initial informal efforts to create a new arena for nursing were followed by the establishment of standards, formal curricula in approved programs, and, more recently, the preparation for advanced levels through master's degree programs in universities. The development of each new form of and forum for nursing was also accompanied by a serious struggle for acceptance, especially within the medical profession. This was especially true if the new form was or could be taken to be in economic competition with physicians.

Over time, the acceptance of new roles for nurses as first demonstrated in practice has led to continuing changes in nursing practice laws across the country. For example, in well-defined primary care practice, an in-depth review of research carried out in the 1970s found no differences between the quality of care provided by qualified nurses and that provided by physicians (Record, 1981). This finding has been confirmed more recently (Mundinger et al., 2000). Properly prepared nurses in advanced practice, the nurse practitioners or advanced practice nurses, can provide primary ambulatory care, normal pregnancy care and delivery, and routine anesthesia at least as well as physicians (Mundinger, 2002).

In 1988, New York State, following the lead of a number of other states, formalized the nurse-practitioner role in its education law, to wit (New York State Education Department, 2005, para. 6902[3]):

> The practice of registered professional nursing by a nurse practitioner . . . may include the diagnosis of illness and physical conditions and the performance of therapeutic and corrective measures . . . in collaboration with a licensed physician . . . provided such services are performed in accordance with a written practice agreement and written practice protocols. The written practice agreement shall include explicit provisions for the resolution of any disagreement between the collaborating physician and the nurse practitioner regarding . . . diagnosis or treatment . . . within the scope of practice of both. To the extent the practice agreement does not so provide, then the collaborating physician's diagnosis or treatment shall prevail.

This sort of legislation opened the door for truly expanded nurse practice. It is proving to be a boon to patients, especially in such areas as primary care and chronic/multiple disease management, prevention, and early detection (Mundinger, 2002).

The number of nurse practitioners (NPs)—registered nurses with specialized training and advanced degrees—has risen from about 30,000 in 1990 to about 115,000 in 2006 (American Academy of Nurse Practitioners, 2006). The growth of the Nurse Practitioner profession is linked to numerous factors. A major one is the decline in the number of doctors choosing primary care as their specialty, a trend that is expected to continue. From 1998 to 2005, medical school surveys showed that the percentage of 3rd-year residents intending to pursue careers in general internal medicine went from 54% to 20%. Many new doctors are choosing more lucrative specialties, in part because of the debt they incur during medical school, and less time-demanding ones with more regular hours as well. The supply of family practice physicians is falling just as the Baby Boomer population is aging and their need for medical care is rising. NPs in many cases can and do fill this need. NPs can perform many of the duties of primary care doctors, such as performing physical exams; diagnosing and treating common health problems; prescribing medications (from a specified list); ordering and interpreting x-rays; providing prenatal care, family planning services, and gynecological exams; and giving immunizations. In addition, NPs are considered to be less rushed and more holistic in their approach to patients, factors increasing patient satisfaction.

Some states allow NPs to practice more independently and comprehensively than others. In these terms, in 2002 the following states were considered the best environments to practice as an NP: New Mexico, Arizona, Iowa, Oregon, Montana, Maine, and Washington. The least favorable, most restrictive, states were Alabama, Virginia, Georgia, and South Carolina (National Center for Health Workforce Analysis, 2002).

PHYSICIAN ASSISTANTS

The health profession of physician assistant (PA) has developed in the United States since the Vietnam War (1965–1973).[4] The early development of the PA profession occurred just as the Vietnam War was getting under way; it received a big boost from the return of Vietnam-veteran medical corpsmen. One can only speculate whether or not the PA profession would have been more than a blip on the radar screen of the history of health services had there been no Vietnam War. Had the PA profession not developed as it did, would the profession of nurse practitioner become more prominent in the United States? But the war did occur, and whether or not the two are integrally related, the PA profession has become an established U.S. health services profession.

By the mid-1980s, the PA profession had become a complex and multifaceted one (Schafft & Cawley, 1987). According to Schafft and Cawley (1987, p. 6), the PA's role involves:

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[4] At the 1972 meeting of the American Public Health Association, there was a panel presentation on new health care delivery developments in Canada that included a discussion of the nurse practitioner. This author asked if there were PA programs in Canada. The speaker replied: "We don't need to have PA programs. We have had no Vietnam War with the large number of returning medics to use and provide for. We need only nurse practitioner programs."

- Approaching a patient of any age group in any setting to elicit a detailed and accurate history, perform an appropriate physical examination, delineate problems, and record and present patient data.
- Analyzing health status data obtained via interview, examination, and laboratory diagnostic studies and delineating health care problems in consultation with the physician.
- Formulating, implementing, and monitoring an individualized treatment or management plan for a patient in consultation with the physician.
- Instructing and counseling patients regarding compliance with the prescribed therapeutic regimen, normal growth and development, family planning, emotional problems of daily living, and health maintenance.
- Performing routine procedures essential to managing simple conditions produced by infection or trauma, assisting in the management of more complex illness and injury, and initiating evaluations and therapeutic procedures in response to life-threatening situations.

By the mid-1990s, it was estimated that PAs "can perform 80% of the routine functions of a primary-care physician's practice" and "are widely accepted by patients" (American Academy of Physician Assistants [AAPA], 1996).

From its beginnings, the PA profession was conceived as an extension of the profession of medicine. Unlike nursing, it was not meant to be another separate profession. In each state, PA licensure is provided for under the medical practice act rather than under a separate law, as is the case with nursing. And although the gender balance within the PA profession has changed over the years to approximately 50:50 (AAPA, 1996), in the beginning, it was predominantly male. For these reasons, many of the power issues that cloud the relationship between physicians and nurses have not appeared.

This status is reflected in the AAPA definition of a PA (AAPA, 2006):

> Physician assistants are health care professionals licensed to practice medicine with physician supervision.... As part of their comprehensive responsibilities, PAs conduct physical exams, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and in virtually all states can write prescriptions. Within the physician–PA relationship, physician assistants exercise autonomy in medical decision making and provide a broad range of diagnostic and therapeutic services. A PA's practice may also include education, research, and administrative services.

In 2006, there were more than 136 PA training programs (AAPA, 2006). Most of them were offered through medical schools, teaching hospitals, or schools of the allied health professions in 4-year colleges. In 2006, there were about 40,000 PAs in the United States who were members of the American Academy of Physician Assistants.

Although in the early days most PAs worked in primary care, by the 1980s, specialization became common. In 1996, about half of the PA population worked in family practice (37.2% of the total), general internal medicine, general pediatrics, and obstetrics/gynecology; another 22% were in surgery; and close to 10% in emergency medicine, with the balance in the other specialties. Some PAs work for individual physicians, but most are employed in hospitals, clinics, group practices, and other organized health care settings. As noted earlier, like nurse practitioners, for the same kinds of patients PAs provide care that is comparable in quality to that provided by physicians. Listed as the best environment to practice as a PA are North Carolina, Oregon, and Montana. The most restrictive states to practice are Mississippi, New Jersey, Virginia, District of Columbia, and Ohio (National Center for Health Workforce Analysis, 2002).

HEALTH CARE WORKFORCE OUTSIDE THE HOSPITAL AND PHYSICIAN OFFICE

There are many other settings in which health services are delivered and many categories of health worker that provide them. In mental health centers, for example, the staff includes psychologists, psychiatric social workers and nurses, and other support staff, in addition to psychiatrists. Community outreach workers are a new type of health care worker trained in recent years by certain ambulatory care programs, both general and mental.

School health services are most often provided by part-time or full-time school nurses, usually engaged by local school boards but sometimes assigned by the local public health agency. School health physicians, who examine children to detect physical or mental disorders, are usually private practitioners working in schools part-time. In some larger school districts, such as New York and Los Angeles, they may be employed full-time. In some school districts, there may also be, for example, psychologists, social workers, audiologists, and dental hygienists.

In local health department centers, public health nurses are the mainstay of the clinics that focus on preventive services. These nurses work with part-time physicians who are otherwise mainly in private practice. Other personnel in public health clinics include health educators, nutritionists and dietitians, and sexually transmitted disease investigators. Besides the personnel staffing the clinics, public health agencies employ sanitarians, statisticians, community health educators with specialized skills, and family planning counselors.

In sum, the health personnel picture in the Unites States is complex. On the technical side, it is highly developed, and many patients greatly benefit from the availability of so many different health care personnel with so much detailed education, training, and experience. There are gaps and overlaps, however, and maldistribution by geographic area and differing levels of patient access to care are significant problems. As noted, the introduction of comprehensive health personnel planning would be a great help, but as in all sectors of the U.S. health care delivery system, that development is a long way off.

CONCLUSIONS

Paralleling the expected growth in health care in the next decade (National Center for Health Workforce Analysis, 2003), health occupations are projected to be leading sources of new jobs and job growth in the next decade (Martiniano & Moore, 2006):

> Health continues to be the fastest growing employment sector in the country. Between 2004 and 2014, the health sector is projected to grow by more than 27% compared to less than 12% for all other employment sectors. Within health care, jobs in home health care and offices of health practitioners, particularly physician offices, are projected to grow the fastest. The health occupations projected to add the most new jobs between 2004 and 2014 are registered nurses, home health aides, orderlies, and personal and home care aides. In addition, many of these occupations will need more recruits to fill vacancies created by retirements or other departures. Demand for other health professions including medicine, pharmacy, and dentistry are also expected to grow. Given the growing demand for health care workers in a variety of occupations and professions, current health workforce shortages are not only expected to persist, but to worsen. (Martiniano & Moore, 2006, pp. 2–3)

Health care employment is expected to make up a larger portion of total U.S. employment by 2014 than in the past. In 1994, a little more than 8% of U.S. jobs were in the health sector, and this increased to 9% in 2004 and is projected to rise to 10% by 2014.

Home health care and offices of health practitioners are expected to grow faster than all other health care settings, with an average annual growth rate of 5.4% and 3.2%, respectively. In comparison, the expected average annual growth rate for the entire economy is 1.2% over the same period. Employment in offices of health practitioners is expected to grow by nearly 37% between 2004 and 2014. This represents more than one third of the total projected growth in health sector employment. Physician and dental offices are projected to add nearly 760,000 and more than 240,000 jobs, respectively.

Seventeen health occupations ranked in the top 30 fastest growing occupations, with 7 ranking in the top 10 and 15 ranking in the top 20. The number of physician assistants is expected to increase by 50%; medical assistants by

52%; home health aides by 56%; physical therapist assistants by 44%; physical therapists by 37%; and medical scientists by 34%.

Nursing is one of the 30 occupations expected to provide the greatest number of new jobs. Nursing is projected to add 703,000 new jobs over the period. An additional 500,000 new RNs will be required to replace RNs leaving the occupation, bringing the total number of RNs needed to fill new and existing jobs to 1.2 million.

The health occupations will continue to be leading sources of jobs for Americans in the coming years because of projected growth in health care. Many of these jobs are well-paying and/or offer health benefits. The professionals who work in the health care sector should continue to be highly valued by the society at large, and by the persons who directly receive their services.

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Chapter 3

Hospitals and Other Health Care Institutions

INTRODUCTION

> Approximately one-third of the U.S. health care dollar is spent on inpatient hospital care, making hospital care the single most expensive component of the health care system. As health care costs rise and the population ages, policy makers are concerned with the growing burden of hospital-based medical care and expenses to governments, consumers, and insurers. (Agency for Healthcare Research and Quality [AHRQ], 2007)

In chapter 8, we discuss this important health care institution and touch on another—the long-term care organization.

Some Historical Background

Historically, for the provision of personal health care the hospital has been the institutional center of the health care delivery system (Knowles, 1980). In its teaching incarnation, the modern hospital is also the center of much undergraduate and graduate clinical training for many health professions, as well as continuing health sciences education, both formal and informal. In addition, some teaching hospitals are also major centers for medical research. For most U.S. physicians, in addition to their private offices, the hospital is an important workplace, and the only place where they are likely to be subject to peer review of their professional work.

The word *hospital* shares its Latin root with the words *hostel* and *hotel*. Most frequently under church sponsorship, the institution originated in the Middle Ages primarily as a place of refuge for the poor, the sick, and the weary, rather than as a place for treating illness. As recently as the turn of the 20th century, a person entering a hospital had less than a 50% chance of leaving it alive. By the beginning of the 21st century, most patients could expect to benefit from a hospital stay: About 97% of patients expect to leave the hospital alive. Even though the quality of care could still be significantly improved (Institute of Medicine, 2000, 2002), the hospital has thus evolved from a place where a person went to spare his family the anguish of watching him die to a multiservice institution providing interdisciplinary medical care, ambulatory, as well as in-bed (Freymann, 1974, pp. 21–29; Rosenberg, 1979; Stern, 1946, chapters 2, 6).

In the European settlements in America, the earliest hospitals were infirmaries attached to poorhouses. (A poorhouse was an institution operated by a local government authority to house persons who were unemployed, orphans or abandoned children, the mentally ill or retarded, and the ill elderly and those otherwise incapable of self-care.) The first of these was established at Henricopolis in Virginia (1612), and the next in 1732 in Philadelphia (Stern, 1946, chapter 6).

The first public institution established solely for the care of the sick was the "pest-house" built in 1794 on Manhattan Island. It was located north of what was then New York City, at a place called Belle Vue ("beautiful vista"). In a reverse of the earlier pattern, the New York City public workhouse (a later version of the poorhouse) was moved to the grounds of the pest-house in 1816. New York City's famous Bellevue Hospital is still at that location. Nongovernment charity (private, voluntary) hospitals to care for the sick poor were first established in the American colonies during the 18th century (Freymann, 1974, pp. 22–24). The first was the Pennsylvania Hospital in Philadelphia, founded by Benjamin Franklin in 1751.

By 1873 there were an estimated 178 hospitals in the United States, many of them solely for the mentally ill (Stevens, 1971, p. 52). At about that time, however, the development of modern medical science was under way, and a general hospital building boom began. By the early 20th century, a patient admitted to a general hospital did in fact have a better than even chance of getting out alive. That milestone was achieved largely through the development of general hospital hygiene, surgical asepsis (keeping surgical sites scrupulously clean and free of microbial contamination), and surgical anesthesia.

After the turn of the 20th century, overall medical care quickly became far too complex for average physicians to be able to carry their entire armamentarium in a black bag. By 1910, general hospitals had been established in many communities. There were nearly 4,400 of them, with a total of 421,000 beds (Stevens, 1971, p. 52). It was the rapid advance of medical science that led to the expansion of the hospital system and of individual hospitals, as well as to the evolution of hospitals as the center of the medical care system (MacEachern, 1962, pp. 21–27; Rosenberg, 1979).

Primary Data Sources

The American Hospital Association (AHA) is the primary agency that counts and classifies hospitals in the United States. The AHA regularly publishes the AHA *Guide* (AHA, 2007a) and the companion AHA *Hospital Statistics* (AHA, 2007b), referred to as *Hospital Statistics* in the text. The former lists each AHA-registered and osteopathic hospital in the United States, as well as U.S. government hospitals outside the United States. The *Guide* provides information on the basic characteristics of each hospital, as well as other valuable information on "Networks, Health Care Systems and Alliances," and "Health Organizations, Agencies, and Providers" at the international, national, state, and voluntary levels, including the various quality-assurance bodies. *Hospital Statistics* presents summary descriptive data about U.S. hospitals, nationally and by state and region. A few selected summaries of AHA and other hospital statistical data are also published in *Health, United States* (National Center for Health Statistics [NCHS], 2006) and the *Statistical Abstract of the United States* (U.S. Census Bureau, 2005). This chapter uses AHA definitions and data, except as otherwise noted.

Primary Definitions

Community Hospital

The AHA has an all-inclusive descriptor for the majority of hospitals: the *community hospital*, which is defined as follows:

> All nonfederal, short-term general, and special hospitals whose facilities and services are available to the public. (Special hospitals include obstetrics and gynecology; eye, ear, nose and throat; rehabilitation; orthopedic, and other individually described specialty services.) Short-term general and special children's hospitals are also considered to be community hospitals. (AHA, 2007b, p. 203)

Hospital Type by Medical Condition Treated

There are 13 types of hospitals, when classified by type of medical condition treated: psychiatric; TB and other respiratory diseases; obstetrics and gynecology; eye, ear, nose, and throat; rehabilitation; orthopedic; chronic disease; surgical; cancer; heart; acute long-term care; general; and all others. The most numerous type is the general hospital, of which there were 4,798 in 2005 out of the total of 5,756 U.S. registered hospitals (AHA, 2007b).

Hospital Type by Control or Ownership

There are two principal types of control or ownership: private and public. Control is defined by the AHA as "The type of organization responsible for establishing policy concerning the overall operation of hospitals" (AHA, 2007b,

p. 204). In turn, there are two categories of private hospital differentiated by the mode of distribution of surplus income: investor-owned, for-profit (formerly called proprietary), which may be owned by an individual, a partnership, or a corporation, and not-for-profit (also called voluntary). There are also three categories of public hospital: federal, state, and local.

Hospital Beds

Hospitals are also classified by the "number of beds regularly maintained (set up and staffed for use) for inpatients as of the close of the reporting period. This excludes newborn bassinets" (AHA, 2007b, p. 202). The AHA groups hospitals into eight categories based on bed size: 6–24 beds; 25–49 beds; 50–99 beds; 100–199 beds; 200–299 beds; 300–399 beds; 400–499 beds; and 500 beds or more.

Length of Patient Stay

There are two categories of hospital, as defined by length of patient stay: long term and short term. Respectively, the terms refer to stays of 30 days or more and of less than 30 days. "The figure is derived by dividing the number of inpatient days by the number of admissions" (AHA, 2007b, p. 207). *Total facility length of stay* "includes admissions and inpatient days from nursing-home-type units under control of the hospital. In *hospital unit length of stay*, nursing home utilization is subtracted" (p. 207).

Average Daily Census

The average daily census is the "average number of people served on an inpatient basis on a single day during the reporting period; the figure is calculated by dividing the number of inpatient days by the number of days in the reporting period" (AHA, 2007b, p. 202).

The mold from which today's health care system was cast took its shape around 1850. There were still relatively few general hospitals or health care facilities of any type in either Great Britain (our most important medical organizational forebear) or the fledgling United States, but the institutional organization of health care was already firmly established. The physical separation, for the most part, as well as separate provision for administration and staffing of the curative services for acute, chronic, and psychiatric illnesses became firmly established in the 19th century. That very strong precedent continues to control the physical and administrative design of the health care delivery system even when all three components have a common source of support, as they do now in Britain.

TABLE 3.1 Basic Characteristics of Major Hospital Groups, United States, 2005

Characteristic	Federal	Nonfederal Psychiatric	Not-for-Profit Community	For-Profit Community	State and Local Community
Number of hospitals	226	446	2,958	868	1,110
Beds (in thousands)	46	77	561	114	128
Annual admissions (in thousands)	952	732	25,881	4,618	4,740
Average daily census (in thousands)	30	68	388	68	85
Average length of stay (days)	NA	NA	5.5	5.3	6.5

Source: AHA, *Hospital Statistics*, 2007, Tables 1 and 2.

SOME NUMBERS

Overall

As can be seen from the foregoing definitions, hospitals can be classified by type of medical conditions treated; number of beds; control or ownership; short term or long term (defined by length of patient stay); and average daily census (the average number of beds occupied on a given day). Table 3.1 presents these data for the major classes of hospital for 2005. Not-for-profit community hospitals are clearly dominant in the hospital market with the most hospitals, beds, and admissions, as well as the highest average daily census. In 2005, most hospitals were nonfederal (96% or 5,530 hospitals). Of the nonfederal hospitals, most were community hospitals (89% or 4,936 hospitals). About 60% of these community hospitals were not-for-profit and 22% were state or local government owned. Only about 18% were investor-owned (AHA, 2007b, p. 6).

The hospital profile has changed over time. In 1978, a peak year, when the U.S. population was close to 40,000,000 fewer than it was in 1994, there were almost 1.4 million beds in 7,015 hospitals of all kinds, with an average daily census of 1.04 million patients and an overall occupancy rate of 75.5%. As of 1990, there were about 1.2 million beds in a total of 6,649 hospitals, with an average daily census of about 844,000 patients and an overall occupancy rate of about 70%. As of 2005, there were about 947,000 beds in a total of 5,756 hospitals, with a total admission of 37,000,000 and a total expenses $570,000,000 (AHA, 2007b, Table 1).

The peak number of nonfederal, short-term general and other special hospitals in the United States, 5,979, was reached in 1975 (AHA, 2007b, Table 1). Before that, the number of such hospitals had risen rather steadily since 1946, when there were 4,444. Between 1946 and 1983, the number of beds in these hospitals increased from 473,000 to 1,021,000 (the high point), or more than doubled. During the same period, reflecting the decline in the number of small hospitals, the average number of beds per hospital increased by 64%, from an average of 106 beds per hospital to 174 beds per hospital.

After 1975, the number of nonfederal, short-term general and other special hospitals declined steadily through 2005 (AHA, 2007b, Table 1). In 1985, there were about 5,784 hospitals, with 1,003,000 beds, close to 34 million admissions, and an average daily census of 650,000. By 2005, the number of hospitals had shrunk to 4,956 (a 17% drop since 1975), with 804,000 beds, more than 35 million admissions, and an average daily census of 542,000. Thus, compared to 1975, a smaller number of hospitals were admitting more patients in 2005, a fact that is reflected in the drop in average length of stay from 7.7 days to 5.6.

There were (and are) multiple reasons accounting for this phenomenon. Among them are the higher fixed costs in staff, facilities, and equipment for hospitals of any size that adversely affect the smaller hospitals; the increasing difficulties of hiring and retaining appropriate staff in rural hospitals; the increasing economies of scale for larger and larger hospitals as the availability of technology, with its attendant costs, increases; and the fact that when hospitals perform various procedures more frequently, the quality of each one goes up.

Teaching Hospitals

In the past, the AHA used the term *teaching hospital* to refer to hospitals providing undergraduate or graduate teaching for medical students and medical house staff (interns, residents, and specialty fellows) (see chapter 2). The term was not applied to hospitals with teaching programs for other health care providers. Although the AHA formerly presented data for the teaching hospitals separately, those data are now subsumed under the general categories of hospital of which the teaching hospitals are a part.

In one of the last years for which teaching hospital data were presented separately, 1989, there were 1,054 teaching community hospitals (about 19% of all community hospitals), with 393,000 beds (more than 42% of all beds in community hospitals) (AHA, 1990, Tables 6 and 8). Their average size was about 370 beds, whereas the average size for all community hospitals was about 170 beds. The teaching hospitals had more than 14 million admissions (almost 46% of the total of community hospitals) and, on an average day, cared for more than 47% of all community hospital patients. They represented almost half of all visits to community hospital outpatient departments. Their occupancy rate was 74.6%, and the average length of stay was 7.5 days. In terms of both professional education and service, teaching hospitals have an importance in the hospital system that is out of proportion to their number.

Distribution and Relative Bed Supply

In 1948, there were approximately 3.4 nonfederal general medical and surgical hospital beds per 1,000 civilian resident population (AHA, Table 1; U.S. Census Bureau, 1990, Table 2). By 1976, the community hospital bed-to-population ratio was 4.5 beds per 1,000. By 1989, the ratio had declined to 3.85, and by 1994 it had reached 3.46, about where it was in 1948. By 2005, that ratio had declined to 2.69 (AHA, 2007b). Primarily because of a post–World War II hospital construction program known as "Hill-Burton" (after its two original congressional sponsors), the geographical distribution of beds was quite different in 2005 from what it had been in 1948.

Under Hill-Burton, many rural hospitals were built in areas that previously had no direct access to modern health services. Improvements in bed distribution and increases in bed supply since World War II, which provided access for many persons for whom hospital services were formerly unavailable, have been regarded as an outstanding national achievement. However, this massive program of hospital construction was undertaken without any kind of a national, comprehensive health care planning system in place.

It turned out that the hospital industry created many hospitals, particularly in the West and South, that now have extraordinarily low occupancy rates and many permanently empty beds. Furthermore, under Hill-Burton, many relatively small hospitals were built, in rural and semirural areas. In the modern era of high-tech, labor-intensive, expensive medical care, small hospitals tend to become highly inefficient and noncompetitive. This is one reason why so many small hospitals have gone bankrupt in the past 20 years.

Hospital closure, secondary to community overbedding and hospital undersizing in terms of the types of procedures that could be carried out, is the reason why in recent years the national bed-to-population ratio has been declining. However, most of the shrinkage has occurred haphazardly. Just as there was no plan when the hospital industry was expanding, there is no plan now when it is contracting. Under the pressure of managed care and "free market" competition, the hospital bed supply will likely continue to shrink for some years to come, but not in anything approaching a rational way.

Characteristics of Hospitalized Patients

Considerable data on the characteristics of hospitalized patients are available from the National Hospital Discharge Survey of community hospitals (Hall & Owings, 2002, pp. 1–3), produced annually by the National Center for Health Statistics of the U.S. Department of Health and Human Services. (In certain cases, these data differ somewhat from those of the AHA in describing the same hospital and patient characteristics.) In 2004, excluding newborns, there were about 35 million discharges from nonfederal, short-stay hospitals, and the average length of stay was 4.8 days (NCHS, 2006, Table 98). This is in contrast to 31 million discharges in 1990 and an average length of stay of 6.4 days, a continuing trend of increasing number of hospitalizations with shorter stays. Persons age 65 and over accounted for about 38% of all discharges in 2004, up from 34% in 1990.

"One-fifth of the national hospital bill was for treatment of five conditions: coronary atherosclerosis, mother's pregnancy and delivery, newborn infants, acute myocardial infarction, and congestive heart failure" (AHRQ, 2007). More than 40% of all discharges had a diagnosis in one of just six diagnostic groups: heart disease (4.4 million), delivery of a newborn (3.7 million), pneumonia (1.3 million), malignant neoplasm (cancer) (1.2. million), psychoses (1.4 million), and fractures (1.0 million). In 2003–2004, there was a change in the rates of various procedures performed in the hospital, compared to 1993–1994 (NCHS, 2006, Table 99). Many procedures increased in frequency, including cardiac catheterization (52.4 to 57.9 per 10,000 population), angiocardiography using contrast materials (44 to 48.4 per 10,000), operations on vessels of the heart (36.1 to 42.1 per 10,000), diagnostic procedures on the small intestines (43 to 48.7 per 10,000), and joint replacement of the lower extremities (23 to 41.1 per 10,000). Others decreased dramatically in frequency, including diagnostic radiology (67.3 to 35.5 per 10,000 population), diagnostic ultrasound (60.5 to 33.3 per 10,000), and cholecystectomy (24.7 to 19.5 per 10,000). These changes reflect innovations in technology, with newer and more effective treatments replacing older ones.

HOSPITAL STRUCTURE

Introduction

Hospitals have a complex structure and a variety of operating divisions. Traditionally, the principal divisions are administration, medical (physicians), nursing, and other diagnostic and therapeutic support. Most hospitals provide services both to inpatients and to outpatients (see chapter 4) who come to an emergency department, to an outpatient clinic, or to a diagnostic or therapeutic service (such as an ambulatory surgery unit) for a procedure not requiring hospitalization.

Hospital Administration

Hospital administration keeps the institution up and running in all areas other than direct patient care. Its major responsibilities include finance, both expense and capital; personnel; providing services—maintenance, housekeeping, laundry, and dietary (cooking and delivery of meals); community/public relations; and development (fund-raising).

Medical Division

The Departments

A hospital's medical division is usually organized along the lines of medical specialties. There is no universal logic to the standard categorization of the latter, which has developed haphazardly over time. Thus, there are certain crossovers and overlaps. Some specialties are defined by the types of interventions used, some by the age or gender of their primary patient population group, and some by the organ or organ system that is their purview.

The major medical departments are as follows:

- *Internal medicine*: diagnosis and therapeutic intervention for adults, involving one or more internal organs or the skin, not requiring physical alteration of the body.
- *Surgery*: diagnosis and therapeutic intervention for persons of all ages in which some physical alteration of the patient's body is the primary focus of the physician's activity.
- *Pediatrics*: diagnosis and therapeutic intervention for children, primarily using nonsurgical techniques.
- *Obstetrics/gynecology*: diagnosis and therapeutic intervention focusing on the female sexual/reproductive system using both surgical and nonsurgical modalities.
- *Psychiatry*: diagnosis and therapeutic intervention for persons of all ages with psychological and emotional problems, using primarily counseling and pharmaceuticals.

There are also medical specialties and departments organized around organs and organ systems in which physicians use both surgical and nonsurgical interventions. They include *ophthalmology* (eye), *otolaryngology* (ear, nose, and throat), *urology* (male sexual/reproductive system and the renal system for both males and females), orthopedics (bones and joints), and *neurology* and *neurosurgery* (respectively, nonsurgical and surgical attention to the nervous system).

Radiology, the use of x-ray and other radiation sources, is a medical department with a primarily diagnostic function, although radiotherapy has become an important function. In recent years, several non-x-ray internal diagnostic techniques such as computerized axial tomography (CAT) scanning and magnetic resonance imaging (MRI) have been developed. They are usually provided by the department of radiology (in some institutions, reflecting the new technologies, now called *diagnostic imaging* or a similar term). In some hospitals, radiotherapy (also called *therapeutic nuclear medicine* or similar) has been separated from diagnostic radiology and its newer diagnostic cousins.

In medical practice, the department of *pathology* provides only a diagnostic function, both before and after treatment. Traditionally, *anesthesiology* has been concerned with preparing patients to be operated on without pain or discomfort during the procedure. More recently, the scope of the work has been expanded to include participation in critical care medicine and the developing area of nonsurgical pain management.

Medical Staff Organization

The physician has traditionally been described both as a "guest in the hospital" and as its primary customer. The hospital has sometimes been described as the doctors' workshop. Except when a physician chooses to run a hospital for profit, however, he or she has no personal responsibility to see that the hospital is functioning and available to provide care for his or her patients. Nor does the individual physician carry any financial liability for the success or failure of the hospital, unless, again, he or she is an owner.

A physician traditionally has been largely free to order whatever tests or treatments he or she deems necessary for a particular patient. In recent years, certain limitations have been placed on this particular physician's freedom. An example is the use by hospitals of what are called *formularies*, which are limited lists of pharmaceuticals that will be provided by the hospital pharmacy for physician prescription. This is an attempt both to ensure that the medications used in the hospital are being used correctly and to keep the number of pharmaceuticals that need to be held in stock under control. Insurers may specify formularies as well, in the attempt to contain costs. Regardless of these kinds of limitations, however, because he or she orders all the hospital tests, services, and drugs provided to its patients, the individual physician is a major determinant of hospital costs, even though traditionally he or she has borne no personal responsibility for them. Physicians in a given specialty (e.g., cardiology/cardiac surgery, oncology/cancer surgery, or children's services) can also influence the direction of the growth and expansion of the institution, affecting costs in another way.

In the traditional hospital–medical staff arrangement, in exchange for the privilege of admitting patients, the physician participates in the self-governance of the medical staff. Physicians may have to share the load for providing care in areas of the hospital for which the medical staff accepts collective responsibility, such as the emergency room or outpatient clinics. A variety of medical staff patterns of organization exist. Roemer and Friedman's review of them (1971) is still largely valid, although some elements are beginning to change.

Under managed care, for example, in an arrangement called the physician–hospital organization (PHO), groups of medical staff are joining with hospital corporations to negotiate contracts with third-party payers, often a managed care organization (MCO), most often a health maintenance organization (HMO; see chapter 8), to provide both medical and hospital services (Kongstvedt & Plocher, 1996). Assuming that the payments from the MCO to the PHO or HMO are made on an other than fee-for-service basis, and increasingly they are (Hudson, 1996), such an arrangement does put the medical staff at some financial risk should patient utilization exceed projections.

Responsible for overseeing the physicians' clinical work are a set of medical staff committees. These include the executive committee, which provides overall coordination and sets general policy; the joint conference committee, which serves as liaison between the medical staff and the hospital's governing board; the credentials committee, which reviews applications to join the medical staff and controls the periodic reappointment process; the infections control committee, which is responsible for preventing infections and monitoring and correcting any outbreaks that do occur; and the pharmacy and therapeutics committee, which reviews pharmaceutical agents for inclusion in the list of drugs approved for use in the hospital (that is, those included in the formulary).

There are also the tissue committee, which reviews all surgical procedures that produce "bodily tissues"; the medical records committee, which is responsible for certifying the completeness and clinical accuracy of the documentation of patient care; and the quality assurance committee, which has the overall responsibility for monitoring and correcting any deficiencies in the quality of care provided by the medical staff.

Other Hospital Health Care Divisions

Another principal health care organizational division besides the medical staff is nursing (see chapter 2). The nonphysician diagnostic and therapeutic services, which may or may not be administratively attached to one of the medical departments, include laboratory (usually under the direction of the department of pathology); electrocardiography (usually a part of internal medicine); electroencephalography (part of neurology); radiotherapy technology (supporting diagnostic imaging); pharmacy; clinical psychology; social service; inhalation therapy (usually part of either anesthesiology or pulmonary medicine); nutrition as therapy; physical, occupational, and speech therapy (often attached to the department of rehabilitation medicine, if there is one); home health care; medical records; adult day care; screening; end-of-life/hospice services; pain management; sports medicine/fitness center; and women's health services (AHA, 2007b, Table 7).

Hospital Governance in the Private Sector[1]

The typical not-for-profit hospital has a board of trustees. Usually prominent in its membership are persons who give or raise substantial sums of money for the hospital or represent important community institutions, such as major employers and banks. The person carrying the title of president of the hospital can be either the leader of the board of trustees, or the paid chief executive officer (CEO) of the hospital. In the former case, the top operations person is usually called the executive director or executive vice-president. If the hospital CEO carries the title of president, then the head of the board usually carries the title of chairman. In theory, the board of directors sets policy, and the chief executive officer carries it out. In practice, the situation is often as complex as it is in any modern corporation.

For-profit hospitals may have a governance structure similar to that of the voluntaries, with board seats held by the owners or their representatives, or they may be run directly by the owners. All hospitals operate under the licensure and supervision of an agency of state government.

PUBLIC GENERAL HOSPITALS

The public general hospital was defined by the Commission on Public General Hospitals of the American Hospital Association (1978, p. v) as “short-term general and certain special hospitals excluding federal (those operated by the Department of Defense and the Department of Veterans Affairs), psychiatric, and tuberculosis hospitals that are owned by state and local governments.”

Public general hospitals provide care for many persons unable to be treated elsewhere: the poor, the homeless, prostitutes, drug addicts and alcoholics, the disruptive psychiatric patients, low-income elderly persons, and prisoners. In certain areas, the public general hospital is also the only source of care for patients with special medical problems regardless of income: the badly burned, at-risk newborns, high-risk mothers, and victims of criminal or noncriminal life-threatening trauma. Although only a minority of hospitals are under public ownership, in a nation without universal health care coverage, they play an important role beyond their numbers (Felt-Lisk, McHugh, & Howell, 2002; Friedman, 1997; Huang, Silbert, & Regenstein, 2005; May, 2004; Verghese, 1996).

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[1] For an extensive treatment of issues in hospital governance, see Kovner, A. R., & Neuhauser, D. (2001). *Health services management: Readings and commentary* (7th ed.). Chicago: Health Administration Press; and Kovner, A. R., & Channing, A. H. (2001). *A career guide for the health services manager* (3rd ed.). Chicago: Health Administration Press.

The public hospital sector is shrinking today. In 1975, there were 1,761 state and local general hospitals with 210,000 beds. As of 1990, there were 1,444 state and local general hospitals, with a total of about 169,000 beds (AHA, 2007b, Table 1). By 2005, the numbers had shrunk to 1,110 state and local hospitals, with about 128,000 beds. The average daily census for these hospitals had declined from 148,000 in 1975, to 111,000 in 1990, and to 85,000 in 2005.

Despite the low occupancy rate, public general hospitals are still the primary health services resource for the nation's poor and for those with no health insurance. As of 2002, these hospitals were in serious trouble. Noting the shrinking number of public general hospitals, Richard Haugh (2002), writing in the American Hospital Association's journal *Hospitals and Health Networks*, highlighted their financial straits:

> [In] an era of tax cuts and disappearing [budget] surpluses, the well is dry. Officials are recommending deep austerity measures . . . [that] might foreshadow a looming crisis throughout the nation. The U.S. health care safety net is frayed; without changes, critics fear, it will unravel—and drag other hospitals down with it. (p. 35)

THE HOSPITAL IN THE PRESENT ERA

Problems

First, hospitals have been relatively costly to build and maintain. They still are, even as their numbers shrink and the pace of new construction and renovation slows markedly. Also, there is an imbalance in the hospital sector in the provision of acute, long-term, and ambulatory care. The high costs of inpatient hospital care are exacerbated by the inadequate supply of affordable intermediate- or long-term care beds for patients who have recovered from the acute phase of their illness but still need high-quality care in bed.

Second, as noted by Dr. Peter Rogatz in 1980 in an observation certainly still true today, there is a pressing need for appropriate housing with social and support services for the elderly who cannot live entirely on their own in ordinary housing, but nevertheless do not need institutionalization of any kind. In the absence of any kind of comprehensive program to deal with it, this problem is getting worse as the population ages.

The third major problem concerns the mode by which most physicians taking care of patients in hospitals have traditionally been paid, as well as the influence that physicians have over hospital operations and expenditures. The individual physician traditionally has made most of the decisions on the commitment and use of hospital resources. Yet, as noted previously, it usually has been the patient or his or her insurer who pays the physician. Thus, the physician has had neither a direct financial relationship to the hospital nor any responsibility for its financial health.

A comparable situation would be if modern school boards were to provide everything necessary for education except payment of the teachers, who would then proceed to collect fees directly from the students. Indeed, this is the way teachers were paid before the educational reforms of the mid-19th century. As noted, managed care is beginning to change some of these relationships in some hospitals in some areas of the country.

Fourth, hospitals have internal problems with vertically organized administrative structures that are not well integrated at the service levels. In many hospitals, the vertical lines of authority of the medical staff, the nursing department, and the support services meet only in the office of the director. In some cases, they never meet. This kind of separation can make it very difficult to provide integrated patient care programs in which, in order to meet patient needs, unitary direction is needed at the functional level (Jonas, 1973). This observation is as true in the first decade of the 21st century as it was in the eighth decade of the 20th.

A fifth problem is the programmatic and sometimes philosophical isolation of many hospitals from the real health and medical problems of their communities. For example, although there are certainly exceptions, in many hospitals outpatient services have had a distinctly second-class status, preventive medicine is practiced to a minimal extent (although that situation is improving somewhat as insurers in particular are gradually beginning to recognize that preventive interventions can save money in the long run), home care and rehabilitation services have been treated as luxuries (although that situation is beginning to improve as well for similar reasons), community-based chronic disease control programs are undertaken only sporadically, and “mental health” services in hospitals have little to do with *community* mental health. Although change is surely occurring, some hospitals have resolutely turned inward, wishing that everyone would just go away and leave them to do their job as they see it: taking care of sick people in bed.

Sixth, as should be apparent from what has already been said in this chapter, hospitals were plunged into the era of managed care without much warning or preparation and certainly with no formal planning for its advent. A major thrust of managed care has been to reduce hospital utilization, as previously noted. These developments have led to, among other things, a flurry of hospital bankruptcies and closings, reductions in bed complements, and mergers and takeovers, as well as the formation of an ever-increasing number of “hospital networks” (Griffith, 1999, pp. 173–186). The last is a kind of formal relationship among a group of hospitals, usually with a major tertiary-care teaching hospital at its center. However, it appears that the rate of mergers and acquisitions of hospitals slowed from 1997 through 2001, following a steady increase from 1994 through 1997, and has reached a plateau of about 55 per year since 2001: in 1994 there were 92, in 1995 there were 128, in 1996 there were 163, in 1997 there were 197, in 1998 there were 137, in 1999 there were 109, in 2000 there were 84, in 2001 there were 83, in 2002 there were 56, in 2003 there were 38, in 2004 there were 59, and in 2005 there were 53 (Irving Levin Associates, 2004).

Certain economies of scale and divisions of labor can be achieved with such arrangements. Consider the current climate, however: no national health care program, an increasing number of uninsured and underinsured persons (Hoffman et al., 2001; Kaiser Family Foundation, 2007), and managed care organizations simply looking for the best deal in making their contracts with hospitals to provide services for their beneficiaries. If hospitals, especially expensive teaching hospitals, simply look to a hospital/health care network of smaller hospitals and individual providers as the means of keeping their beds filled and do not contemplate further major service reorganization that will deemphasize expensive inpatient care and enable them to close expensive beds, some of them will not be able to survive in the current economy.

There are serious obstacles in the way of even rational planners at major teaching hospitals. As Dr. George Ross Fisher said, in a review of a book on teaching hospital mergers (2001):

> Unfortunately, managed care [companies] arrived, apparently quite willing to destroy both research and tertiary care . . . if that is what it takes to preserve their profitability, which mainly lies in adverse de-selection of subscribers. When a payment system that depends on selecting only well people if possible encounters a delivery system that depends on attracting only very sick people if possible, that delivery system is in trouble.

Solutions

Complex problems do not have simple solutions, and there are no panaceas. Several approaches to hospital reform are available, however. For example, we can still turn to the timeless work of Dr. John Gordon Freymann. Freymann developed the concept of the “mission-oriented hospital” (Freymann, 1974, chapter 18), which is as valid today as it was when it was conceived. However, its broad implementation would require both a system of universal financial entitlement to health services and a system for rational, national health and health services planning. How compatible such an approach would be with for-profit managed care is anybody’s guess.

The mission-oriented hospital has two principal attributes: (1) Each hospital has a mission defined and continuously modified by the specific needs of the community it serves, and (2) the rational planning process provides individuality and flexibility (Freymann, 1974, p. 248). Freymann recognized that:

> the word "hospital" itself presents a problem, for today it connotes a building that houses patients. I think "hospital" could be used in a different sense to signify a dynamic complex of facilities and skilled personnel organized to provide all types of health services. (p. 247)

The mission-oriented approach would make the hospital into a health center rather than an illness center, ending what Freymann (1974) called the "tyranny of the bed." The hospital would respond to the needs of its community in a rational, planned, dynamic manner. By definition, the acute/chronic/preventive distinctions would become relics of the past.

The current administrative problems would not be resolved automatically by a mission-oriented approach. Rather, *they would have to be solved in order to accomplish mission orientation*. His approach demands an administrative structure that is functionally decentralized to operate integrated programs requiring staff teams at the patient care level, not one that has vertically organized reporting lines separating health care providers into independent hierarchies.

This outcome might be achieved through managed care–induced hospital reorganizations, especially networking and the development of integrated delivery systems (Kongstvedt & Plocher, 1996). However, because mission orientation as defined by Freymann requires, at least in part, a focus on issues other than the bottom line, achieving that outcome is likely well beyond the capabilities of contemporary for-profit managed care.

Some experts have thought that the Internet might provide a solution to at least some hospitals' problems. The supremely odd couple of Ira Magaziner, who managed the ultimate political failure of the Clinton health plan of 1994 (see chapter 9), and Newt Gingrich, the chief political opponent of the plan in the House of Representatives, came together to promote this position (Cunningham, 2000). However, as J. D. Kleinke (2000), certainly no health care radical, pointed out:

> Contrary to the claims of its well-financed promoters, the Internet will not solve the administrative redundancies, economic inefficiencies, or quality problems that have plagued the U.S. health care system for decades. These phenomena are the result of economic, organizational, legal, regulatory, and cultural conflicts rooted in a health care system grown from hybrid public and private financing; cultural expectations of unlimited access to unlimited medical resources; and the use of third-party payers rewarded to constrain those expectations. The historic inadequacy of information technology to solve health care's biggest problems is a symptom of these structural realities, not their cause. With its revolution of information access for consumers, the Internet will exacerbate the cost and utilization

> problems of a health care system in which patients demand more, physicians are legally and economically motivated to supply more, and public and private purchasers are expected to pay the bills. (p. 57)

Actually, this statement does much more than shoot down the Internet-as-savior, the changing-the-way-we-manipulate-information-about-what-is-in-the-bottle-without-touching-what-is-in-bottle "solution." It summarizes the health care delivery system predicament, especially those of hospitals, as it stands today.

LONG-TERM CARE: THE EXAMPLE OF NURSING HOMES[2]

"The term *long-term care* encompasses a range of supportive, rehabilitative, nursing, and palliative services provided to people—from young to old—whose capacity to perform daily activities is restricted due to chronic disease or disability" (Feldman, Nadash, & Gursen, 2005, p. 201). There is a group of long-term care institutions other than long-term hospitals that are generically called *nursing homes*. Their number has increased significantly since the 1930s.

Formerly classified according to the level of skill involved in the care they gave, beginning in 1990 all nursing homes eligible to receive federal third-party reimbursement for the care they provide were called *nursing facilities*. In 1995, there were more than 16,000 such institutions of 25 beds or more, with more than 1,750,000 beds (NCHS, 2006, Table 116). In 2004, there were similar numbers of nursing home facilities and beds—more than 16,000 nursing homes with about 1.7 million beds. The occupancy rate of 83% in 2004 was lower than in 1995 (85%). The number of nursing home residents per 1,000 population has been declining since 1973–1974, when it was 58.5 per 1,000 population 65 and over; it was 43.3 per 1,000 in 1999 (NCHS, 2006, Table 101).

About two thirds of nursing homes (and two thirds of beds) are under for-profit ownership, with 26% in the voluntary sector and 8% owned by government agencies (Feldman et al., 2005, p. 217). More than half of the financial support for nursing homes comes from public funds, much of it under the Medicaid program (see chapter 5), as Medicare (see also chapter 5) provides little long-term care coverage. In 2004, Medicaid covered 44% of nursing home care in the United States (Kaiser Family Foundation, 2007).

Much of Medicaid expenditures go for the elderly (28%) and disabled (42%), although these groups comprise 11% and 14% of Medicaid enrollees,

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[2] Long-term care deserves a fuller discussion than we have room for in this book. Much of this section is based on Feldman, Nadash, and Gursen (2005). The reader is referred to this source for more detail on nursing homes in particular and long-term care in general.

respectively (Kaiser Family Foundation, 2007). Further, a substantial portion of expenditures for the disabled and elderly is for long-term care. However, by no means are all of the people benefiting from this payment mechanism receiving public assistance at the time they entered a nursing home (if they are institutionalized), and many had never received public assistance. But a number of states have instituted "asset transfer" systems. These permit people of means to transfer property and other assets to others, usually their children, so that on paper they become "poor," and thus Medicaid eligible, after some period of time following the asset transfer (see chapter 6).

Chronic problems with the quality of long-term care provoke periodic exposés and outcries for reform (Eisen & Sloan, 1997; Pear, 2002). But because any institutional care is expensive, the long-term solution to the long-term care problem probably lies with improved home care services and significantly improved health promotion, disease prevention, and self-care programs for the rapidly increasing number of elderly persons in the United States.

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Chapter 4

Primary and Ambulatory Care

PRIMARY CARE

Introduction

Primary care and ambulatory care go together like apple pie and ice cream. This is so even though not all primary care is delivered in an ambulatory setting, nor is all ambulatory care primary care. Nevertheless, because they are in most instances closely associated, they will be covered in the same chapter.

As noted in chapter 1, by sheer volume primary health care services are predominant in the health care delivery system. But primary care has proved challenging to define precisely. Over the years, many definitions have been offered. One such normative definition is the following (Jonas, 1973):

> Primary care is medical attention to the great majority of ills. It should be provided continuously over a significant period of time by the same appropriately trained individual (or team) who is sympathetic, understanding, knowledgeable and equipped, who is as capable of keeping people well as he is of returning them to health when they fall ill. (p. 177)

Unfortunately, to this day the coordination of preventive and curative services occurs less often than it should in much of American medical practice (McGinnis, Williams-Russo, & Knickman, 2002; Stange, Woolf, & Gjeltma, 2002).

In 1977, the Institute of Medicine reviewed 33 different definitions of the term *primary care* (Ruby, 1977). Its summary definition from 1978, both normative and descriptive, was the following (Eisenberg, 1997):

> [Primary care is] the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health needs, developing a sustained partnership with patients, and practicing in the context of family and community. (p. 615)

In 1996, Dr. Barbara Starfield provided one normative definition, covering both what primary care is and, in the best of all possible worlds, what it ought to be:

> Primary care is the means by which the two goals of a health services system—optimization of health and equity in distributing resources—are balanced. It is the basic level of care provided equally to everyone. It addresses the most common problems in the community by providing preventive, curative, and rehabilitative services to maximize health and well-being. It integrates care when more than one health problem exists, and deals with the context in which illness exists and influences people's responses to their health problems. It is care that organizes and rationalizes the deployment of all resources, basic as well as specialized, directed at promoting, maintaining, and improving health. (p. 1365)

In 1997, Dr. Eric Cassell, expressing a career-long concern for the personal and interpersonal aspects of medical practice, addressed a different kind of "balance" in offering his own "ought to be" definition of primary care (Geiger, 1997):

> [Primary care is] careful history taking... artfully enhanced by skillful questioning at every point in the illness... supplemented by discerning scrutiny of patients' presentation to the world, behavior, mood and feelings, environment and context... plus the physical examination, supplemented by the mediated investigations offered by modern tests and imaging. (p. 1637)

For achieving the best in primary care (and, indeed, for all of medicine), as Dr. Kerr White (1968/1973), anticipating Cassell, so splendidly put it:

> One wants to avoid the confusion inherent in the encounter between the patient who implicitly says to the doctor, "I hope you treat what I've got" and the physician who implicitly says to the patient, "I hope you've got what I treat." (p. 362)

According to many authorities, the ideal primary care environment is one that provides classic "comprehensive care" (Reader & Soave, 1976). In terms that still apply, Dr. John Knowles (1965) defined the latter at a conference held in 1964:

> Comprehensive medicine in this [ambulatory care] context means the coordination of all the various caring elements in the community with those of the medical profession by a team of individuals representing all disciplines, with all the techniques and resources available to the physician and his patient. The aim of these individuals would be to provide total care—somatic, psychic, and social—to those in need, and to study and research the expanding social and economic problems of medical care with the intent of improving the organization and provision of health services. (p. 73)

The concept of community-oriented primary care (COPC) was developed back in the 1980s (Madison, 1983; Mullan, 1982; Mullan & Conner, 1982; Nutting, Wood, & Conner, 1985). It grew out of the concept of comprehensive care as defined by Knowles (1965). According to Rhyne, Cashman, and Kantrowitz (1998):

> COPC is a process by which a defined population's health problems are systematically identified and addressed. Ideally, it combines principles of primary care, epidemiology, and public health. . . . [It] could [also] be called community-responsive health care, community-based primary care, or something else. The process is the important element. The community is a partner at every step. (p. 2)

These are all ideal or, at least in part, normative definitions of primary and comprehensive care. In functional terms, however, primary care is that care which most people need, and use, most of the time, for most of their health and illness concerns.

Functions

The primary feature of *comprehensive* primary care is its integrating role in medical practice. In the past, when nearly all medical services were rendered by a family's general practitioner, coordination was almost automatic. Today, a primary care doctor or team can still provide most of the care that is necessary most of the time. But in the context of modern medical knowledge and technology, organization and planning for such a practice must be undertaken.

Medical complications or new problems at times will require the expertise of others. Coordination of care can be ensured if the primary provider assesses the situation correctly, helps the patient with a proper referral, then integrates the outcome of the referral into the patient's ongoing care (Bodenheimer, Lo, & Casalino, 1999). This important function of the primary provider prevents fragmentation of care and the hit-or-miss nature of patient self-referral to specialists and promotes comprehensive care, for the patient as a whole person, not merely a set of parts.

The term *gatekeeper* was originally applied to this function by Dr. Anne Somers (1983). In the still-applicable sense that Dr. Somers used the term, the gatekeeper function of the primary care practitioner can only benefit the patient. In the managed care era, however, the term *gatekeeper* has taken on a different meaning in describing the main function of the primary care physician: to monitor, regulate, and control the use of medical and related services by managed care organizations' patients. Thus, a fiscal responsibility has now been added to the task list of the primary care physician (Alexander, Hall, & Lantos, 2006; Shortell, Waters, Clarke, & Budetti, 1998). In this version, the gatekeeper function as carried out may not always be to the patient's benefit.

Under managed care, primary responsibilities that the physician may have to the payer for the patient's care may on occasion conflict with the responsibility the physician has for the care of the patient. In some managed care organizations (MCOs), for example, managed care physicians receive monetary bonuses for holding down utilization of services by their patients (Alexander et al., 2006). As Bodenheimer and colleagues noted (1999):

> Primary care gatekeeping [in MCO terms], in which the goal of the primary care physician (PCP) is to reduce patient referrals to specialists and thereby reduce costs, is not an adequate system in which to practice medicine. However, returning to the pre–managed care model of uncoordinated open access to specialists is a poor solution. The primary care model should be retained, but PCPs should be transformed from gatekeepers into coordinators of care, in which the goal of the PCP is to integrate both primary and specialty care to improve quality. (p. 2045)

In contrast to the situation in many other countries, the primary care relationship in the United States traditionally has not ended at the hospital admitting office. Instead, primary care physicians have provided a good deal of the inpatient care. Most board-certified family practitioners, general internists, and general pediatricians in this country have hospital admitting privileges.

In most other industrialized nations, primary care physicians work only in ambulatory care offices and health centers. Specialists provide inpatient and hospital clinic care. As noted in chapter 2, however, with the growth of managed care in the United States, the development of what some observers have called the hospitalist model is occurring. It remains to be seen how far this development will go.

Brief Historical Background

Thinking about primary care in conceptual terms has hardly been confined to recent decades (Roemer, 1975). Nor has its implementation been without its early champions in the United States. As far back as the 1930s, primary care received a strong endorsement from the Committee on the Costs of Medical

Care (see chapter 9) and, in the intervening years, from many other authorities (Somers, 1983). In Great Britain, the concept goes back at least as far as the 1920 Dawson report on the structure of health services (Sidel & Sidel, 1983).

Despite these recommendations, in the United States, as physician specialization and subspecialization increased dramatically in the period following World War II, much of the ambulatory care provided in private offices and groups and in hospital outpatient departments became highly fragmented (Freymann, 1974). The need to restore continuity and coordination was recognized in the 1960s and led to a revitalization of the primary care concept (Institute of Medicine, 1978).

Many of the health services entities called *neighborhood health centers* that developed in the 1960s and 1970s fostered the primary care approach, as did many of the original health maintenance organizations developed in the 1970s and 1980s (see chapter 8). Nevertheless, in the 1990s, it was still the case that most people in the United States did not have access to comprehensive primary care, even with (or perhaps because of) the advent of for-profit managed care (Starfield, 1996). There is no reason to believe that this situation has changed for the better in the 21st century. For instance, a report on primary care access in Texas deems the situation a crisis (Stoneham, Banning, Kroll, & Young, 2004).

Primary Care Workforce

In the ideal primary care setting, an appropriately trained health professional or team provides most of the preventive and curative care for an individual or family over a significant period of time. In the late 1960s, a task list for the ideal primary care system and primary care provider was developed, one that is still valid (Committee on Medical Schools, 1968, p. 753):

- Assessment of total patient needs before these are categorized by specialty.
- Elaboration of a plan for meeting those needs in the order of their importance.
- Determination of who shall meet the defined needs—physicians (generalist or specialist), non-physician members of the health care team, or social agencies.
- Follow-up to see that needs are met.
- Provision of such care in a continuous, coordinated, and comprehensive manner.
- Attention at each step to the personal, social, and family dimensions of the patient's problem.
- Provision of health maintenance and disease prevention at the same level of importance as the provision of cure and rehabilitation.

This description of functions shows that primary care is not simply a collection of services. Above all it is a state of mind, to wit (Committee on Medical Schools, 1968):

> The primary-care physician must be capable of establishing a profile of the total needs of the patient and his family. This evaluation should include social, economic, and psychological details as well as the more strictly "medical" aspects. He [sic] must know what resources are available for meeting those needs. He should then define a plan of care, deciding which parts are to be carried out by himself and which by others. The plan should have a long-range dimension. It should be understandable to the patient and his family, and it should include a follow-up on whether indicated measures have been undertaken and whether they have been effective. (p. 74)

Today, both the task list and state-of-mind requirements apply as well to primary care nurse practitioners and physician assistants as to primary care physicians.

Among physicians, primary care is provided variously by family practitioners (prepared to deliver primary care services to entire families), general pediatricians, specialists in general internal medicine, and for many women of childbearing age, obstetrician-gynecologists. As noted in chapter 2, it has now been shown that nurse practitioners/advanced practice nurses (Mundinger, 2002) and physicians' assistants can provide primary care for most patients that is at least equal in quality to that provided by physicians. It is thus likely that the debate over who should be doing what to whom in primary care will continue for many years to come.

Primary Care and the Health Care Delivery System

Some observers believe that the level and quality of primary care provision serve as good markers for the quality of a nation's health care delivery system as a whole (Davis, Schoenbaum, & Audet, 2005). Concerning the variation in primary care quality among nations, Starfield (1996) has noted:

> First, countries with better primary care tend to be countries that strive toward equity in distribution of health services and toward more equitable income distributions. Apparently, a commitment to social equity goes along with a commitment to equity in the distribution of health care resources. Second, it is not the number of primary care physicians, or even the ratio of primary care physicians to specialists, that accounts for the differential effects of the health services across those countries. Rather, the differences are a result of how the resources are distributed, whether or not they are organized to achieve the functions of primary care, and whether they clearly specify the roles and interrelationships between primary care and specialist physicians. (p. 1365)

AMBULATORY CARE

Definitions

Ambulatory care is health care given to a person who is not a bed patient in a health care institution. The term thus covers all health services other than community health services and personal health services for the institutionalized patient. The majority of physician–patient contacts in the United States occur in an ambulatory setting. There are two principal categories of ambulatory care. The largest is that given by private physicians in solo, partnership, or private group practice, on a fee-for-service basis, and by private physicians (often the same individuals) working in one of several different types of managed care arrangements, paid either on a fee-for-service or capitation basis.

The other category is care provided in a setting with an identity independent from that of the particular individual physicians working in it. This category includes hospital-based ambulatory services (e.g., clinics, emergency departments, and health promotion centers); community-based, hospital ambulatory services (e.g., outpatient surgery centers); emergency medical services systems, such as those run by police and fire departments; local public health department clinics; neighborhood health centers and community health centers; staff and group model health maintenance organizations (see chapter 8); and organized home care services, community mental health centers, industrial health services, school health services, and prison health services. Most physicians working in one of these settings are salaried.

Utilization

In 2002, there were 890 million ambulatory patient visits to office-based physicians. Americans averaged 3.14 physician visits per person. Females made about 59.4% of all physician office visits, with rates higher than those of males in all age groups other than the youngest (under 15 years) (Woodwell & Cherry, 2004). Visit rates tend to increase with age after the age of 15 (as one might expect, given the natural aging process and the impact it has on health and illness status). In 2002, white people had almost one more office visit per year than African American people, 3.35 versus 2.53, and greater than one more office visit per year when compared with Asians, whose rate was 2.29 visits per year.

The top six specialties visited were general and family practice (24.2%), internal medicine (17.6%), pediatrics (13.5%), obstetrics and gynecology (7.9%), ophthalmology (5.6%), and orthopedic surgery (4.3%) (Woodwell & Cherry, 2004, Figure 2). As a source of payment, 59% of visits were covered by private indemnity insurance and about 29% by Medicare and Medicaid, with the balance covered by self-pay, workers' compensation, and "other."

The top 10 reasons for making an office visit to a physician were general medical exam, progress visit, cough, postoperative visit, prenatal examination, symptoms referable to the throat, hypertension, knee symptoms, well-baby examinations, and unspecified medication needs (Woodwell & Cherry, 2004, Table 9).

Hospital Outpatient Departments

Introduction

For a variety of reasons, most American hospitals traditionally have focused the bulk of their efforts and activities on inpatients who are acutely ill and confined to bed (Freymann, 1974, chapter 3). Hospitals also have had to deal with other types of patients, however. Most are classified as outpatients.

Hospital outpatients require either immediate treatment for an acute and sometimes serious illness or injury, or ongoing care for a more routine matter. Very often the services of the latter type are similar to those needed by patients who attend physicians' offices. In theory at least, there are two categories of hospital ambulatory services, corresponding to the two principal categories of patient needs: emergency services, provided by emergency rooms or departments (EDs), and clinic services or outpatient departments (OPDs).

In the real world, overlap between the two categories of service is increasing. Patients, hospital staff, and hospital administrations, separately and together, are sometimes confused about the differences in role and function of the two categories. All three groups sometimes have trouble deciding which patients should go where for what.

The original intended functions of hospital emergency service units were (1) to take care of acutely ill or injured people, particularly with life-threatening or potentially life-threatening problems that required immediate attention by personnel, or equipment not found in private practitioners' offices; and (2) to offer prompt hospitalization if needed. Most hospitals have found it desirable or necessary (legally required in many states) to provide such services.

In the past, it was easier for hospitals to determine that emergency services should be provided than that clinic services should be. One reason for this was that insurance carriers were more likely to reimburse hospitals for emergency services than for clinic services. Under managed care, and with the steadily increasing number of Americans who have no or inadequate health insurance coverage, this situation is changing. In fact, the use of EDs for nonpreapproved, nonurgent care by MCO beneficiaries has created a major cost containment problem for the managed care industry. In an increasing number of instances, the MCO is refusing to pay the hospital for such care (Gresenz, Studdert, Campbell, & Hensler, 2002).

Some Historical Background

In the 19th century, clinic service was part of the function of most hospitals serving the poor in urban areas (Freymann, 1974). By 1916, 495 hospitals had clinics, often serving a health care personnel educational function as well as a charitable one (Roemer, 1981). Indeed, many of these clinics were originally established to care for persons who for one reason or another were not being served by a public institution.

Hospital-based emergency services came into being to meet observed needs as well. For example, in 1908, the Goshen (NY) Emergency Hospital was established. Its creation was stimulated by the building of one of New York State's early trunk highways, Route 17. The road went through the center of the village of Goshen. Traffic accidents occurred with increasing frequency. Thus, a hospital was needed, and with strong local effort, it was built.[1]

In the beginning, voluntary hospital OPDs were staffed on a rotating basis by the members of the hospital medical staff working there without pay. Voluntary hospital medical staffs consisted primarily of physicians practicing privately in the community. They were thus much more important in setting the style for the organization of medical practice in hospital OPDs than were those of the local government hospitals, which were much more likely to rely on the services of paid medical staff. (For contemporary staffing arrangements, see later discussion.)

Hospital clinics have changed in the past 20 years. They have become more sophisticated. In many hospitals, they have been reorganized to improve their efficiency and effectiveness by providing the care that patients need rather than simply serving the functions of the hospital as it perceived them, that is, organizing hospital services to first meet the training and educational needs of medical students and house staff. Whereas the average length of inpatient stays has decreased sharply over the past 20 years (see chapter 3), often placing financial strains on the hospital, clinic revenue as a percent of total revenue had risen to 43.5% by 2002 (Runy, 2003). As examples of the improved care being offered, many hospitals now provide more and better clinic hours and have integrated care throughout the clinic system.

Hospital Outpatient Department Utilization

In 2004, approximately 85 million visits were made to hospital OPDs, 29.5 visits per 100 persons per year (Middleton & Hing, 2006). Paralleling the general ambulatory patient utilization figures, females had higher visit rates than males,

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[1] Why is this particular example chosen, one might ask? Because Dr. Jonas' grandmother happened to have been a member of that hospital's founding board of directors, and his stepmother was a longtime member of the board of its successor, Arden Hill Hospital.

particularly among the 15- to 44-year-old age groups. In contrast to private office visit rates, the hospital OPD visit rate for African Americans and Hispanics was higher than that for Whites in all age categories except under 15 years, and overall close to double. Medicaid, State Children's Health Insurance Program (SCHIP), and private indemnity insurance (see chapter 6) were the three most common payment sources. The 10 most common reasons for visits were progress visit (follow-up to previous visit), general medical exam, routine prenatal examination, cough, medication, symptoms referable to the throat, postoperative visit, hypertension, well-baby examination, and stomach pain, cramps, and spasms. Between 1994 and 2004, the increase in visit rates was greatest among people under 21 years: infants under 1 year (up by 37%), children 1–12 years (up by 34%), and adolescents 13–21 years (up by 27%). The increase in visit rate for people over 21 was smaller—about 6%.

Present Hospital OPD Organization and Staffing

Although not all clinics are found in teaching hospitals (those affiliated with medical schools), most are. Given the way medical education is structured, teaching hospitals have over time found that the best way of organizing OPDs to provide opportunities for teaching and research is to have separate disease-, organ-, or organ system–specific clinics (Freymann, 1974, p. 255). This is still largely the case, although there has been an increase in clinics that specialize in treatment of a demographic group (e.g., women or the elderly) as well as conditions that cross disease or organ-specific boundaries (e.g., pain management clinics).

Typically, teaching hospitals have three categories of clinics: medical, surgical, and other. Medical clinics, of which a family practice unit or a general medical clinic approximating the function of the general internist may be a part, include cardiology, neurology, dermatology, allergy, and gastroenterology specialties. General surgery, orthopedics, urology, plastic surgery, and the like compose the surgical clinic group. Included in the third, catchall group are pediatrics and the pediatric subspecialties, obstetrics-gynecology and its subspecialties, and other specialties such as rehabilitation medicine.

The larger teaching hospitals often have more than 100 different specialty and subspecialty clinics. Thus, a hospital-based physician working in the usual hospital clinic organization can concentrate on diabetes, peripheral vascular disease, or stroke in his or her teaching and research. This is useful for the provider focusing on a particular disease or condition. It may also be helpful to the patient who has a single disease or problem of a rather complex or unusual nature. Difficulties may arise, however, for the patient with multiple medical problems. Such a patient's care may be divided among multiple clinics, with no one physician coordinating the care and providing an overview of the patient as a person rather than as a collection of organ systems (e.g., the cardiovascular system), or organs (e.g., the eye), or even organ components (e.g., the retina).

There are five functional categories of physician staff in teaching hospital clinics. First, it was formerly very common for the hospital's voluntary (read private) attending medical staff to draw clinic duty as part of repaying the hospital for granting admitting privileges for their private patients at no cost to themselves. This is still the case in some institutions.

Second, by the 1980s, many medical schools had become increasingly dependent for their financial support on taking a share of the income physicians earned in the clinics. The money was received primarily from third-party payers. Today, many clinics in medical school–owned teaching hospitals are staffed by medical school faculty whose work there generates both some of their own income and money for the school's general fund. The management system for dividing this income between the physicians and the institution providing the space and supporting staff is usually referred to as the *clinical practice plan*.

Third, to carry out teaching, supervisory, and research functions, a teaching hospital may assign full-time salaried inpatient physicians, usually junior staff, to the clinics. Fourth, house staff (physicians in post–medical school, graduate specialty training, including interns, residents, and fellows) usually draw significant clinic duty from time to time throughout the course of their training. Fifth, for clinics with many patient visits, hospitals may hire outside physicians exclusively to work in them on a sessional or part-time salaried basis.

All of these arrangements, in the context of the fragmented, subspecialty-focused organization of most teaching hospital clinics, create serious problems for the future development of primary care and primary care physicians. As one of the nation's experts on the subject, Dr. Fitzhugh Mullan, put it in terms that are still true today (Landy, 2001): "Medical education in the U.S. marginalizes primary care, and the current medical reimbursement system, which gives much higher compensation to specialists than to generalists, encourages medical institutions to skew treatment in favor of atomized high-tech interventions."

Some Problems Faced by Clinic Patients

The basic contradiction in hospital ambulatory services is clear. On the one hand, there are the teaching and research needs of specialty-oriented providers. On the other, there are the needs of patients with either ordinary problems or several different problems requiring the care of several specialties. For many of them, a dysfunctional disjunction of fragmented care has been created (Roemer, Kramer, & Frink, 1975). This situation is not new but has not changed since it was noted by Dr. Roemer and colleagues back in 1975. Professional recognition of the problem and recommendations for correcting it also have not changed.

In 1964, at a conference on "The Expanding Role of Ambulatory Services in Hospitals and Health Departments" held at the New York Academy of

Medicine, Dr. Cecil Sheps (1965) said:

> As I sat through the sessions yesterday and today I had a persistent feeling of déjà vu. I possess a book written by Michael M. Davis and published in 1927 [*Clinics, Hospitals and Health Centers*, New York: Harper, 1927]. In it there is quoted a statement prepared in 1914 that describes the purpose of an out-patient department just as clearly as anything said at this conference: that the focus must be on the patient, that care must be organized around the patient, and that the hospital must take the community as its venue and not simply the patients who come to it. (p. 148)

An echo of this recommendation was found in John Gordon Freymann's mission-oriented hospital concept from the 1970s (see chapter 3). A 1980s version of what Dr. Davis was talking about in 1927 and Dr. Freymann was talking about in the 1970s was called community-oriented primary care (COPC) (Dobbie, Kelly, Sylvia, & Freeman, 2006; Longlett, Kruse, & Wesley, 2001; Madison, 1983; Mullan, 1982; Mullan & Conner, 1982; Nutting, Wood, & Conner, 1985; Rhyne, Bogue, Kukulka, & Fulmer, 1998). It is still a model for which to strive. Its major elements are as follows:

- The clinical practice of comprehensive primary medical care (as defined earlier in this chapter).
- The use of applied epidemiology in practice planning.
- Community involvement in program planning.
- The use of data gathered in practice operations in a continuous feedback loop for future program planning.
- Continuing surveillance of community health status and needs.

The model can be used in any medical practice, whether solo, group, or hospital-based. The principal problem COPC faces is not conceptual; the ideas have been with us for many years, and they are obviously sound. The difficulty is in implementation. To this day there are only a few institutions that are even interested in trying to approach the ideal, much less able to find the personnel and money necessary to reach it.

Hospital Emergency Services

In 2004, Americans made about 110.2 million visits to hospital emergency departments, or close to 38.2 visits per 100 persons per year (McCaig & Nawar, 2006). With the exception of children under 1 year of age, persons 75 years and older had the highest annual rate of visits. African Americans had a higher visit rate (68.9 per 100 people) than did Whites (35.2 per 100 people). About 19.6% of all visits were for the treatment of injuries and adverse effects of medical treatment. General symptoms encompassed 15.6% of the distribution, whereas symptoms referable to the musculoskeletal system, digestive system, and respiratory system collectively encompassed 38.2% of the distribution (13.8%, 13.7%, and 10.7%, respectively; McCaig & Nawar, 2006, Table 7). From the patient perspective, the most common reasons that patients came into an ED were stomach ache, chest pain, fever, back symptoms, headache, cough, shortness of breath, vomiting, pain, lacerations and cuts, accidents, and symptoms referable to the throat (McCaig & Nawar, 2006, Table 8).

The hospital ED thus serves a variety of functions. First, it provides care to critically ill and injured patients, true emergencies. Second, in many voluntary hospitals it also serves as a secondary, well-equipped private physician's office, with more sophisticated resources than are available in a typical doctor's private office. Third, EDs are a source of patient admissions to the hospital.

A fourth role that has become increasingly important in the years since World War II is obvious from looking at the list of reasons for visits from the patients' perspective. It is the provision of care to persons who are neither injured nor critically ill, but who (1) have not seen or cannot reach their private physician, (2) find that their regular clinic is not open when needed, (3) find that their regular or covering HMO-assigned primary-care gatekeeper physician is not available, (4) are geographically out of region, or, increasingly, (5) have no insurance coverage and thus have no place else to go when they get sick (e.g., Alavy, Chung, Maggiore, Shim, & Dhuper, 2006; Moon, Laurens, Weimer, & Levy, 2005).

For virtually all patients who go to an emergency room (knowing, by the way, that the wait for service is likely to be long unless they are seriously ill or injured and that they are unlikely to be seen by a physician they have met before), for whichever reason just listed, the visit qualifies, in their mind, as an "emergency." However, from the provider perspective, things are seen rather differently. In terms that still apply, back in 1968 Dr. E. Richard Weinerman and associates (Weinerman, 1968, p. 1040) defined three categories of patients presenting themselves to emergency units:

- Non-urgent: Condition does not require the resources of an emergency service; referral for routine medical care may or may not be needed; disorder is nonacute or minor in severity.
- Urgent: Condition requires medical attention within the period of a few hours; there is a possible danger to the patient if medically unattended; disorder is acute but not necessarily severe.
- Emergent: Condition requires immediate medical attention; time delay is harmful to patient; disorder is acute and potentially threatening to life or function.

Of course, these definitions are made from the professional perspective. Most patients do not make the kinds of distinctions health professionals make. Many patient visits to emergency rooms are for conditions that are neither urgent nor emergent from a medical viewpoint. “Nonurgent” and some “urgent” cases can overtax hospital EDs with responsibilities with which they are for the most part not ideally equipped to deal.

In the view of many analysts, the solution to the problem of the inappropriate use of the emergency room must be found outside the walls of the hospital. It must encompass an integrated system of medical care for the entire community, ensuring availability of appropriate medical care at all hours and to all classes of the population. Thus, we come back to the definitions of comprehensive primary care, to the visions of Michael Davis, John Knowles, and John Gordon Freymann, and to the concept of community-oriented primary care.

Hospital Ambulatory Services Outside the Walls of the Hospital

From the 1980s onward, hospitals have been developing community-based facilities, both within their walls and at satellite sites. These facilities provide services that traditionally have required inpatient stays but, with advances in medical practice and technology, can now safely be offered on an outpatient basis (Anderson, 1990; Ermann & Gabel, 1985; Lin, Yang, Wen, & Chang. 2006; Podolsky, 1996). Such facilities include satellite OPDs, which may separate specialty clinics à la many hospitals, or may be more like a community health center; comprehensive diagnostic centers for laboratory, x-ray, and related testing; and ambulatory surgery centers (Medical Group Management Association, 2002), where surgery that can be safely performed on an outpatient basis is done.

Ambulatory surgery centers are quickly increasing in number, and many of them are part of hospital systems. Surgeries in these settings are replacing inpatient surgeries. There were more than 4,500 ambulatory surgical centers in the United States in 2007 (Foundation for Ambulatory Surgery in America, 2007). New technologies, such as arthroscopic surgery, which allow for the use of noninvasive or minimally invasive procedures, certainly are at the center of this rapid growth. The payers of care strongly support this transformation because of the tremendous difference in charges for surgery done on an outpatient basis and that done for inpatients. Patients generally view ambulatory surgery favorably because of a better physical environment, the ease of access that many centers provide, and the overriding factor that the patients do not have to be admitted to a hospital.

Public Health Agency Clinics

In many parts of the United States, local government provides personal ambulatory health services in public hospitals, through local health departments, and in other venues (see chapter 5). Local health departments operate an array of special clinics, focusing primarily on the prevention of disease.

Important among their services are clinics for tuberculosis control (often providing treatment as well as case finding and contact investigation services), child health (where immunizations, examinations, and education on child rearing are provided), prenatal care, sexually transmitted disease control, and certain mental health problems. In recent years, some public health agencies have broadened the scope of their services to include family planning, chronic disease detection, and general primary (disease treatment) care. Precisely how much care is provided is not known. Although there are more than 2,000 local health department units providing some kind of care, public health services are not a major factor in the overall ambulatory care picture (Association of State and Territorial Health Officials, 2006; Health Resources and Services Administration [HRSA], 2006c).

The provision of personal disease treatment service by local health departments has been a subject of controversy ever since the practice began in the 19th century (Rosen, 1971; Winslow, 1929, chapter 17). Battles with the private physician sector over the role of local health departments were especially fierce during the 1920s, when some local health departments developed plans to expand their general disease treatment services (Myers, Steinhardt, Mosley, & Cashman, 1968; Rosen, 1971; Winslow, 1929, chapter 17).

The efforts of the organized representatives of U.S. physicians to stop these developments generally met with success. To this day, local health department personal health services are usually limited to those medical areas in which private physicians are not very interested (e.g., routine well-baby examinations), not especially competent (e.g., treatment, case finding, and contact investigation for sexually transmitted diseases and tuberculosis), or not available (e.g., primary care in underserved areas).

Lately there has been a diminution in organized medicine's opposition to the involvement of local health departments in the provision of direct medical services to the poor. Some hard-pressed urban and suburban health departments have done this, especially where access to public hospital services is limited or nonexistent.

Neighborhood and Community Health Centers

In the late 1960s and early 1970s, the neighborhood health center (NHC) movement emerged on the U.S. health care scene. The NHC was based on the concepts of full-time salaried physician staffing, multidisciplinary team health care practice, and community involvement in both policy-making and facility operations (Davis & Schoen, 1978; Zwick, 1972/1974). The movement was strongly stimulated by the federal Office of Economic Opportunity (OEO). The OEO was the lead agency for the "war on poverty" initiated by President Lyndon Johnson from 1964 through 1968.

For poor people, the NHCs sought to provide one-stop shopping for comprehensive ambulatory care—a full range of preventive and rehabilitative as well as treatment services that were affordable and of high quality. The NHCs also aimed to intervene in the cycle of poverty, by providing jobs and skills/career development opportunities for the residents of the communities they served. The movement did not meet with overwhelming success, in terms of patient visits provided. Conceptually, though, it was very important, leading to, among other things, the community-oriented primary care model mentioned earlier.

The NHC did not represent an entirely new concept in the United States. The 19th-century freestanding urban "dispensary" was an early general ambulatory care center that primarily served the poor. Although it was organized differently, it performed some functions similar to those of the modern NHC or the community health center, the NHC's successor. Health department ambulatory care programs developed during the last quarter of the 19th century had some elements that would also appear later in NHCs, such as districting and comprehensiveness (Rosen, 1971).

The experience with prepaid group practice (PPGP) in the 1930s, 1940s, and 1950s (see chapter 8) influenced the development of the NHC movement of the 1960s and 1970s (Light & Brown, 1967). With varying degrees of vigor and success, the NHCs attempted to make multidisciplinary group practice work. Along with physicians and nurses, they employed social workers, neighborhood health workers (usually people from the area served, specially trained by the NHC with a combination of basic nursing and social service skills), and sometimes lawyers, all on salary. These health care teams helped patients deal with both social and medical problems.

At the movement's peak, in the early 1970s, nationally there were an estimated 200 NHCs ("NENA," 1972). In the mid-1970s, the Nixon and Ford administrations more narrowly defined the scope of the NHC program and renamed its facilities *community health centers*. The CHCs, which included many of the original NHCs, were to concentrate on the delivery of primary care services. They were to deemphasize other NHC roles, such as providing employment opportunities and training programs, stimulating social and economic development in their communities, and concerning themselves with community-wide as well as personal health problems.

By the early 1980s, there were more than 800 CHCs serving more than 4.5 million people (Sardell, 1983), a remarkable resurgence for a program that received little publicity. By the early 1990s (Starfield, 1992), there were fewer CHCs (540), but with a total of 2,000 locations and sublocations serving close to 6 million poor people in all 50 states, the District of Columbia, and the major U.S. territories. In 2001, President George W. Bush initiated an expansion of the CHCs. As a result, by 2006 there were more than 3,800 community and migrant worker health centers providing care for more than 14.6 million people (HRSA, 2006c).

Today, "Health Centers" refer to all the diverse public and nonprofit organizations and programs that receive federal funding under section 330 of the Public Health Service (PHS) Act, as amended by the Health Centers Consolidated Act of 1996 (P.L. 104-299) and the Safety Net Amendments of 2002. They include Community Health Centers, Migrant Health Centers, Health Care for the Homeless Health Centers, and Primary Care Public Housing Health Centers.

Health centers are characterized by five essential elements that differentiate them from other providers:

- They must be located in or serve a high need community, i.e. "medically underserved areas" or "medically underserved populations";
- They must provide comprehensive primary care services as well as supportive services such as translation and transportation services that promote access to health care;
- Their services must be available to all residents of their service areas, with fees adjusted upon patients' ability to pay;
- They must be governed by a community board with a majority of members health center patients; and,
- They must meet other performance and accountability requirements regarding their administrative, clinical, and financial operations. (HRSA, 2006a)

As of 2004, more than 40% of CHC patients were uninsured, and 91% had incomes below 200% of the federal poverty level (HRSA, 2006b). Racial and ethnic minorities make up 63.5% of CHC patients. In 1999, a disproportionate share had special health care needs (11% were substance abusers, 5% were homeless, and 2.5% were HIV positive). The CHCs provide a broad range of support services, including transportation, translation, health education, nutrition, and AIDS management, and have been considered by those who use them to provide high-quality care (McAlearney, 2002). Many of the CHCs were on the brink of financial insolvency in the late 1990s, but the Bush Administration initiative to expand CHCs has eased the financial difficulties of these health care providers (HRSA, 2006c).

Industrial Health Service Units

A range of industrial health hazards exist, from traumatic injury to occupational exposure to harmful substances (e.g., silica, asbestos, and lead). The number of "in-plant" health units in the United States is not known, but there are thousands of them. In small plants (fewer than 100 workers), health services are ordinarily quite rudimentary. They are often limited to a first-aid kit and arrangements with some local health facility to which injured workers may be sent. Very large plants (with more than 2,500 workers) usually have some systematic in-plant health service. Customarily, it is staffed with trained industrial nurses and part-time or full-time physicians. In a few companies, in-plant health services are comprehensive, providing employees with complete medical care for all disorders, job connected or not.

The long-term trend in American industry is toward greater concentration of production in fewer large corporations. Although at one time it seemed that concentration might enhance the prospects for improving occupational health programs, in the 1980s there were actually reductions in service in many large corporations in the name of cost savings (D. Parkinson, personal communication, October 25, 1990). This situation does not appear to have improved since that time.

School Health Clinics

In 2002, there were more than 71.2 million students in primary and secondary schools, colleges, and universities, projected to rise to 74.2 million in 2010 (U.S. Census Bureau, 2005, Table 204). In 2002, more than 48.2 million students were enrolled in 92,330 public elementary or secondary schools (U.S. Census Bureau, 2005, Table 230), and about 16.6 million were enrolled in 4,168 institutions of higher education (U.S. Census Bureau, 2005, Table 265). Almost all educational institutions provide some type of organized, ambulatory health service. About half of the school health services are run by local health departments, the balance being run by boards of education, on their own (25%), or in cooperation with the local health department.

Very little disease treatment is done in school health programs. Usually carried out by school nurses, the work of most of these programs is confined to case finding and prevention for certain chronic or epidemic diseases, for example, screening for vision and hearing difficulties and providing immunizations. Referrals are made to physicians for diagnosis and treatment, should they be indicated. College and university health services are more likely to provide general diagnostic and treatment care. Some pay special attention to mental and substance abuse problems.

Home Care and Hospice

According to Strahan (1996):

> Home health care is provided to individuals and families in their place of residence to promote, maintain, or restore health or to maximize the level of independence while minimizing the effects of disability and illness, including terminal illness.

> These agencies are often referred to today as "hospitals without walls" because advances in technology allow dozens of complex illnesses, once treated almost exclusively in the hospital, to be treated at home.

Hospice care is defined as a program of palliative and supportive care services that provides physical, psychological, social, and spiritual care for dying persons, their families, and other loved ones. Hospice services are available in both the home and inpatient settings.

In 2003, there were about 20,000 home health care agencies in the United States. About 7,265 of these were Medicare-certified agencies, of which about 47% were profit-making organizations. The remainder are predominantly operated on a non-profit basis (National Association for Home Care & Hospice, 2004). Total expenditure on home care services in 2003 was about $40 billion and was projected to go to $45 billion in 2004 (U.S. Census Bureau, 2005, Table 120). In 2000 (the latest year for which data are available), about 1.35 million predominantly elderly, female persons received organized home health services (U.S. Census Bureau, 2005, Table 171). The major medical diagnoses for this group, based on Medicare home health utilization data, were circulatory system diseases and heart disease (47.1%), injury and poisoning (15.9%), diseases of the musculoskeletal system and connective tissue (14.1%), and diseases of the respiratory system (11.6%) (National Association for Home Care & Hospice, 2004).

CONCLUSIONS

The bulk of the need for medical care and for the provision of health services occurs in the ambulatory setting. In the United States, a disproportionate share of health care resources is devoted to inpatient care, both acute and long term. If, overall, health care is to be improved, this imbalance needs to be addressed. Furthermore, given the current profile of disease and disability in the United States, it is obvious that significant improvements in the health of the American people could be achieved by the widespread implementation of known health-promotive and disease-preventive measures in the ambulatory setting (U.S. Department of Health and Human Services, 2000). This is the central element of comprehensive primary care.

As stated at the outset of this chapter, primary care goes with ambulatory care as ice cream goes with apple pie (neither of which is unhealthy if eaten only occasionally). Historically, there is movement in the right direction. Much remains to be done.

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Chapter 5

Government and the Health Care System

INTRODUCTION

As we noted in chapter 1, the United States government operates neither the health care delivery system nor the health services financing system in anything close to their entirety. In fact, in the United States, the government is less involved with the provision of health care (as contrasted with the payment for health services, with which it is heavily involved) than it is in any other industrialized country in the world.

Perhaps the most important reason for this difference is the political and economic strength of the private medical, hospital, insurance company, and now managed care sectors of the health services economy and their opposition to what they term "government control and interference." In the view of these and other stakeholders, the health care sector in the United States is already the most regulated of all economic sectors. Additionally, they argue that numerous rules contradict or duplicate others. It is commonly cited that that there are more than 130,000 pages of rules and instructions for the Medicare and Medicaid programs and claimed that meeting the regulatory demands of all the relevant agencies requires up to an hour of paperwork for every hour of patient care provided (American Hospital Association, 2001).

There are, of course, exceptions to this rule of dominance by the private sector. These include certain select areas of the health care delivery system that are not profitable or are technically difficult to deal with, such as care of the sick poor, care of the mentally ill, care of special, distant population groups such as Native Americans living on reservations, providing payment for both short- and long-term care of the elderly, and infectious disease control and other personal public health services. Therefore, as restricted as is the U.S. government's role as compared with that found in other nations, in terms of dollars spent (see chapter 6) it still looms rather large and thus deserves our attention.

SOME HISTORICAL BACKGROUND

The health care role that government does have in the United States has developed and expanded gradually over a long period of time. In his preface to a seminal book on government medical services of the 1940s by Bernhard J. Stern (1946), W. G. Smillie, one of the first medical sociologists (as was Dr. Stern) and as well a noted public health authority of the day, said:

> Our forefathers certainly had no concept of responsibility of the Federal Government, nor of the state government, for health protection of the people. This was solely a local governmental responsibility. When Benjamin Franklin wrote "Health is Wealth" in the Farmers' Almanac, he was saying that health was a commodity to be bought, to be sold, to be conserved, or to be wasted. But he considered that health conservation was the responsibility of the individual, not of government. The local community was responsible only for the protection of its citizens against the hazards of community life. Thus government responsibility for health protection consisted of (a) promotion of sanitation and (b) communicable disease control. The Federal Constitution, as well as the Constitutions of most of the states, contains no reference or intimation of a federal or state function in medical care. The care of the sick poor was a local community responsibility from earliest pioneer days. This activity was assumed first by voluntary philanthropy; later, it was transferred, and became an official governmental obligation. (p. xiii)

Professor Stern (1946) continued that line of thinking in the introduction to his book:

> Government action in the field has traditionally been limited to the care of the indigent and has been dominated in its scope and administration by the restraining influences of the parochial poor laws. Gradually, and especially after the passage of the Social Security Act and during [World War II], government medical care has increasingly been furnished to some nonindigent groups. New patterns of government medical care are being formulated and the role of local, state, and federal governments in the field is changing. . . . The attitudes of the medical profession and of the public toward government medical programs will determine whether these resources are to be used progressively to distribute more medical care of higher quality to the American people. (pp. 4–5)

What a contemporary ring this last sentence has, even though it was written more than 60 years ago. Even without any kind of national health system, government at all jurisdictional levels in the United States is much more heavily involved in the health care delivery system in both degree and kind in 2007 than it was in 1946. Consider, for example, such initiatives as Medicare and Medicaid, government regulation of spending and payment and the environment, the development and approval of pharmaceuticals, and support of biomedical research and health professions education, as well as traditional public health services and care for the poor in certain jurisdictions. Particularly in the last regard, certain characteristics have remained unchanged. They are most significant. To quote Smillie again (Stern, 1946):

> Practically all governmental procedures in medical care stem from the original local community responsibility for the care of the sick poor, and many of our great municipal hospitals, clinics, and health services of today still bear the stigma of pauperism. (p. xiv)

By the term *medical care*, Smillie meant what we have often referred to as *personal health services* or *direct health care delivery*.

What has been termed the *pauper stigma*, signifying that "poor equals bad" and that poverty is the fault of the poor, is still attached to much government activity in direct health care delivery (although certain health department services have managed to escape the taint). It is rooted in the Protestant work ethic, which held people directly accountable for their state in life. The legal implementation of that ethic goes back at least as far as the Elizabethan Poor Laws in England (de Schweinitz, 1943/1961).

Although in our society today some may accept socioeconomic explanations as to why some people are well off and others are destitute, the attitudes of many toward the proper role of government in health care are still colored by old values and prejudices toward the poor and people of color (Jonas, 1986; still the case 20 years later). Additionally, the health status of the latter groups is different from that of the nation as a whole (as noted in a variety of loci throughout this book). For example, one study (Geronimus, Bound, Waidmann, Hillemeier, & Burns, 1996) reported in 1996 that

> When they were compared with the nationwide age-standardized annual death rates for whites, the death rates for both sexes in each of the [studied] poverty areas were excessive, especially among blacks.... Boys in Harlem [a predominantly African American district in New York City] who reached the age of 15 had a 37 percent chance of surviving to the age of 65; for girls the likelihood was 65 percent. (p. 1552)

And a more recent study by Geronimus and colleagues (Geronimus, Hicken, Keene, & Bound, 2006) found

> evidence that racial inequalities in health exist across a range of biological systems among adults and are not explained by racial differences in poverty. The weathering effects of living in a race-conscious society may be greatest among those Blacks most likely to engage in high effort coping. (p. 826)

A broader application of the foregoing finding is that of Sir Michael Marmot (2002): "Income is related to health in three ways: through the gross national product of countries, the income of individuals, and the income inequalities among rich nations and among geographic areas" (p. 31).

Many questions remain about the role of government in health today, some of which have resonated for decades. In his preface to the landmark report of the Institute of Medicine's Committee on the Future of Public Health, Dr. Richard Remington (Institute of Medicine, 1988) summarized them well in terms that, for better or for worse, still apply:

> But what is the most appropriate nature of that governmental presence? How should government's role relate to that of the private sector? How should governmental responsibility for public health be apportioned among local, state, and federal levels? Should government be the health care provider of last resort or does it have a greater responsibility? Should public health consist only of a necessary residuum of activities not met by private providers? How should governmental activities directed toward the maintenance of an environment conducive to health be apportioned among various agencies? But above all, just what is public health? What does it include and what does it exclude? Based on an appropriate definition, what kinds of programs and agencies should be constructed to meet the needs and demands of the public, which is often resistant to an increasing role, or at least an increasing cost, of government? (pp. v–vi)

These questions have yet to be answered definitively for the United States. The public debate about the role of government in health care sharply diminished in intensity following the defeat of the Clinton health plan (see chapter 9), but may have made its way back onto the national political agenda following the 2006 midterm elections.

This is not to say that there were not calls "to do something" at the governmental level, both in the delivery of personal health services (Institute of Medicine, 2001) as there have been throughout the 20th century (see chapters 1 and 9) and in dealing with the nonmedical determinants of health (Lurie, 2002; McGinniss, Williams-Russo, & Knickman, 2002). It is to say that although early in the new millennium there was little political resonance for these concerns, given especially the power of the for-profit sector's political lobby, that situation may be changing as we move through the second half of its first decade.

THE CONSTITUTIONAL BASIS OF GOVERNMENT AUTHORITY IN HEALTH CARE

It is argued that a very significant role for government in health care delivery is justified by the amount of money government spends on it. This says nothing about the calls for major reforms that could be undertaken by no agency other than government that echo down to us from the early 1930s and resonate in many voices today. But such a role has a constitutional basis as well.

To understand government operations in the health care delivery system, it is essential to understand the structure of the government itself.[1] A basic principle of the United States Constitution is that sovereign power is to be shared between the federal and state governments, a principle called federalism. At its heart, the United States Constitution is an agreement among the original 13 states to delegate some of their inherent powers to a federal government, on behalf, not of themselves as separately sovereign entities, but of, as the Preamble to the Constitution says, "the people of the United States." As part of this agreement, in the Tenth Amendment to the Constitution, the states explicitly reserved to themselves the rest of the power: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people."

Because it is not explicitly mentioned in the Constitution, among the powers reserved to the states is the "police power." It is the latter that forms the basis of the states' role in health (Mustard, 1945, pp. 17–21). As Grad (2005) points out:

> In the states, government authority to regulate for the protection of public health and to provide health services is based on the "police power"—that is, the power to provide for the health, safety, and welfare of the people. It is not necessary that this power be expressly stated, because it is a plenary power that every sovereign government has, simply by virtue of being a sovereign government. For purposes of the police power, the state governments—which antedate the federal government—are sovereign governments. . . . [T]he exercise of the police power is really what government is about. It defines the very purpose of government. (p. 11)

Among the states' other inherent powers are those of delegation of their own authority. The states used this power to create a third tier of government, local government. Most states have delegated some of their own health powers to

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[1] *The Public Health Law Manual* by Frank P. Grad (2005), *Health and the Law* by Tom Christoffel (1982), and "The Legal Basis for Public Health" by E. P. Richards and K. C. Rathbun, chapter 4 in Scutchfield and Keck's *Principles of Public Health Practice* (1996), are valuable guides to the legal basis of government activity in health care and to the many legal procedures involved in the enforcement of public health law.

that tier. The constitutional basis of the federal government's health authority is found in the powers to tax and spend to provide for the general welfare, and regulate interstate and foreign commerce (see the Preamble and Article 1, Section 8 of the Constitution) (Grad, 2005, pp. 11–15).

The other basic constitutional principle affecting health and health services is *separation of powers*. The Constitution divides the sovereign power of the federal government among three branches of government: executive, legislative, and judicial. Under separation of powers, each branch of the federal government has its own authority and responsibility, spelled out in the Constitution. Furthermore, the Constitution spells out curbs on the powers of each branch, exercised by the other two. This arrangement is called the *system of checks and balances*.

One very important check on the power of both the federal legislative and executive branches, *judicial review* of the constitutionality of their actions, is not found in the Constitution, however. It was established early in the 19th century by the third Chief Justice of the Supreme Court, John Marshall, and his colleagues on the bench. It has become an accepted part of the United States constitutional system only because the other two branches have granted the Court that authority in practice and have followed its determinations.

In organizing themselves, the state governments have followed fairly closely the tripartite form of government established under the U.S. Constitution, with checks and balances and separation of powers. At the tertiary, local, level of government, the boundaries between the branches at times become blurred, however. For example, in some suburban and rural areas, the local chief executive officer presides over the local legislative body. Nevertheless, in most United States jurisdictions, separation of powers is a major principle of government.

THE HEALTH CARE FUNCTIONS OF GOVERNMENT

The Legislative Branch

At each level of government, federal, state, and local, each of the three branches of government has responsibility and authority for health and health services. Legislatures create the laws that establish the means to safeguard the public's health, in matters ranging from the assurance of a pure water supply to protecting the health of workers in their places of employment. The legislatures also enact the legal framework within which the health care delivery system functions, determining which individuals and institutions are authorized to deliver what services to which persons under what conditions and requirements.

In the past, legislatures have imposed certain requirements for planning and development on the system, although in most jurisdictions that function has been minimized or has disappeared entirely. If the government is to participate in health care financing (see chapter 6), or directly deliver services (see this chapter and chapter 3), or support research efforts, the legislature must first establish the legal authority for those programs.

The Judiciary

The judiciary generally supports the work of the other two branches of government. The judicial branches at the three levels of government have important powers relating to health and health services. In the criminal law arena, working in concert with the law enforcement arms of the executive branches, under the authority granted to them by their respective legislatures, they can try apprehended transgressors of the criminal law and determine punishment for those successfully prosecuted. For example, although it is a state legislature that creates the licensing law for physicians and the executive branch that administers it, it is the judicial system that determines the guilt or innocence of a person charged with "practicing medicine without a license." The criminal justice system also plays a vital role in safeguarding the public's health. For example, it enforces sanitary protection and pollution control legislation, with criminal sanctions if necessary.

In the civil arena, the judicial system handles disputes arising from the provision of health services, for example, through the process of malpractice litigation. The judicial system adjudicates contract cases arising from health care system disputes, such as those between providers or patients, on one side, and a managed care organization (MCO) on the other. It protects the rights of individuals under the due process and equal protection clauses of the Fifth and Fourteenth Amendments to the Constitution. Together, then, the judicial and executive branches form the civil and criminal justice systems, at the federal, state, and local levels.

The Executive Branch

In common parlance, the term *government in health care* refers to the executive branch that delivers health care services, drafts and enforces provider/payer regulations, and administers financing programs, not the legislature that creates the programs or regulatory authority, nor the courts that settle disputes arising under the laws and adjudicates violations of them. As it does in common parlance, then, in the remainder of this chapter the term *government* refers to the executive branch of government.

Provision of Personal Health Services

At the federal level, personal health services are provided for the most part to *categories of persons*: members of the uniformed services and their families, Native Americans, and military veterans, for example. State governments provide personal health services for the most part to *persons who have specific diseases*, such as mental illness and tuberculosis. Local governments' personal health services are *stratified by class*. Generally they are for the poor. There are occasional overlaps. For example, governments at all levels provide health services for prisoners, one category of person.

Provision of Community Health Services

Government at all levels is the major provider of the traditional community-wide "public health" services, such as pure water supply and sanitary sewage disposal, food and drug inspection and regulation, communicable disease control (e.g., immunization and the control of sexually transmitted diseases), vital statistics, environmental regulation and protection, and public health laboratory work.

Certain community health activities are shared with the private sector. For example, in public health education, voluntary agencies such as the American Cancer Society and the American Heart Association are important participants. Private refuse companies do much of the solid waste collection and, in certain states, supply the water. Private organizations such as the Sierra Club and the Natural Resources Defense Council are active in environmental protection. Private institutions also play a vital role in health sciences education and research.

Health Services Financing

As will be described in more detail in chapter 6, government participates in the financing system in three ways. First, it pays for the operation of its own programs, both personal and community. It does this directly, for example, through the federal government's Veterans Administration hospital system or a municipal hospital serving primarily the poor. It also does this indirectly, for example, through the federal government's provision of grants to state governments to help pay for personal care in state mental hospitals and for the operation of the state's public health agencies at the community level. The states in turn indirectly support local government public health activities by providing money for that purpose.

Second, through grants and contracts to nongovernmental agencies (and, in certain cases, other governmental agencies), governments support other types of health-related programs, for example, in biomedical research and medical education. Third, and this is by far the major role of government in financing, under such programs as Medicare and Medicaid governments pay providers for the delivery of care to patients. As will be discussed in greater detail in chapter 6 (Smith, Cowan, Heffler, & Catlin, 2006), federal, state, and local public funds accounted for about 45% of national health expenditures in 2004, up from 42% in 1980 and 38% in 1970.

THE FEDERAL GOVERNMENT AND THE PROVISION OF HEALTH SERVICES

Many federal agencies are involved in the delivery of personal and community health services (Brandt, 1996). The United States Department of Health and Human Services (DHHS) is the most important federal actor in health and health care. Including its social service functions, as of 2006, the department operated more than 300 different programs (DHHS, 2006a). There are two other federal agencies with major health services responsibilities: the Department of Veterans Affairs (DVA) and Department of Defense (DOD). Other federal agencies with significant health-related responsibilities include the Department of Agriculture (nutrition policy; meat and poultry inspection; food stamps), the Environmental Protection Agency, and the Department of Labor (administering the Occupational Safety and Health Act).

Department of Health and Human Services

In 2006, the mission of the Department of Health and Human Services (DHHS), as stated on its Web site (DHHS, 2006a), was: "[to protect] the health of all Americans and [provide] essential human services, especially for those who are least able to help themselves."

This stood in contrast with the rather more explicit mission for the department, as stated under the previous administration, which was to (DHHS, 1996)

> protect and promote the health, social and economic well-being of all Americans and in particular those least able to help themselves—children, the elderly, persons with disabilities, and the disadvantaged—by helping them and their families develop and maintain healthy, productive, and independent lives.

As of 2006, the DHHS had 11 major operating divisions (DHHS, 2006b). (Until March 31, 1995, the Social Security Administration had been part of the DHHS. On April 1, 1995, it became an independent agency.) All are concerned with health in one way or another. They are the eight units grouped under the United States Public Health Service (USPHS) as well as the other DHHS agencies: the Centers for Medicare and Medicaid Services (CMS, formerly the Health Care Financing Administration, HCFA), which administers the Medicare and Medicaid programs at the federal level, the Administration for Children and Families, the Administration on Aging, and the U.S. Public Health Service Commissioned Corps. CMS will be discussed in greater detail in chapter 6 because of its role in financing much of health care through the Medicare and Medicaid programs.

Since 1996, the Public Health Service has existed in name only. It is no longer an operating administrative entity. The position of assistant secretary for health, who formerly administered the USPHS as a single agency, was abolished. The directors of each of its former constituents, described briefly next, were left to report directly to the secretary of health and human services (J. M. McGinnis, personal communication, October 23, 1996).

Public Health Service

The Public Health Service (PHS) had a long and proud history, dating back to a 1798 act that created the Marine Hospital Service (Mustard, 1945, pp. 23–81; Schmeckebier, 1923, chapter 1; Stern, 1946, pp. 145–154). In 1878, Congress added foreign quarantine responsibilities to the work of the Marine Hospital Service. This led in 1889 to the development of a quasimilitary personnel system (the Commissioned Corps of the PHS). The corps was made up largely of career medical people, commanded (only symbolically in recent years) by the Surgeon General of the United States.

The PHS continued to gain responsibilities over time. Following the end of World War II, it grew rapidly, with the passage of the Hospital Survey and Construction (Hill-Burton) Act of 1946; the major expansion of the National Institutes of Health; the creation of the Communicable Disease Center in Atlanta (now the Centers for Disease Control and Prevention); and the development of drug abuse control, mental retardation, and mental health centers and comprehensive health planning activities, among others.

As of 2006, the seven former PHS divisions were the National Institutes of Health, the Food and Drug Administration, the Centers for Disease Control and Prevention, the Indian Health Service, the Health Resources and Services Administration, the Substance Abuse and Mental Health Services Administration, and the Agency for Health Care Research and Quality (DHHS, 2006b). Collectively, these agencies carry out a variety of functions: regulation, direct provision of personal and community health services, provision of financial support for a variety of health services through grants and contracts, direct biomedical research, and provision of the principal federal support of biomedical research in nongovernmental agencies.

Through its multiple institutes, such as the National Cancer Institute and the National Heart, Lung, and Blood Institute, the National Institutes of Health (NIH) is responsible for supporting and carrying out biomedical research. Its primary mission focuses on basic biomedical research at the organ-system, tissue, cellular, and subcellular levels. NIH has its own (intramural) research program on its campus in Bethesda, Maryland, and provides funds for research at many other institutions around the country through (extramural) grants and contracts. NIH also fosters research by supporting training, resource development, and construction.

The task of the Food and Drug Administration (FDA) is to protect the public against food, drug, and medical device and product hazards and to ensure drug potency and effectiveness. Thus, the FDA regulates prescription drugs and over-the-counter medications, biological products, and human blood and its derivatives. The focus is on the assurance of the efficacy and safety of a product before marketing and on the assurance of continuing quality after approval. Medical devices are regulated in a similar manner. Radiological equipment is also regulated, the goals being to control radiation exposure to the public as well as to ensure efficacy.

The regulatory programs of the FDA, especially those focusing on the efficacy and safety of drugs and medical devices, are sometimes controversial. Industry spokespeople maintain that the entry of useful drugs to the market is at times unnecessarily delayed by a lengthy and expensive approval process. Supporters of that process recall, for example, the thalidomide disaster. Nevertheless, in the mid-1990s, the FDA did manage to introduce internal reforms, significantly speeding up the drug review process (MacPherson, 1996).

There has been continued controversy over the FDA regulatory process through 2007. For example, in 2005, Senators Samuel Brownback (R-KS) and James Inhofe (R-OK) introduced the Access, Compassion, Care and Ethics for Seriously Ill Patients Act (S. 1956), which would make it easier for seriously ill patients to receive drugs that are not yet fully approved (GovTrack.US, 2006). In October 2006, Representative Edward Markey (D-MA) introduced H.R. 5252, the Fair Access to Clinical Trials Act, which was intended to address the problems of patient safety and validity of clinical trials results. "Representative Markey's introductory remarks in the Congressional Record state that the legislation would require researchers to enter their clinical trials into a Federal registry before starting them and report the results of the trials at the conclusion" (Office of Legislative Policy Analysis [OLPA], 2006). In 2005, Senators Charles Grassley (D-IO) and Christopher Dodd (D-CT) introduced the Food and Drug Administration Safety Act of 2005 (S. 930), which established the Center for Postmarket Drug Evaluation and Research to address the problems of adverse drug effects after a drug has gone to market (Library of Congress, 2006). As of the writing of this book, none of these bills had been passed.

The Centers for Disease Control and Prevention (CDC) is the national public health agency primarily responsible for prevention efforts. Its programs are aimed at preventing and controlling disease and personal injury, directing foreign and interstate quarantine operations, developing programs for health education and health promotion, improving the performance of clinical laboratories, and developing the standards necessary to ensure safe and healthful working conditions for all working people. Through the National Center for

Health Statistics, the CDC collects and publishes a variety of vital, health, and health services data. It maintains the nation's reference laboratories and supports laboratory training programs.

The Indian Health Service provides health care for about 1.6 million Native Americans and Alaska Natives who live on or near Indian reservations. Health services provided include hospital, ambulatory, preventive, and rehabilitative care and community sanitation. The Indian Health Service has a system of about 50 hospitals and more than 600 other (primarily outpatient) health facilities, as well as a network of providers working on contract.

The Health Resources and Services Administration (HRSA) runs the direct service programs of DHHS for "medically needy" persons, primarily through community and migrant health centers serving more than 14 million people at more than 3,700 sites; supports efforts to increase the number and diversity of health care professionals caring for underserved populations through, for example, the National Health Service Corps; and participates in the acquired immunodeficiency syndrome (AIDS) control program in a variety of ways.

The Substance Abuse and Mental Health Services Administration (SAMHSA) works to improve the quality and availability of substance abuse prevention, addiction treatment, and mental health service; conducts clinical and biomedical research in its own laboratories; provides funding to the states to support mental health services and substance abuse programs; funds extramural research, research training, and prevention programs through grants and contracts; monitors substance abuse; and supports innovative treatment and prevention projects nationwide.

The Agency for Healthcare Research and Quality (AHRQ) "supports research on health care systems, health care quality and cost issues, access to health care, and effectiveness of medical treatments. It provides evidence-based information on health care outcomes and quality of care" (DHHS, 2006b). It is designed to improve the quality of health care, reduce its cost, improve patients' safety, address medical errors, and broaden access to essential services.

Unfortunately, most of the agencies just mentioned have suffered severe cuts in their operating budgets under the Bush Administration, with concomitant reductions in their services.

Other Federal Departments

Many other federal departments have some health services responsibilities, as previously noted. Several are discussed here.

The Department of Veterans Affairs (DVA) provides many services to veterans (DVA, 2006a). After military service, the United States veteran becomes entitled to a remarkably broad range of health services through a health care subsystem, the precise equivalent of which is not found in any other nation in the world. This fact is doubtless related on the one hand to the lack of a national health insurance program for the general population and on the other to the political power of the veterans' organizations.

A veteran is defined as anyone who served 90 days or more in an armed service, but a veteran must have received an honorable or general discharge in order to be automatically eligible. The specific rules covering health care eligibility for the many classes of veterans are complex. They may be reviewed in detail on the DVA Web site. A financial means test for certain classes was introduced by the Bush Administration in 2003. The number of patients with service-connected disabilities treated in Veterans Administration hospitals has been dropping over time, although with the advent of the Iraq war it is now again on the increase.

The DVA owns the largest centrally directed hospital and clinic system in the United States (DVA, 2006b). In 2005,

> the DVA health care system included 154 medical centers, with at least one in each state, Puerto Rico and the District of Columbia. The DVA operates more than 1,300 sites of care, including 875 ambulatory care and community-based outpatient clinics, 136 nursing homes, 43 residential rehabilitation treatment programs, 206 Veterans Centers and 88 comprehensive home-care programs. DVA health care facilities provide a broad spectrum of medical, surgical and rehabilitative care. More than 5.3 million people received care in VA health care facilities in 2005. By the end of fiscal year 2005, 78 percent of all disabled and low-income veterans had enrolled with VA for health care; 65 percent of them were treated by VA. In 2005, VA inpatient facilities treated 587,000 patients. VA's outpatient clinics registered nearly 57.5 million visits.

There is a major shift under way from a primary focus on inpatient care to one on outpatient services, health promotion and disease prevention, and easier access to the system.

The Department of Defense (DOD) oversees the health services of the various branches of the military through the Military Health System. Each of the armed forces, the Army, Navy, Air Force, and Marines, has its own network of health facilities: hospitals, clinics, and field posts (Assistant Secretary of Defense, 1990, 1996, and the Web site). All DOD health personnel are members of the military, salaried according to their military ranks (without relation to the specific services they render). The same basic structure prevails in times of war or peace. Health promotion and disease prevention are emphasized and integrated with the delivery of treatment services.

Through both its own facilities and contracting arrangements with civilian providers, DOD provides health services to members of the armed forces, their dependents, surviving dependents of service people killed while on active duty, and military retirees and their dependents. Servicemen and -women are eligible for retirement benefits after a minimum of 20 years of service. The health services part of that package is paid in addition to the DVA benefits for which they may be eligible.

An unusual aspect of military medical departments is that they are charged not only with providing a full range of direct health services but also with providing for the environmental health and protection of their military communities. This unification of administrative responsibility for personal and community preventive and treatment services is rarely found elsewhere in the United States health care delivery system.

The Department of Agriculture (USDA) oversees (USDA, 2006) the Food Safety Inspection Service (FSIS); the Food and Nutrition Service (FNS), which includes the Women, Infants, and Children (WIC) nutritional program, school breakfast and lunch programs, and the Food Stamp program, which helps poor people to buy food; the Center for Nutrition Policy and Promotion (CNPP), which, in cooperation with the DHHS, periodically issues dietary guidelines for the nation; the Animal and Plant Health Inspection Service (APHIS); and the Rural Utilities Service (RUS), which includes telemedicine programs. The USDA conducts research on the nutrient composition of foods, food consumption, and nutritional requirements. The FSIS and APHIS are operated in cooperation with the FDA.

Focusing on preventive activities in the workplace, the Occupational Safety and Health Administration (OSHA) is part of the Department of Labor. OSHA uses criteria developed by the National Institute for Occupational Safety and Health (NIOSH), part of the CDC, to set national standards for occupational safety and health (Brock & Tyson, 1985). Since OSHA was created in 1971, while U.S. employment has doubled, workplace fatalities have been cut by more than 60%, and occupational injury and illness rates have declined by 40%.

The major responsibilities of OSHA are to develop workplace health and safety standards, to enforce and gain compliance with the standards, to engage in education and training, to help the states in occupational safety and health matters (26 states have their own occupational safety and health programs), and to aid business in meeting OSHA requirements (OSHA, 2007). There are a few industries that are not covered by OSHA. For example, the health and safety of miners is the province of the Bureau of Mines in the Department of the Interior.

The Environmental Protection Agency (EPA) is an independent unit of the Federal government created during the Nixon Administration that was elevated to cabinet-level status during the Clinton administration (EPA, 2006). It has major responsibilities for the control of air and water quality and pollution, solid waste disposal, pesticide contamination, radiation hazards, and toxic substances (EPA, 1988, 1989, and the Web site). The EPA conducts research on air, water, and land pollution control technology and the effects of pollution on humans, develops criteria and issues national standards for pollutants, and enforces compliance with these standards.

STATE GOVERNMENTS' ROLE IN HEALTH SERVICES

Introduction

As at the federal level, at the state level many different agencies are involved in health services. For example, in most states, departments other than the health department provide two of the important health-related functions managed primarily by the states: mental illness treatment services and Medicaid operations. Furthermore, the licensing authority for health personnel sometimes resides in the education department, vocational rehabilitation is often found in a special agency, occupational health in the labor department, environmental protection in a separate department, and school health with local boards of education. Most states also have a board of health, usually appointed by the governor, which has varying administrative, policy, and advisory functions.

In the 1920s, political struggles with private practitioners led to a limitation of service responsibilities for both the state and local health departments. Haven Emerson, a leading public health official of the time, defined the "Basic Six" services appropriate for departments of public health: vital statistics, public health laboratories, communicable disease control, environmental sanitation, maternal and child health, and public health education (Wilson & Neuhauser, 1976, p. 204).

Some time ago, the Association of State and Territorial Health Officials (ASTHO) defined a state health program as

> [a] set of identifiable services organized to solve health related problems or to meet specific health or health related needs, provided to or on behalf of the public, by or under the direction of an organizational entity in a State Health Agency [SHA], and for which reasonably accurate estimates of expenditures can be made. (ASTHO, 1980, p. vii)

Using this definition, ASTHO identified six program areas for SHAs: "personal health, environmental health, health resources, laboratory, general administration and services, and funds to local health departments not allocated to program areas" (ASTHO, 1980, p. 9). Although the number has stayed the same, in some states the content of the work has expanded well beyond that covered by the "Basic Six" (Dandoy, 1996). In 2007, the ASTHO General Policy (ASTHO, 2007) stated:

> Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy. Federal, state and local governmental agencies working with public and private entities comprise the nation's public health

> system. Collectively, the public health system works to prevent disease, injury and disability; protect against environmental hazards; promote physical and mental health; respond to disasters and emerging diseases; and ensure access to healthcare services. Within this broader public health system, governmental public health—a tripartite system composed of federal, state, and local health agencies—occupies an exceptional and fundamental role in assuring the public's health. Governmental public health is uniquely accountable to the public and their elected representatives for the responsible use of tax dollars with which it is entrusted.

Of note in this most recent ASTHO policy statement is the emphasis on evidence-based public health, that is, holding the public health system accountable for implementing sound practice and evidence-based methods that address public health problems effectively and efficiently.

Since World War II, as the health care delivery system has become vastly more complex, there have been an increasing number of public health and health services interests requiring protection. In response, governments have vastly expanded the responsibilities of both state and local departments of health and other health-related governmental agencies. Those responsibilities now include, for example, regulation and quality assurance for physicians, hospitals, other provider agencies and groups, including institutional licensure, planning (what there is of it), and ever more complex environmental protection functions and, of course, regulation of payers.

As noted earlier, it is interesting just how much government regulation of the health care system there is in the United States, well beyond that found in other countries. This is precisely because there is no national health system, so in order to provide some modicum of financial as well as health care quality protection to the public, the various players must be regulated. As also noted previously, state and local health-related activities outside the health departments have expanded as well.

Health Statistics

Among the oldest of public health functions is the collection and analysis of vital and health statistics. Data on births, deaths, marriages, and divorces (the "vital" statistics), and incidence of the several reportable (primarily infectious) diseases are collected by the local health authorities and forwarded to the state level. There they are codified and analyzed, often by various demographic characteristics such as age, gender, marital status, ethnicity, and geographic location. Each state then forwards its collected data to the National Center for Health Statistics of the Centers for Disease Control and Prevention for further analysis and publication.

Licensing

Licensing is a basic government function in health care. The licensing process for individual practitioners first establishes minimum standards for qualification. It then applies those standards to applicants to determine who may and who may not deliver what kinds of health services. Licensing of health care institutions sets minimum standards for each facility and their personnel as a group, applies the standards, and determines whether the institution may operate.

The licensing authority is one of the most significant of the health powers residing with the states. The manner in which it is used is a major determinant of the character of the health care delivery system. The medical licensing system is particularly significant in that regard. Because no one can practice medicine without a license, the system has given physicians tight control over the central product of the health care delivery system, medical services. By exercising this control, physicians have largely determined the structure of the health care delivery system: how it is organized, the types and functions of the institutions, and the powers of the several categories of personnel who work in it—until, that is, the advent of the MCOs, which took major control of many physicians' purse strings.

LOCAL GOVERNMENTS' ROLE IN HEALTH SERVICES

A local health department (LHD) is a unit of either state or local government focusing exclusively on a "substate" geographic area, usually a well-defined one considered by virtually any observer to be "local" in nature—a county, city, town, parish, or village. In the mid-1990s, there were about 2,900 local health departments throughout the United States, employing about 192,000 people, of whom 145,000 were full-time workers, providing health services of one kind or another to about 40 million people at an annual cost of about $8 billion (Rawding & Wasserman, 1996). A 2006 link to descriptions of local health departments nationally, as well as to descriptions of most of the major units, boards, and associations in health care, may be found at http://healthguideusa.org/local_health_departments.htm.

The activities of most LHDs are limited for the most part to some version of the original "Basic Six" (see earlier discussion), although in recent years some have also become involved in the direct delivery of ambulatory services to the poor. Following the state and federal models, certain local health services are provided by various agencies other than health departments. For example, cities and counties are likely to place their hospitals for the poor, their mental health services, and their environmental protection services, including water supply, sanitary sewage disposal, and solid waste disposal, each under separate agencies.

Commonly, LHDs provide one or more of the following services: immunization, environmental surveillance, tuberculosis control, maternal and child health care, school health services, venereal disease control, chronic disease control, home care, family planning, ambulatory care, and health code enforcement. Thus, the LHDs, in cooperation with SHAs and other state agencies, particularly in environmental health, are the backbone of the system for providing public health and preventive services to the people.

PROBLEMS IN PUBLIC HEALTH

State and local public health services, and indeed federal services, face many problems. The current state of affairs is still best summarized by the Committee on the Future of Public Health, which published its report in 1988 (Institute of Medicine, 1988):

> Many of the major improvements in the health of the American people have been accomplished through public health measures.... But the public has come to take the success of public health for granted.... [T]his nation has lost sight of its public health goals and has allowed the system of public health activities to fall into disarray. Public health is what we, as a society, do collectively to assure the conditions in which people can be healthy.... [M]any problems demonstrate the need to protect the nation's health through effective, organized, and sustained effort by the public sector.... The current state of our abilities for effective public health action ... is cause for national concern.... [W]e have slackened our public health vigilance nationally, and the health of the public is unnecessarily threatened as a result.... Successes as great as those of the past are still possible, but not without public concern and concerted action to restore America's public health capacity. This [report] envisions the future of public health, analyzes the current situation and how it developed, and presents a plan of action that will, in the committee's judgment, provide a solid foundation for a strong public health capability throughout the nation. (pp. 1–2)

The committee's report is commended to those readers who are concerned with the future of public health in the United States. These observations are certainly still valid. If anything, the situation has gotten worse, as witnessed by the disorganized response to the 2001 anthrax outbreak.

CONCLUSIONS

Although government is heavily involved in health and health care in the United States, United States politics and the United States economic system significantly limit the degree of that involvement. Government provides the legal underpinning for the system through the licensing laws. It regulates the financial workings of the system and its quality of care. It also regulates the causes of potential environmental and occupational hazardous exposures and the possible responses to them. In addition, government is a direct financier and a direct provider of service. It is preeminent in community health services and plays an important role in supporting health sciences education and research.

Most health care providers of both the individual and corporate variety recognize (often grudgingly) the reality that government is already heavily involved in the health care system. As noted, they welcome participation in certain critical areas: licensing; care of the mentally ill, the tubercular, and the poor; and community health services. But it is likely that the questions about the proper role of government in health for our country today, summarized so well by Dr. Remington at the beginning of this chapter, cannot be fruitfully resolved until the place and the power of the private health services provider sector in the health care delivery system as a whole are redefined.

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Chapter 6

Financing

INTRODUCTION

Health care is like no other sector of the economy. In his seminal 1963 article, "Uncertainty and the Welfare Economics of Medical Care," Kenneth Arrow identified these differences as uncertainty, asymmetries of information, and nonmarketability of risks inherent in medicine and medical practice. Even after a millennium of observation and study, our knowledge about the human body, disease, and medicine is very much incomplete. In addition, whereas the physician nearly always has more medical knowledge, patients generally know more about their own history so that there is usually a serious information asymmetry between patient and provider. Furthermore, patient behavior is guided by perception of risk. For example, moral hazard is the change in an individual's behavior that results from having insurance coverage, which modifies the costs of misfortune. Social scientists predict that people make less effort to avoid misfortune when they are insured. If an accident costs a person $2,000 but insurance pays $1,500, the insured person has less incentive to avoid the accident than if the insurance paid only $500.

Financing health care is a tension among the ethics and values we place on human life, the asymmetries of information, and uncertainty about care wrapped in nonmarketable risks. The implication is that the health care market would collapse if entirely governed by market forces, even though the health care sector exists within a general market economy. That is, at some level, health care competes for resources (e.g., workers, supporting goods and services) against the production of food, the construction of homes, the creation of movies, and the seemingly infinite number of other goods and services that a nation of 300 million people and associated businesses consume. At some level, providing resources for an additional surgeon to perform cardiac surgeries means that fewer houses can be constructed or that the quality or quantity of food produced will be diminished. Within the health care sector itself, tradeoffs are also made: Money spent on an MRI machine is money not spent on additional doctors, money spent on research is money not spent on providing care, and money spent researching one disease is money not spent on another. Thus, financing health care in the United States is a complex matter of workarounds, redundancies, and contradictions. Furthermore, because the United States lacks a single national health care payment system, just how the money is paid to the providers of health care has become very complicated (Igelhart, 1999a).

This chapter describes the basics of health care financing and the system that handles its functions: how much money is spent on health care in the United States, where the money comes from, what the money is spent on, and how the money is paid to providers.

Throughout this chapter, please refer to Table 6.1, which displays total national health expenditures, as well as per capita amounts and percentage of distribution by source of funds, for the major sources of funds in selected years from 1960 to 2005 (Centers for Medicare and Medicaid Services [CMS], 2007a, Table 1). Also, Table 6.2 presents national health expenditures aggregate amounts and average annual percent of change by type of expenditure for 1960-2005 (CMS, 2007a, Table 2). Table 6.3 displays national health expenditures, by source of funds and type of expenditure for 2000–2005 (CMS, 2007b, Table 3). Tables 6.1, 6.2, and 6.3 are at the end of the chapter.

HOW MUCH IS SPENT

Thus far, the United States has increased the rate of health care spending every year, at least since 1960. In both absolute and relative terms, national health expenditures have grown considerably over the years (see Table 6.1). Between 1980 and 2005, national health care payments sextupled in current dollars. In 1980 health care expenditures accounted for only 9.1% of the GDP, in contrast to 16.0% of the GDP in 2005. During the 1980s, the annual rate of increase in health care expenditures was constantly in the double-digit range, even when inflation and the GDP growth rates were not. Why this happened is a matter of much controversy.

Starting in the 1990s, with the advent of managed care and its downward pressure on both physician and hospital usage, a brake was put on health care cost increases, at least for the time being: the rates of increase from 1970 through 1990 had been over 10% per year (see Table 6.1). By 1993, the rate of increase had fallen to 8.5%, and from 1997 through 1998 it was about 6%. In 1999, the rate of increase began an upward trend, going from 6.2% to 9.1% in 2002. In 2003 there was another period of decline, with the rate of increase going from 8.1% in 2003 to 6.9% in 2005.

In 2003, health care spending accounted for 15% of the GDP. That figure is about 36% higher than the percentage of the GDP spent by the country with the next highest spending rate—Germany (U.S. Census Bureau, 2005, Table 1323). Germany has a comprehensive national health insurance program. In fact, it is the oldest such program in the world (see chapter 9). National health expenditures accounted for 16% of the Gross Domestic Product (GDP) in 2004 and 2005 (see Table 6.1).[1] Only when housing, household operation, and residential investment (not a common grouping) are combined into a supercategory (i.e., "Shelter") is there any larger spending category (Bureau of Economic Analysis, 2006). In 2004, 13.5 million people were employed in health care—13.1 million were wage and salary workers and about 411,000 were self-employed (Bureau of Labor Statistics, 2006).

In 1980, health care expenditures totaled about $254 billion, an increase of 13% over the previous year (see Table 6.1). About 85% of total expenditures went for personal health care (see Table 6.2). The balance was paid for research, facilities construction, program administration, private health insurance administration, and public health services. In 1990, just 10 years later, health care payments totaled about $714 billion, an increase of 11% over the previous year, and about 2.8 times higher than total expenditures in 1980. Again, personal health care accounted for 85% of spending (see Table 6.2). In 2005, health care payments totaled about $1.99 trillion, an increase of about 7% over the previous year, and about 2.8 times higher than the total in 1990 (see Table 6.1). Changing little since 1980, about 84% of total expenditures went for personal health care (see Table 6.2). As in previous years, the balance was paid for research, facilities construction, program administration, private health insurance administration and profits, and public health services.

Regardless of whether health care cost inflation will outstrip the general inflation rate by a lot or a little, using fairly conservative estimates, Heffler and colleagues came to some rather startling conclusions. They projected expenditures of close to $2.2 trillion, 16.1% of the GDP, in 2007, and more than $2.8 trillion, 17% of the GDP, in 2011 (Heffler et al., 2002).

A considerable part of the constant upward trend in health care spending in the United States has been caused by factors other than simple utilization, such as the ever-intensifying use of expensive technology-based diagnostic and procedural interventions, especially at the beginning and the end of life (Franks,

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[1] This category does not include public health, government administrative costs for Medicare, and health-related construction and other infrastructure investments such as hospital construction and renovation. Also, like all elements of the GDP, unpaid work is not counted. This is particularly significant in health care because most medical symptoms are self-diagnosed and treated (Dean, 1981). Additionally, it is very common for people to receive care from family and loved ones in the course of mild illness. When people stay home from work because of illness, the GDP is reduced. On the other hand, if those same people were taken care of by a paid caregiver, the GDP would increase.

Clancy, & Nutting, 1992; Meier & Morrison, 2002). Thus, it remains to be seen how long the increase in expenditure rate will remain at a relatively modest level (although still above the general rate of inflation), or whether it will return to its previously astronomical (double-digit) levels, as in the 1970s and 1980s.

WHERE THE MONEY COMES FROM, WITHIN THE SYSTEM

In the United States, health care is paid by some combination of the patient, the provider, and a third-party payer. Money paid directly by the patient for health care costs is referred to as "out-of-pocket." *Charity care* and *forgiven debts* are the terms providers use when they have borne the cost of providing care. Anyone responsible for payment of a health care cost other than the patient (or the patient's family) or the provider is a third-party payer. Third-party payers include the patient's or their relative's employer, private insurance or managed-care organization (MCO) engaged by the patient or another party, charity organizations, and federal, state, and local governments. In many cases, several of these parties—patient, provider, and third-party payers—come together to pay a single bill. To use a typical example, a child might visit a pediatrician who would then receive a small "copay" from the mother ("out-of-pocket") during the visit. Then the pediatrician's office would bill a private insurance firm (perhaps an MCO contracted by the father's employer; see chapter 8 for more details), which would pay some or the remainder of the bill. Very complicated relationships can enjoin three or more payers.

In the United States, payers are generally categorized as private or public. Within the private sector, private health insurance companies and out-of-pocket expenditures are primary. Within the public sector, federal, state, and local governments all provide funding for health care. The public sector may act as a provider of services or as a third-party payer. For example, some health care programs are operated and paid for directly by government: the federal Department of Veterans Affairs health care system, the states' mental hospitals, and public general hospitals operated by local governments. These are all supported mainly by tax revenues. On the other hand, the Medicare program acts as a third-party payer in that it does not provide services, but only the money to pay for health services supplied by hospitals, physicians, and others.

Traditionally, for many patients, health care has been provided under a direct, private (usually unwritten) contract between themselves and the provider of care. But that care is usually paid for by a third-party payer as defined previously. This system has been further complicated by the development of managed care. Patient care is still paid for by a third party, but the patient now has a written contract with the MCO, not the physician, describing in detail what care he or she will be entitled to under what circumstances, delivered by whom, in return for the payment made to the MCO, usually by the patient's employer. This written contract with the payer replaces the old unwritten contract with the provider. Among other things, this change in contract type has had a major impact on just who is ultimately in charge of patient care decisions (see chapter 8).

Private Health Insurance[2]

The history of private health insurers and the rise of managed care is discussed in more detail in Chapter 8, whereas the current and historical financial involvement of the private health insurers will be briefly examined here. The salient feature of private insurance in the United States is that most people obtain it through their employer (or spouse's or parent's employer). One can almost say that employers (and employees, through their contributions to health insurance premiums) are the true payers in this case and that private insurance companies are the administrators of payments. Outside of employer-sponsored plans, private health insurance can be difficult to obtain because of the inherent problems of moral hazard and asymmetries of information discussed earlier. In the state of New York, for example, insurance purchased outside of employer (or other group) sponsored plans can cost as much as $3,000 per month for a family even though the benefits are not more generous than a typical employer plan, which would cost far less to the same family.

About 69% of Americans have some type of private health insurance coverage (U.S. Census Bureau, 2005, Table 142). This is a decrease from 73% in 1990. Generally speaking, insurance companies are either for-profit or nonprofit. Blue Cross/Blue Shield (BC/BS) has been a major private health insurer since 1929. According to the Blue Cross Blue Shield Association (BCBS, 2007):

> Over the past 75 years, we've grown from our humble beginnings assuring hospital care to Texas teachers and providing physician care to lumber and mine workers in the Pacific Northwest. Now we're the largest health benefits provider in America, serving more than 98 million people in all regions of the country.

Originally, BC/BS was entirely nonprofit, although a move to convert to for-profit status began for some BC/BS companies in the mid-1990s (Cunningham & Sherlock, 2002). The commercial insurance companies such as Metropolitan Life and Aetna, either independently or in partnership with an MCO, have always operated on a for-profit basis only. Some of their surplus of income over expenditures is paid to the owners of the company as profit.

The private sector—through health insurance companies, out-of-pocket payments, and other sources—paid about 55% of health care expenditures in 2005, down from about 60% in 1990 (see Table 6.1). Private health insurance companies alone paid about 35% of national health care expenditures in 2005,

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[2] A comprehensive overview of private health insurance is Gary Claxton's "How Private Insurance Works: A Primer," available from the Kaiser Family Foundation's Web site, www.kff.org.

of which about 86% was for personal health care services including hospitalization, physician services, and prescription drugs (see Table 6.3). The remaining 14% was for administrative costs. In 2000, private health insurance companies paid slightly less of national health care expenditures (34%), of which 88% was for personal health care services and 12% for administrative costs.

Out-of-Pocket Expenditures

Out-of-pocket expenditures include direct payments to providers for noninsured services, extra payments to providers of insurance-covered or managed care–covered services that bill at an amount higher than the insurance/managed care company pays for that service, and deductibles and coinsurance on health insurance/managed care benefits.

A deductible is a flat amount, for example, $200 per individual or $500 per family, that a health care beneficiary must pay out-of-pocket before the insurance company will begin paying for any health services received during some time period (usually a calendar year). Coinsurance is a share, for example, 20%, of the payment for each service covered by insurance for which the beneficiary is responsible.

Under managed care, beneficiaries receiving health services from a provider of their choice within the plan (a so-called point-of-service arrangement; see chapter 8) or out-of-plan entirely will usually pay for some or all of the excess charges out-of-pocket. Today, however, there are an increasing number of "luxury" MCO plans, available at an extra cost above that normally borne by the beneficiary's employer. They provide for unfettered patient choice of physician, without prior authorization and without additional payment beyond the usual deductible or coinsurance. Obviously, only higher paid employees can take advantage of such plans.

Out-of-pocket expenditures accounted for about 14.8% of national health care expenditures in 2005. This was about the same as in 2000. Reflecting the different levels of third-party coverage for different health services, out-of-pocket payments accounted for about 3% of hospital expenditures, about 10% of physicians' fees, and over 25% of the costs of prescription drugs in 2005 (see Table 6.3).

Government Spending

Government spending has accounted for an increasing proportion of the health care dollar since 1960 (see Table 6.1). At that time, 5 years before Congress enacted the Medicare and Medicaid programs, government's share was about 25% of the total. By 1970, it was 37.6%. It reached 41.9% in 1980. In 1993, the government's share of health care expenditures reached about 44% and has stayed above that level ever since (45.4% in 2005). In 2005, government entities covered close to 57% of hospital care and almost 66% of nursing home and home health care costs (see Table 6.3).

Medicare[3]

The first national social insurance program to finance medical care in the United States was established by Congress in 1965 as part of President Lyndon Johnson's "Great Society" program. Called Medicare, it is authorized by Title XVIII of the Social Security Act (Hoffman et al., 2001; Igelhart, 1999c; Moon, 2001). Originally, it provided payment for some health services for persons 65 years of age and older who were eligible for Social Security or Railroad Retirement benefits, whether they took them or not. In 1973, its coverage was broadened to include those permanently disabled workers and their dependents who were eligible for old age, survivors', and disability insurance under Social Security, as well as persons with end-stage renal disease.

Medicare has four parts: hospital insurance (Part A), which also covers skilled nursing facility care on a very limited basis, as well as hospice and home health care; supplementary medical insurance (Part B), which covers physician and certain other health professional services, hospital outpatient care, and certain other services; Medicare+Choice (Part C), which permits Medicare beneficiaries to enroll in MCOs; and the Medicare Prescription Drug Coverage (Part D), which was designed to lower the costs of prescription medication for Medicare beneficiaries. Medicare Part A is funded primarily from Social Security taxes, whereas about two thirds of Part B is funded from general revenues, with the balance coming from enrollee premium payments. Medicare prescription drug coverage is funded through premiums.

Medicare is operated by the Centers for Medicare and Medicaid Services (CMS, formerly called the Health Care Financing Administration) of the U.S. Department of Health and Human Services. Its administrative costs are remarkably low compared to those of the private health insurance sector, ranging from 1% to 2% (Hoffman, Klees, & Curtis, 2000, p. 11).

Medicare Part D, which was part of the Medicare Prescription Drug Improvement and Modernization Act (MMA) of 2003, began on January 1, 2006. Part D provides eligible patients with prescription drug benefits, designed to reduce the cost of medications. Coverage is provided through private entities, both stand-alone prescription drug plans (PDPs) and the more comprehensive Medicare Advantage (MA) plans. The financial risk of the program is shared by both private entities and the government.

Enrollment into Medicare Part D is voluntary for those who did not previously receive drug coverage through Medicaid. The population subset that

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[3] An ongoing series of reports on and guides to the Medicare system is available from Medpac, the Medicare Payment Advisory Commission to the U.S. Congress, at www.medpac.gov.

is eligible for both Medicaid and Medicare is known as "dual eligibles." Before 2006, their drug coverage was provided by the Medicaid program. In the beginning, beneficiaries had the option to choose which plan best suited their needs. Later, they were automatically enrolled in what the government decided was the appropriate plan.

For those not covered under dual-eligible status, there is a monthly premium, estimated to be $35 in 2006. This premium is in addition to the annual premium for Medicare Part B (about $420). Under the plan's current structure, there is a $250 deductible to be paid by the individual. After the deductible is paid, Medicare pays 75% of prescription drug costs, up to $2,250 in total drug costs. Between $2,250 and $5,100, Medicare Part D provides no coverage. This gap in coverage is known as the "donut hole." After the gap, Medicare pays 95% of drug costs. In every category, the individual is expected to pay the remaining portion of costs, either out-of-pocket or through additional private insurance coverage. The deductibles, premiums, and limits will increase annually (Burns, Glaun, & Lipschutz, 2005).

Most Medicare beneficiaries use providers of their choice. Physicians are paid on a fee-for-service basis, according to a fee schedule constructed on the so-called resource-based relative value system (RBRVS). In the mid-1980s, it replaced the old inflation-stimulating "usual and customary fee" system. Because the "usual and customary fees" were set by the physicians themselves, the inflation factor was built in.

Unfortunately, as payments to physicians began to decline in the early 2000s as a result of the federal Balanced Budget Amendment (BBA) of 1998, an increasing number of physicians refused to accept Medicare fees as payment in full. In this instance, the physician sees only those Medicare patients who agree to accept responsibility for the total charges and then submit the bill to the Medicare program to obtain whatever reimbursement they can.

Hospitals are reimbursed on an episode-of-care basis, the amount of payment for each case determined by a formula based on a fiscal construct called the Diagnosis-Related Group (DRG), one form of the prospective payment system (PPS). Managed care was introduced into the Medicare program in the mid-1990s (Himmelstein & Woolhandler, 2001, chapter 5; Zarabozo, Taylor, & Hicks, 1996). However, MCOs claimed that Medicare reimbursement levels were too low (Moon, 2001), and they dumped almost 1 million beneficiaries on January 1, 2001, as a result.

In 2005, total Medicare expenditures were $331.4 billion for personal health care expenditures (CMS, 2007a, Table 5), covering some of the health care costs for about 42 million enrollees, up from $146.2 billion for almost 37 million beneficiaries in 1993. In 1998, although about 75% of Medicare enrollees incurred some expenses, about 50% of the total paid for care went to only 6% of beneficiaries who received care (Hoffman et al., 2001, pp. 32, 93). Medicare financed 32% of all spending for hospital care and 22% of physician services costs (Hoffman et al., 2001, Tables 2 and 3). As noted by Meier and Morrison (2002), “In 2002, 50 percent of deaths of Medicare beneficiaries occurred in hospitals, often after stays in intensive care units, visits to multiple physicians in the months before death, and enormous expenditures for treatments intended to prolong life” (p. 1087).

Looking toward the mid-21st century, the Medicare program is seriously in need of rescue and reform (Igelhart, 1999c; Moon, 2001). The “baby boomers”—those people born in the immediate post–World War II era—will become eligible for Medicare starting in 2010, whereas the number of working people available to finance the system through the payroll tax that presently supports it will, in relative terms, continue to decline.

Though not yet widely recognized, any permanent rescue of Medicare will require some kind of national health care system that covers everyone. Medicare covers that part of the population that requires the most medical services (i.e., the elderly). But it is financed narrowly by the limited payroll tax. It is hard to see how it will be possible for the program to avoid bankruptcy with the expanding elderly population and the shrinking financing base that is projected in this century. However, as the fight over the Clinton health plan in 1993–1994 showed (see chapter 9), a national financing system covering all Americans equally and the regulatory controls that would come with it are something that many private stakeholders in the U.S. health care system continue to fight hard to avoid.

Medicaid

Along with Medicare, Congress created the Medicaid program in 1965, authorized by Title XIX of the Social Security Act (Hoffman et al., 2001; Igelhart, 1999b; Rosenbaum, 2002). Medicaid is a needs-based program that provides coverage for some health services for some of the poor on a “means-tested” basis. Therefore, to receive Medicaid coverage, unlike Medicare coverage, a person must apply for it. Also, in contrast to Medicare, the Medicaid program then applies a series of income-level determinations to each applicant, thus “testing their means.” Only those persons whose incomes and other assets fall below a certain level as specified by law or regulation (varying from state to state) are declared eligible for coverage.

Medicaid is supported by federal and state tax levy funds and is administered by the states. Each state program is distinct and unique. Therefore, benefits and coverage vary widely from state to state. Like Medicare, Medicaid generally reimburses providers on a fee-for-service/episode-of-care basis, although in the mid-1990s managed care was introduced into the Medicaid program, as it was to Medicare.

Title XIX, as amended, requires a state to provide a set of 14 services in order to be eligible to receive federal funds for its program, with a very complicated set of requirements governing just who may be considered eligible for Medicaid and who may not. The 1996 Welfare Reform Act has had a major impact on Medicaid because of its elimination of the Aid to Families with Dependent Children (AFDC) program, since the time of the New Deal the principal welfare program in the United States. As of this writing, the overall nature of that impact remains far from certain.

A combination of low income eligibility requirements and low fees paid to providers (many of whom have therefore chosen not to participate) has led to very limited coverage in many states. A few of the wealthier states now provide Medicaid coverage for the *medically indigent*. These are persons in an income range deemed not to be low enough to qualify them for income, but low enough to make paying for health services a heavy burden.

Some states (e.g., New York) allow elderly persons with assets to divest themselves of those assets by passing them on to their children over a period of time. They can thus artificially “spend down” (by this divestiture to family members) to the stipulated Medicaid-eligible income and assets levels without actually spending the money to pay for care. Of course, this means that the taxpayers of the state pick up the costs of care of a person otherwise ineligible for Medicaid.

It is interesting to note that in 2003, whereas 49% of Medicaid beneficiaries were children and 26% were nonelderly, nondisabled adults (most of them the mothers of the covered children), about 70% of all Medicaid expenditures were for the benefit of the aged (28%) and the disabled (42%) (Kaiser Family Foundation, 2006). Eligible elderly accounted for 11% of Medicaid beneficiaries, and eligible disabled accounted for 14%. In 2003, Medicaid covered over 17% of all personal health care spending, with 55 million people receiving some kind of Medicaid coverage.

State Children’s Health Insurance Program

Created with the Clinton Administration’s Balanced Budget Act (BBA) of 1997, the State Children’s Health Insurance Program (SCHIP) provides health coverage for uninsured children who are not eligible for Medicaid. It is jointly financed by the federal and state governments and administered by the states. Within broad federal guidelines, each state determines the design of its program, eligibility groups, benefit packages, payment levels for coverage, and administrative and operating procedures. SCHIP provides a capped amount of funds to states on a matching basis for federal fiscal years (FY) 1998 through 2007. Federal payments to states are based on state expenditures under approved plans.

Other Government Programs

Among other major government health programs are, at the federal level, those offered through the Department of Defense, the Department of Veterans Affairs, and the National Institutes of Health (the federal government’s major biomedical research arm); at the state level, the state public health and mental hospital services; and, at the local level, the local public general hospitals and local public health services (see also chapter 5).

These government programs are paid for primarily with broad-based tax levy funds. Together, they consume a relatively small proportion of the national health care budget. For example, in 1999, national expenditures on public health services accounted for about 2.8% of the total (see Table 6.2). By way of comparison, payments for program administration and the net cost of private insurance (administration and profit) together were about 2.5 times higher than expenditures for public health services.

WHERE THE MONEY GOES

National health expenditures (NHE) are calculated by the Centers for Medicare and Medicaid Services (CMS), Office of the Actuary, National Health Statistics Group (CMS, 2007a). NHE comprise the following two major categories: (1) Health Services and Supplies; and (2) Investments, a category made up of Research and Structures and Equipment. Most expenditures fall within Health Services and Supplies, and most of these are for personal health care (hospital care; physician and other professional services including dentistry; nursing home and home health care; and medical products including prescription drugs and durable medical equipment). Complementary and alternative medicine (CAM) is included under Other Professional and Personal Health Care Services, and vitamins, supplements, and minerals are included under Other Medical Products. The other two categories within Health Services and Supplies are: (1) Government Administration and Net Cost of Private Health Insurance; and (2) Government Public Health Activities. NHE do not include a much broader definition of health care that might include expenditures for dieting and weight loss, health and fitness clubs, sporting goods and related recreation, and healthy foods (see Figure 6.1).

How does the United States spend its health care dollar? In 2005, 93.6% of NHE were for Health Services and Supplies; investment accounted for the balance of 6.4%. Of the Health Services and Supplies, 89.3% were for Personal Health Care; 7.2% for Government Administration and Net Cost of Private Health Insurance; and 2.8% for Government Public Health Activities. Of the major groups within Personal Health Care, hospital care accounted for 30.7% of the NHE, physician and clinical services for 21.2%, nursing home and home health care accounted for 8.5%; prescription drugs accounted for 10.1%; and durable medical equipment for 1.2% (see Table 6.2 and Figure 6.1).

How are NHE allocated by health condition and characteristics of patients? Through its Medical Expenditure Panel Survey (MEPS) program, the Agency for Healthcare Research and Quality (AHRQ) maintains the most complete

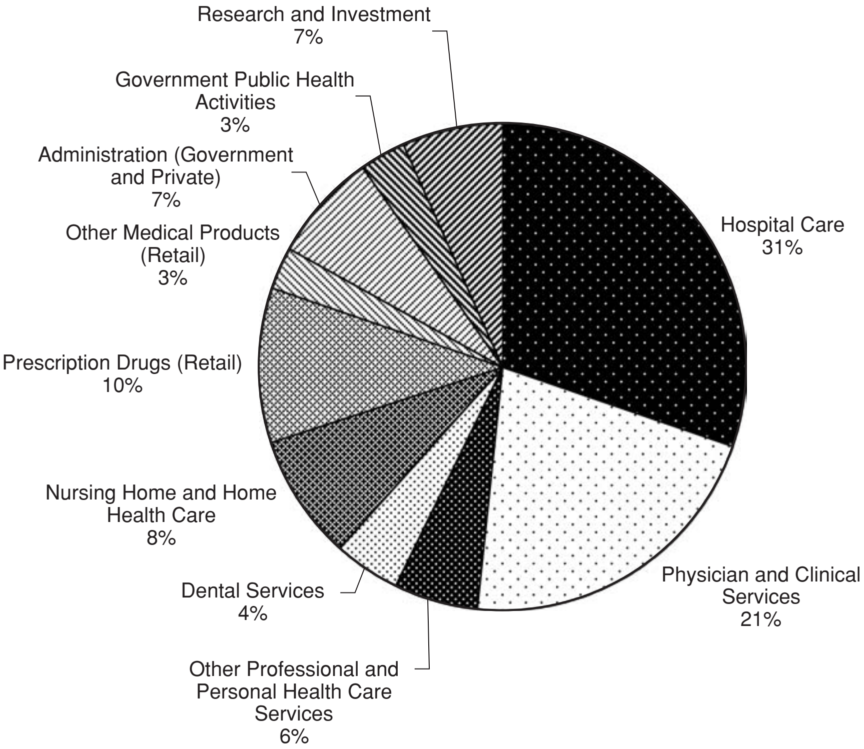

FIGURE 6.1 National health expenditures by type of expenditure, 2005

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

source of data on the cost and use of health care and health insurance coverage.[4] Through large-scale surveys of families and individuals, their medical providers (doctors, hospitals, pharmacies, etc.), and employers across the United States,

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[4] The expenditures included in the MEPS survey are a subset of those included in the Personal Health Care component of the NHE. Although the sample of U.S. civilian noninstitutionalized population surveyed in the Household Component of MEPS represents 98% of the U.S. population, the nature of the population excluded from the MEPS sample is such that they are likely to have very different health care expenditures. In addition, the NHE includes expenditures on nonpatient services (gift shops, cafeterias, etc.) as well as other expenditures not counted by MEPS (e.g., nonprescription nondurable goods and CAM services). In 1996, the expenditures of MEPS Household Component made up about 60% of the Personal Health Care component of National Health Expenditures, and in 2003, MEPS accounted for $895.5 billion or slightly less than 62% of the estimated $1,446 billion spent on Personal Health Care. The author strongly recommends that anyone planning to use either NHE or MEPS data for analysis or decision making should supplement their understanding of the inclusions, exclusions, and limitations of such data with the article "Reconciling Medical Expenditure Estimates From the MEPS and the NHA," by T. M. Selden and colleagues (Selden et al., 2001).

MEPS collects data on the specific health services that Americans use, how frequently they use them, the cost of these services, and how they are paid for, as well as data on the cost, scope, and breadth of health insurance held by and available to U.S. workers (Agency for Healthcare Research and Quality [AHRQ], 2006).

Ranked by expenditure, in 2003 the top 12 diseases or conditions accounted for 55.7% of MEPS-captured spending (Center for Financing, Access, and Cost Trends, 2005). It should be emphasized that different (e.g., broader or narrower) categorizations of disease may produce different rankings (see Figure 6.2).

Figure 6.3 charts expenditures by age and sex in 2003 and confirms what many would expect: older people use more health care than younger people, on average. For men, the expenditures jump suddenly between the ages of 18 and 21 and then fall until after age 40. Expenditures for women jump after age 21 but then plateau until age 50, when they begin to rapidly rise along with those of men.

Figure 6.4 indicates that health care spending is disproportionately distributed in the population. In 2002, half the population accounted for only 3% of total health care spending. Five percent of people accounted for 49% of spending and 1% accounted for 22% of expenditures (Stanton & Rutherford, 2006). Or, to put it another way, for every $100 spent by someone in the bottom half, someone in the top 1% spent more than $35,000.

Roughly a quarter of this small group remained in the top 1% of health care expenditures in 2003, and clearly, 75% did not.[5] But of the people who were in the top half of expenditures in 2002, most remained in the top half the following year (see Figure 6.5). Mirroring this, most of the people who were in the bottom half of expenditures in 2002 remained in the bottom half the following year (see Figure 6.5). The implication is that there is both a strong chronic and episodic utilization of health care. High or low use in one year is a strong predictor of similar use in the next. However, even over short periods of time, a sizable segment of the population moves between percentiles.

Although numerous studies advise of the relatively significant resources spent during the last year of life—and even more during the last 6 months—Ezekiel J. Emanuel and Linda L. Emanuel (1994) argue:

> Cost savings due to changes in practice at the end of life are not likely to be substantial. The amount that might be saved by reducing the use of aggressive life-sustaining interventions for dying patients is at most 3.3 percent of total national health care expenditures.

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[5] The MEPS data also indicate that of the people who dropped out of the top percentiles of 2002, only a small percentage can be explained by death, institutionalization, or ineligibility in the following year (Cohen & Yu, 2006).

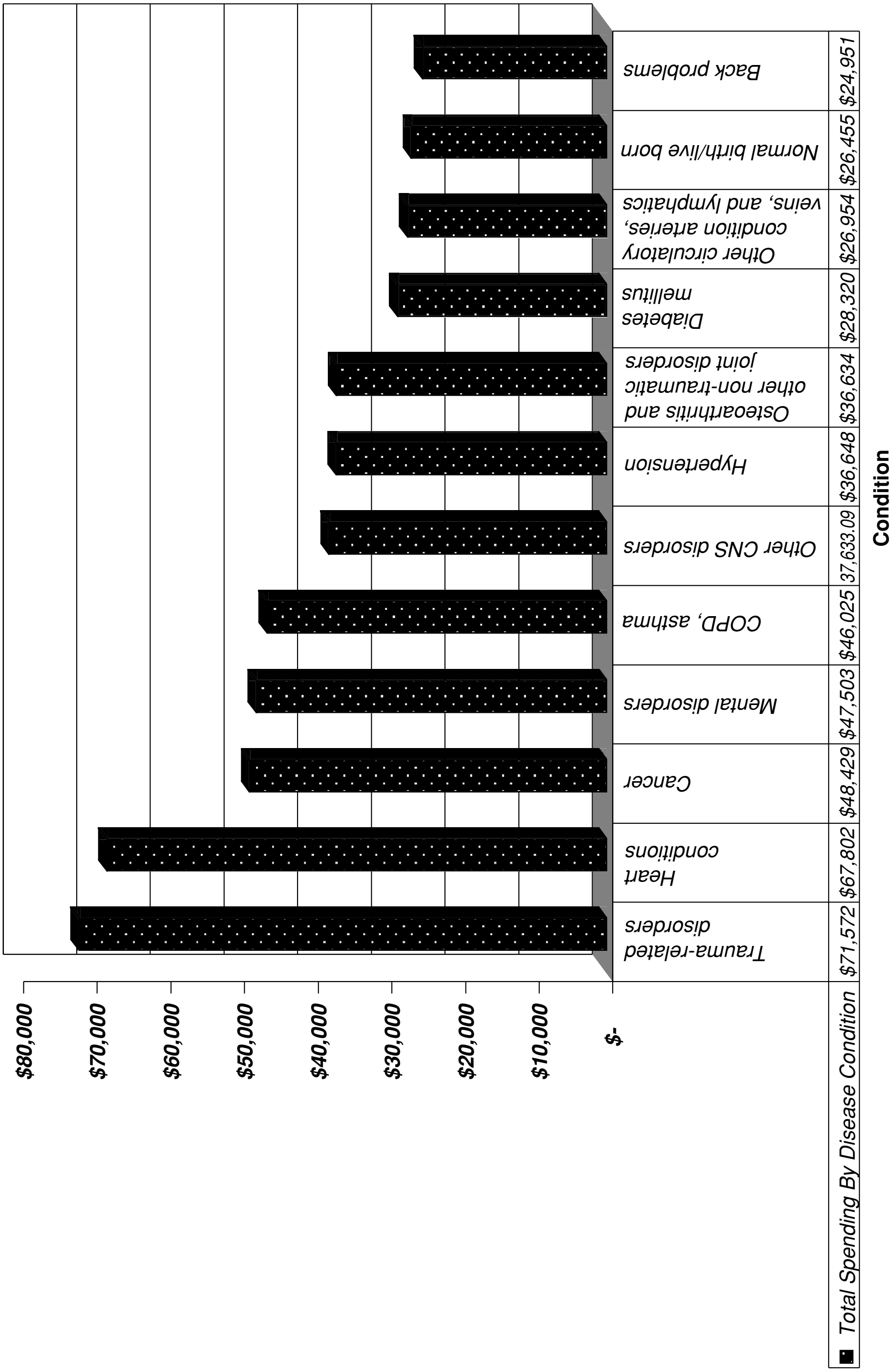


FIGURE 6.2 Total spending by disease condition (in milions), 2003.

SOURCE: Medical Expenditure Parey Survey, 2003.

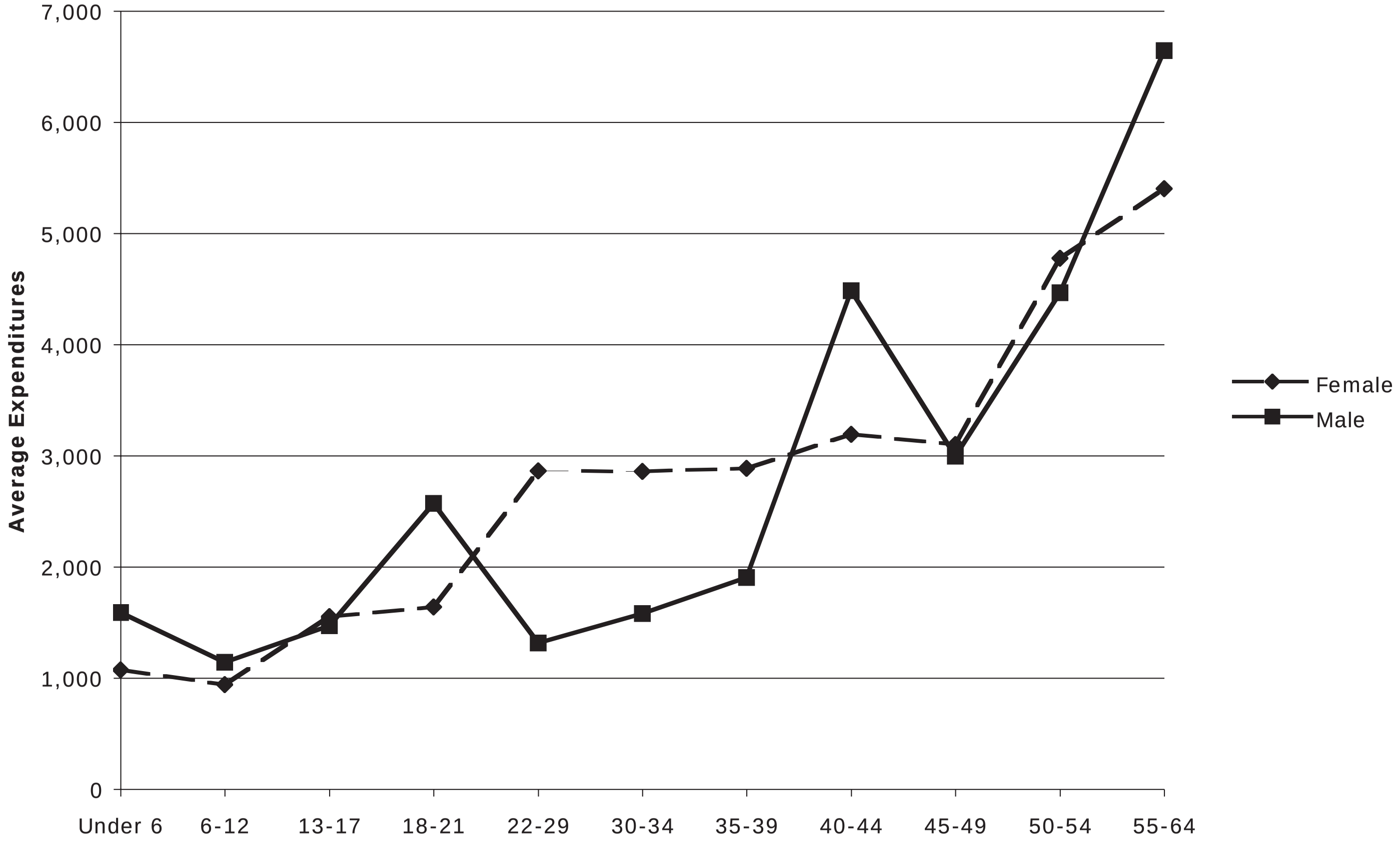
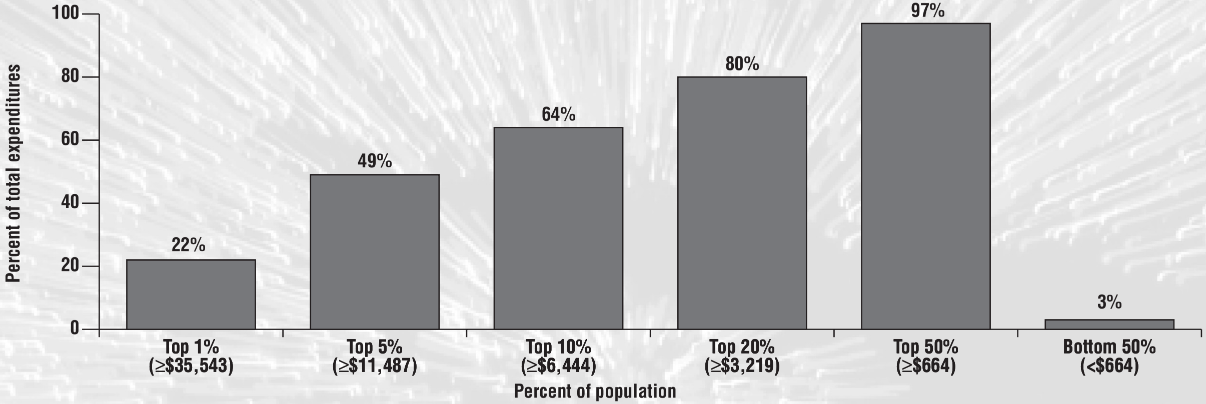


FIGURE 6.3 Average medical expenditures by age and sex, 2003.

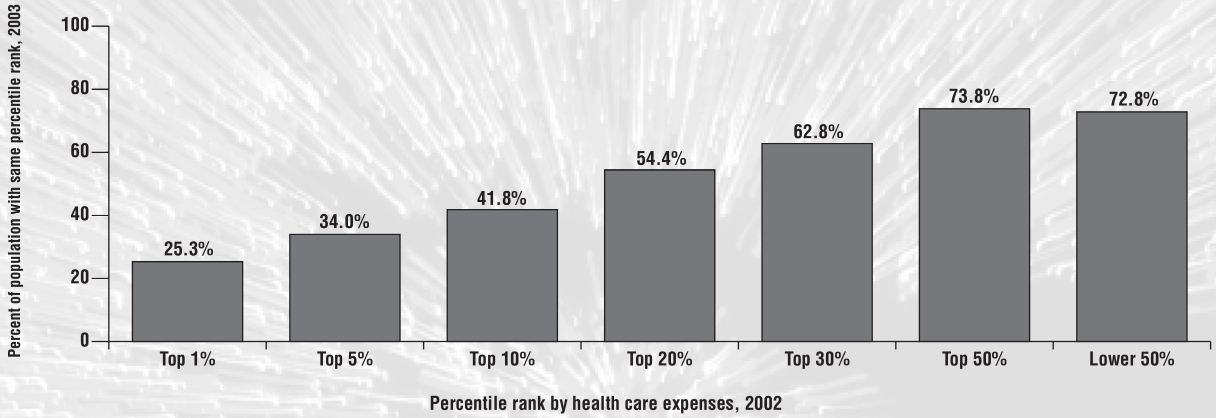
SOURCE: Medical Expenditure Parey Survey, 2003



Source: Conwell LJ, Cohen JW. Characteristics of people with high medical expenses in the U.S. civilian noninstitutionalized population, 2002. Statistical Brief #73. March 2005. Agency for Healthcare Research and Quality, Rockville, MD. Web site: http://www.meps.ahrq.gov/PrintProducts/PrintProdLookup.asp?ProductType=StatisticalBrief. Accessed April 7, 2006.

Note: Figures in parentheses are expenses per person.

FIGURE 6.4 Percent of total health care expenses incurred by different percentiles of U.S. population: 2002



Source: Cohen SC, Yu W. The persistence in the level of health care expenditures over time: estimates for the U.S. population, 2002-2003. Statistical Brief #124. May 2006. Agency for Healthcare Research and Quality, Rockville, MD. Web site: http://www.meps.ahrq.gov/PrintProducts/PrintProdLookup.asp?ProductType=StatisticalBrief. Accessed May 15, 2006.

FIGURE 6.5 Persistence in the level of health care expenses: United States, 2002–03

They also assert that these savings "would not restrain the rate of growth in health care spending over time. Instead, this amount represents a fraction of the increase due to inflation in health care costs and less than [the amount] needed to cover the uninsured population" (p. 543). Accepting this, we cannot assume that less aggressive care at the end of life will solve the financial problems of the health care system.

HOW THE MONEY IS PAID: PROVIDERS, PAYERS, AND PAYMENTS

Provider Payment Approaches

In the health care market, professional services from physicians, therapists, dentists, and so forth accounted for 31.3% of NHE in 2005. These providers are considered to drive the utilization of much of the remainder of NHE including hospital care, nursing home and home health care, prescription drugs, and medical equipment, devices, and supplies. Prescription drugs and other medical products are also markets with their own dynamics, but this discussion focuses on how the services of health care providers and institutions (e.g., hospitals, nursing homes) are paid.

In general, there are six payment modes that people and organizations use to buy and sell services. These are cost/cost-plus, hourly or time and materials, fee-for-service, fixed-price, capitation, and value. We will discuss each in relationship to the provision of personal health care services.

Cost/Cost-Plus

Reimbursement is how hospitals describe payment received for services they have already provided. Under a cost payment method, the organization providing the service tracks all costs associated with each customer and then asks to be paid that amount. This is similar to how an employee might be reimbursed for expenses incurred during a business trip. The employee would offer receipts for plane fare, hotel, food, and other allowable items and then expect to receive exactly that amount in return. An indemnity plan is one under which the covered party is reimbursed for all expenses he or she incurs.

An organization is often paid on a cost-plus basis (so-called because a contract specifies that the organization will be reimbursed for actual costs plus an additional percentage of those costs). The cost-plus method provides an additional margin out of which the providing organization can generate profit after any nonproject expenses are paid.

In practice, any independent entities have to be paid in a cost-plus manner. Of course, a profit-generating organization will never survive under a pure cost-only reimbursement model, but even nonprofits need more than cost reimbursement to survive. Under any contract there are nonreimbursable expenses, and every significant organization has expenses that are not specific to one project. The margin allowed on the cost-plus project is what an organization draws from to pay these expenses.

The cost/cost-plus method still dominates health care provider payment. Some people like cost-plus contracts because they provide high levels of transparency and seem to limit profits. However, there are drawbacks. These bills are often so detailed that the payer can understand only the bottom line.[6] In practice, what is reimbursable, as well as ceilings and thresholds on the amounts, must be set. Accounting for utilization of shares of resources can be complicated, and approaches must be agreed on. In addition, cost-plus contracting does not reward the organization, in this case the health care provider, for either better quality or finding new ways to provide services more cheaply. In a true cost-plus system, the contract penalizes the providing organization for cutting costs.

Time and Materials

The hourly payment method, common in service industries, is often referred to as *time and materials*. In this case, a provider would be charged a fixed hourly rate covering all the costs except agreed-on materials, which would be billed as incurred. For example, a residential electrician might pass along all costs for fixtures and breakers and charge $85 per hour for his time, which then must cover his vehicle, all his tools, any assistants he might employ, and so forth. Time and materials tends to be the system of choice in cases where the scope of work is not clear to either party. Per diem (by the day) reimbursement remains a very common payment method for hospitals (Kaiser Family Foundation, 2002). And although such a system encourages the hospital to work hard to minimize overhead expenses, payers will always worry that the hospital is not looking for ways to increase efficiency.

Fee-for-Service

The fee-for-service method is common when the scope of work is clear to both sides. It is the oldest form of payment for health services and the predominant system of paying physicians, dentists, and private providers in the Other Professional Services category of the NHE. For example, a dentist will typically have a set price for a cleaning and checkup. If additional services are needed, those will be performed at essentially published prices. In such a system, the risk of inefficiency is born by the provider and the risk of bad advice is born by the customer. Whether a root canal requires 1 hour or 2 hours to perform and whether or not a root canal is the best use of the patient's money, the dentist

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[6] In health care, a cottage industry has formed around the interpretation of medical bills. For fees ranging between $50 and $250 per hour, *claims assistance professionals* or *health-care advocates* will decipher bills, challenge errors, and negotiate discounts (Francis, 2006; Whitehouse, 2006).

receives the same payment. The local market and the dentist's perceived reputation in it drives the rates he or she can charge.

According to some observers (Jonas, 1978; Roemer, 1962), in the past this piecework system was a major cause of many of the observed problems in the health care delivery system. Although the patient's risk that he or she overpays for a service is reduced, such systems do not reward the providers for better quality service. Nor do they reward the provider for steering the patient toward more efficient services. A frequent complaint is that preventive medicine is completely ignored (Lown, 1998; Medical Reform Group of Ontario, 1980).

Fixed-Price

A service is called *productized* when it can be marketed or sold as a commodity, which implies that a fixed price will buy a known quantity of that service. Critically, the known quantity is a customer-centric outcome (or in the case of health care, treatment of a disease or condition on a per-episode basis). This can be compared with the provider-centric fee-for-service system, which focuses on what the provider does, whereas a fixed-price, productized approach is nominally focused on the condition presented by the patient.

The prospective payment system (PPS) was adopted for Medicare by the federal government in 1983 for Medicare Part A benefits (i.e., payments to hospitals) as a way to control costs. It can be seen as forcing productization on the hospitals—at least with respect to the patients covered by Medicare. With PPS, the hospital is paid a predetermined rate for each Medicare patient based on the patient's presenting condition. Each patient is classified into a Diagnosis-Related Group (DRG), a preset list created by the Centers for Medicare and Medicaid Services (CMS). Except for certain extremely high-cost patients, the hospital receives a flat rate for the DRG, regardless of the volume of actual services provided to a patient.

In such a system the provider is rewarded for how efficiently the patient is treated. Quality is emphasized to the extent that it affects the efficiency of the treatments for the initial diagnosis. The negative side of this type of system is that it intrinsically rewards providers who exaggerate the reported severity of the diagnosis, because disease classification determines the amount of payment that will be received. Since patients are classified by the same organizations that treat them, there can be what is called "up-coding." Also, providers are rewarded for attracting or seeking healthier patients (who otherwise tend to heal faster than sicker ones) and preventive medicine tends to remain a low priority.

Capitation

Capitation is a fixed prepayment per person to the health care provider for an agreed-on array of services. The payment is the same no matter how many services or what type of services each patient actually gets. In theory, such a system encourages the selection of the least expensive treatments as well as promotes services likely to result in the lowest overall cost during the contract period. However, such a system has no reinforcement for promoting the long-term health of the patient. With capitation, providers are likely to be rewarded for enrolling patients least likely to consume many health services, that is, the healthy.

One can also see *global budgeting* (a payment method common to government-run facilities) as a simplified form of capitation—one with only one payer. The provider receives a global budget, which must cover all costs of treatment needed by the eligible population. This is the common way of paying for Veterans Administration hospitals, state mental hospitals, and local health department clinics. In practice, a global budget model tends to resemble the cost model, as the budgets are often negotiated starting with the previous year's cost, and those in operational control are not usually rewarded for coming in under budget (in bureaucracies, coming in under budget is taken as a sign that the budget was set too high).

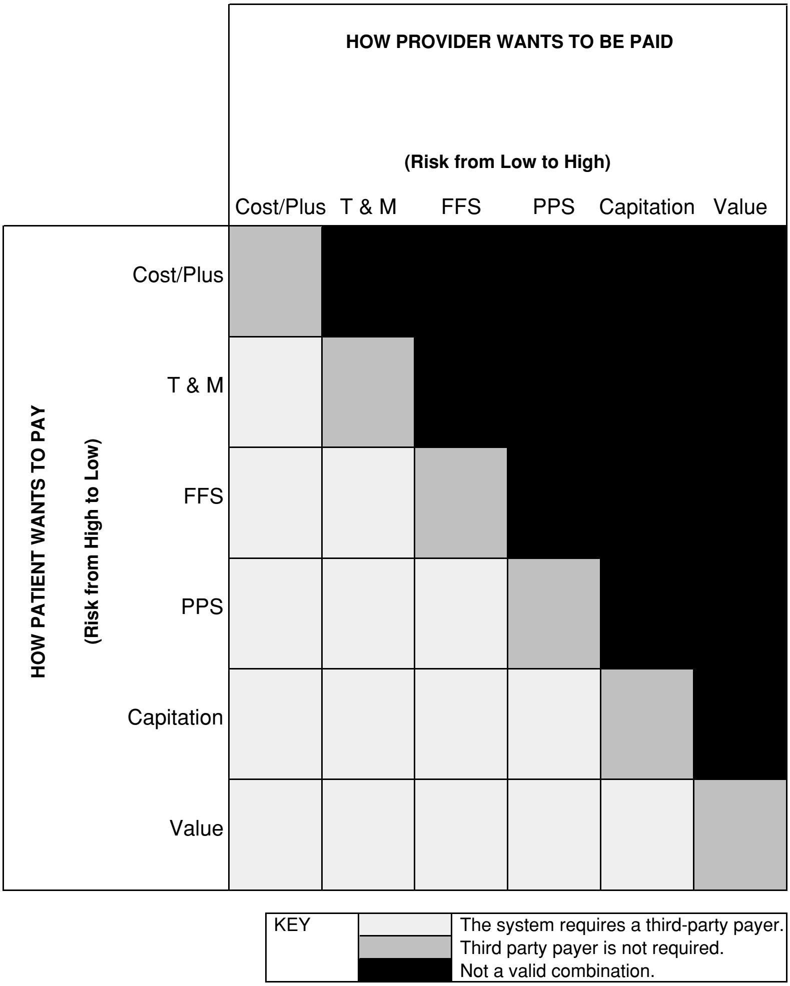
Value

Not frequently seen in health care services, *value-based compensation* is the payment model in which the performing organization is rewarded for the value delivered. Value-based systems are most often used when the value is easy to measure and indisputable. For example, personal injury lawyers often offer their services purely for a contingency fee because the value of the lawsuit proceeds is easy to measure.

One of the assumptions of market theory is that the buyer, in this case, the patient, has a sense of the value of what he or she is buying. As Arrow pointed out in 1963, the uncertainties surrounding medicine make it difficult for providers to know the real value of what they are providing and even more difficult for the patient, who is almost certainly at an information disadvantage relative to the provider. On the other hand, if patients started paying for care according to how much it was worth to them economically, the system would tend toward valuing the lives of wealthier people more highly, which most people would find unethical. Finally, in an emergency situation, a patient may not be able to value care until after the care is provided.

Risk Transfer and Good Intentions

The different payment models can be arranged along a continuum representing the financial risk borne by the buyer and the risk borne by the provider. If the payment model with which the patient pays is different from the payment model under which the provider operates (as is possible in a system with third-party payers such as the current U.S. health system), then the possible combinations can be represented as a matrix (see Figure 6.6).



HOW PROVIDER WANTS TO BE PAID

(Risk from Low to High)

HOW PATIENT WANTS TO PAY

(Risk from High to Low)

	Cost/Plus	T & M	FFS	PPS	Capitation	Value
Cost/Plus	▨	■	■	■	■	■
T & M	□	▨	■	■	■	■
FFS	□	□	▨	■	■	■
PPS	□	□	□	▨	■	■
Capitation	□	□	□	□	▨	■
Value	□	□	□	□	□	▨

KEY		
	□	The system requires a third-party payer.
	▨	Third party payer is not required.
	■	Not a valid combination.

FIGURE 6.6 Provider and patient risk matrix

With each combination, any risk not borne by the provider or patient is borne by the third-party payer. One could expect a third-party payer to react to this risk by excluding people or conditions, rejecting charges, capping fees, or otherwise capping coverage and raising premiums.

On the other hand, even when the payment methods match (e.g., the patient and the provider operate under a fee-for-service contract), either side may wish to use an intermediary. The introduction of Health Savings Accounts (HSAs) has essentially created an opening for a different type of institution in health care that starts to resemble something like American Express as opposed to United Health. And so one sees banks—experts in low-risk, high-volume transactions such as managing payments for product purchases—entering the health care market.

It should be noted that how we pay for health care has both short-term and long-term implications. The system of payment affects how the principals act in the system today, but also who and where the principals are tomorrow. There is no shortage of physicians in training who vie for residencies in dermatology or cosmetic surgery, but pediatrics is always in need. A simple capitation system will encourage physicians (and other providers) toward healthier patients. Similarly, a system rewarding outcomes may encourage physicians away from riskier cases. The challenge of rewarding for process consistency is that nearly all best practices are contraindicated in some populations.

Third-Party Payers

Insurance (Risk Management)

Who should pay for health care? As important as how we pay for health care is who controls the payments. Although ultimately all costs of health care are borne by the people, how the money gets from the people to the providers of goods (antibiotics, vitamins, wheelchairs, etc.) and services (physicians, hospitals, chiropractors) shapes the system. A system where people purchase directly from the providers, just as they purchase cars and hire mechanics, will be very different from one in which the people give their money to the government, which then maintains a health care system much as all governments maintain a military.

Although most people do not need very much health care in a given year, any significant health care incident is likely to be very expensive. Severe illness can easily cost tens of thousands of dollars, and heroic measures (e.g., trauma and organ transplants) can easily cost in the hundreds of thousands of dollars. Some rare conditions can even cost into the millions of dollars to treat (Thomas, 2006; Zhang, 2006). A health care condition requiring $500,000 in treatment would exceed the lifetime income of most people and would be financially devastating for all but a small percent of the population.

As noted earlier, whereas a significant number of people retain their health expenditure rank from year to year, a sizeable number do not. Therefore, most people desire some sort of insurance to protect themselves against wild swings in health care costs. As Glied (2001) pointed out, people do not buy health insurance to insure their health, but rather to insure their ability to pay for (and obtain) health care in the event that their health status changes. Historically, health insurance was intended to cover major medical events (Dranove & Millenson, 2006).

Matching Different Provider and Patient Payment Approaches

The real motivation for having third-party payers is to bridge the gap between how people want to pay for health care and how third-party payers want to be paid. Although there is little need for a third-party payer in a case where a person wants to pay a fixed monthly amount for health care to a provider who is paid on a capitation basis and offers the entire range of medical services, in reality people do not usually have this option.

More often, people obtain their health care from a variety of providers who may be operating under any one of those aforementioned models, and quite often an individual provider will offer services under multiple and differing charging models. A third-party payer adds value by converting a stream of monthly payments into a stream of service-driven or ailment-driven payments to providers.

Maintaining a Network of Providers

To maintain this conversion, the third-party payer maintains a network of providers with which it has negotiated contracts. These contracts detail which payment models will be used and what rates will be used, as well as other details common to commercial contracts.

Price and Provider Expertise

With the most extensive databases of patient visits, especially over time, third-party payers have the benefit of expertise. The databases of third-party payers are a wellspring of information for longitudinal studies and better understanding of treatment options. Third-party payers deal with an array of providers daily. They know the going rate for a wide variety of procedures and consultations across geographic regions and quality tiers. They can conduct quantitative quality studies more easily than any other organization. Therefore, it is third-party payers who have the best chance of predicting which providers will offer a good outcome.

CONCLUSIONS

The United States spends more on health care than any other country in the world, both on a gross basis and on a per capita basis. Further, the United States has a uniquely complex financing and payment system (as demonstrated by the information in this chapter). As some have assessed, we creakily crank dollars through the system, which requires enormous amounts of eligibility determination, benefit checking, coinsurance/deductible calculation/billing/collection, preutilization authorization, utilization review, and so on (Himmelstein & Woolhandler, 2001). Mountains of paperwork are created, astronomical voice and fax/telephone costs are incurred, and untold amounts of computer time and space are used. Huge numbers of staff are required to carry out these activities.

In addition to the high cost related of administration, the U.S. health care system leaves many people without health insurance and, therefore, with much reduced access to health care. As a matter of fact, in 1999, more than 42 million Americans had no health care payment coverage of any kind (Schroeder, 2001). This lack of health insurance has many negative consequences, ranging from personal anxiety, to increased use of emergency rooms (often meaning that care was deferred past the point where it might have been routine—and cheap—to where it was complex and expensive, with the delay leading to avoidable complications), to growing personal bankruptcy rates (Hoffman et al., 2001).

In the next chapter, we will discuss the performance—quality, equity, and efficiency—of the complex system that we have developed for providing health care in the United States. This is followed by chapters on the history of attempts to reform the system and projections about the future.

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TABLE 6.1 National Health Expenditures Aggregate, Per Capita Amounts, Percent Distribution, and Average Annual Percent Growth, by Source of Funds: Selected Calendar Years 1960–2005

Item	1960	1970	1980	1990	1993	1997	1998	1999	2000	2001	2002	2003	2004	2005
						Amount In Billions								
National Health Expenditures	$27.5	$74.9	$253.9	$714.0	$912.6	$1,125.4	$1,190.9	$1,265.3	$1,353.3	$1,469.6	$1,602.8	$1,733.4	$1,858.9	$1,987.7
Private	20.7	46.8	147.6	427.3	512.5	614.2	662.7	710.4	757.1	808.5	880.7	955.8	1,020.9	1.085.0
Public	6.8	28.1	106.3	286.7	400.1	511.2	528.2	554.8	596.1	661.1	722.1	777.7	838.0	902.7
Federal	2.9	17.7	71.6	193.9	279.2	364.9	372.1	389.6	417.5	464.3	509.4	553.1	600.6	643.7
State and Local	3.9	10.4	34.8	92.8	120.9	146.3	156.1	165.2	178.6	196.9	212.7	224.6	237.4	259.0
						Number In Millions								
U.S. Population[1]	186	210	230	254	263	274	277	280	283	285	288	291	294	297
						Amount In Billions								
Gross Domestic Product[2]	$526	$1,039	$2,790	$5,803	$6,657	$8,304	$8,747	$9,268	$9,817	$10,128	$10,470	$10,961	$11,713	$12,456
						Per Capita Amount								
National Health Expenditures	$148	$366	$1,102	$2,813	$3,469	$4,104	$4,299	$4,522	$4,790	$5,148	$5,559	$5,952	$6,322	$6,697
Private	111	222	640	1,684	1,948	2,240	2,392	2,539	2,680	2,832	3,054	3,282	3,472	3,656
Public	36	134	462	1,130	1,521	1,864	1,907	1,983	2,110	2,316	2,504	2,6970	2,850	3,041
Federal	15	84	311	764	1,061	1,331	1,343	1,393	1,478	1,626	1,767	1,899	2,043	2,169
State and Local	21	49	151	366	459	533	564	590	632	690	738	771	807	873

						Percent Distribution								
National Health Expenditures	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Private	75.3	62.4	58.1	59.8	56.2	54.6	55.6	56.1	55.9	55.0	54.9	55.1	54.9	54.6
Public	24.7	37.6	41.9	40.2	43.8	45.4	44.4	43.9	44.1	45.0	45.1	44.9	45.1	45.4
Federal	10.4	23.7	28.2	27.1	30.6	32.4	31.2	30.8	30.9	31.6	31.8	31.9	32.3	32.4
State and Local	14.3	13.9	13.7	13.0	13.2	13.0	13.1	13.1	13.2	13.4	13.3	13.0	12.8	13.0
						Percent of Gross Domestic Product								
National Health Expenditures	5.2	7.2	9.1	12.3	13.7	13.6	13.6	13.7	13.8	14.5	15.3	15.8	15.9	16.0
						Average Annual Percent Growth from Previous Year Shown								
National Health Expenditures		10.5	13.0	10.9	8.5	5.4	5.8	6.2	7.0	8.6	9.1	8.1	7.2	6.9
Private		8.5	12.2	11.2	6.2	4.6	7.9	7.2	6.6	6.8	8.9	8.5	6.8	6.3
Public		15.3	14.2	10.4	11.7	6.3	3.3	5.0	7.4	10.9	9.2	7.7	7.8	7.7
Federal		20.0	15.0	10.5	12.9	6.9	2.0	4.7	7.1	11.2	9.7	8.6	8.6	7.2
State and Local		10.2	12.8	10.3	9.2	4.9	6.7	5.8	8.1	10.2	8.1	5.6	5.7	9.1
U.S. Population		1.2	0.9	1.0	1.2	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9
Gross Domestic Product		7.0	10.4	7.6	4.7	5.7	5.3	6.0	5.9	3.2	3.4	4.7	6.9	6.3

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[1] Census resident based population less armed forces overseas and less the population of outlying areas. Source: U.S. Bureau of the Census.

[2] U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: Numbers and percents may not add to totals because of rounding. $ amounts shown are in current dollars.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; U.S. Department of Commerce, Bureau of Economic Analysis, and U.S. Bureau of the Census.

TABLE 6.2 National Health Expenditures, by Source of Funds and Type of Expenditure: Calendar Years 2000–2005

		Private					Public		
			Consumer						
Year and Type of Expenditure	Total	All Private Funds	Total	Out-of-Pocket Payments	Private Health Insurance	Other	Total	Federal	State and Local
2000				Amount in Billions					
National Health Expenditures	$1,353.3	$757.1	$648.1	$192.9	$455.2	$109.0	$596.1	$417.5	$178.6
Health Services and Supplies	1,264.4	706.1	648.1	192.9	455.2	58.0	558.3	391.6	166.7
Personal Health Care	1,139.9	653.1	596.1	192.9	403.2	56.9	486.8	370.1	116.7
Hospital Care	417.0	179.7	157.8	13.6	144.2	21.9	237.4	192.1	45.3
Professional Services	426.7	282.0	252.8	70.8	181.9	29.3	144.7	107.8	36.9
Physician and Clinical Services	288.6	191.2	169.0	32.2	136.8	22.2	97.5	79.1	18.4
Other Professional Services	39.1	27.5	24.8	11.0	13.9	2.6	11.6	8.1	3.5
Dental Services	62.0	59.2	59.0	27.7	31.3	0.2	2.8	1.7	1.1
Other Personal Health Care	37.1	4.3	–	–	–	4.3	32.8	19.0	13.8
Nursing Home and Home Health	125.8	54.7	48.9	34.1	14.8	5.8	71.1	48.7	22.3
Home Health Care	30.5	13.6	12.4	5.5	6.9	1.2	1.69	12.3	4.6
Nursing Home Care	95.3	41.1	36.6	28.7	7.9	4.5	54.2	36.4	17.8
Retail Outlet Sales of Medical Products	170.3	136.6	136.6	74.3	62.3	–	33.7	21.5	12.1
Prescription Drugs	120.8	93.2	93.2	33.4	59.7	–	27.6	15.8	11.8
Other Medical Products	49.5	43.5	43.5	40.9	2.6	–	6.0	5.7	0.4
Durable Medical Equipment	19.3	14.6	14.6	12.1	2.6	–	4.7	4.4	0.4
Other Non-Durable Medical Products	30.2	28.8	28.8	28.8	–	–	1.3	1.3	–
Government Administration and Net Cost of Private Health Insurance	81.2	53.1	52.0	–	52.0	1.1	28.1	16.4	11.7
Government Public Health Activities	43.4	–	–	–	–	–	43.4	5.1	38.3
Investment	88.8	51.0	–	–	–	51.0	37.8	25.8	12.0
Research	25.6	2.5	–	–	–	2.5	23.1	19.7	3.3
Structures and Equipment	63.2	48.5	–	–	–	48.5	14.7	6.1	8.6

2001									
National Health Expenditures	1,469.9	808.5	698.7	200.0	498.7	109.7	661.1	464.3	196.9
Health Services and Supplies	1,376.2	756.3	698.7	200.0	498.7	57.6	619.9	435.6	184.3
Personal Health Care	1,239.0	697.6	641.3	200.0	441.3	56.3	541.4	412.6	128.7
Hospital Care	451.4	192.1	171.3	14.2	157.0	20.9	259.3	210.4	48.9
Professional Services	465.3	303.4	272.9	74.4	198.5	30.4	162.0	120.3	41.7
Physician and Clinical Services	313.2	205.8	182.6	33.5	149.1	23.2	107.3	87.0	20.4
Other Professional Services	42.8	29.4	26.7	11.6	15.2	2.6	13.4	9.4	3.9
Dental Services	67.5	63.7	63.5	29.3	34.3	0.1	3.8	2.3	1.6
Other Personal Health Care	41.9	4.5	–	–	–	4.5	37.4	21.6	15.8
Nursing Home and Home Health	133.7	53.2	48.2	34.3	13.9	5.0	80.5	56.6	23.9
Home Health Care	32.2	12.2	11.2	5.4	5.8	1.0	20.0	14.5	5.5
Nursing Home Care	101.5	41.1	37.1	28.9	8.1	4.0	60.4	42.0	18.4
Retail Outlet Sales of Medical Products	188.5	148.9	148.9	77.0	71.9	–	39.6	25.4	14.2
Prescription Drugs	138.6	105.5	105.5	36.2	69.3	–	33.0	19.2	13.8
Other Medical Products	49.9	43.3	43.3	40.8	2.5	–	6.6	6.3	0.4
Durable Medical Equipment	19.6	14.5	14.5	12.0	2.5	–	5.1	4.8	0.4
Other Non-Durable Medical Products	30.3	28.8	28.8	28.8	–	–	1.5	1.5	–
Government Administration and Net Cost of Private Health Insurance	90.4	58.7	57.4	–	57.4	1.3	31.7	17.5	14.1
Government Public Health Activities	46.8	–	–	–	–	–	46.8	5.4	41.4
Investment	93.4	52.2	–	–	–	52.2	41.3	28.7	12.6
Research	28.8	2.8	–	–	–	2.8	26.0	22.3	3.6
Structures and Equipment	64.7	49.4	–	–	–	49.4	15.3	6.4	9.0

Continued

TABLE 6.2 *Continued*

		Private					Public		
			Consumer						
Year and Type of Expenditure	Total	All Private Funds	Total	Out-of-Pocket Payments	Private Health Insurance	Other	Total	Federal	State and Local
2002				Amount in Billions					
National Health Expenditures	$1,602.8	$880.7	$762.3	$211.3	$551.0	$118.4	$722.1	$509.4	$212.7
Health Services and Supplies	1,498.8	821.8	762.3	211.3	551.0	59.5	677.0	477.4	199.6
Personal Health Care	1,341.2	751.0	692.8	211.3	481.5	58.2	590.2	449.8	140.4
Hospital Care	488.6	208.5	187.1	15.6	171.5	21.5	280.1	226.8	53.2
Professional Services	503.1	326.6	294.8	79.4	215.4	31.8	176.5	131.1	45.4
Physician and Clinical Services	337.9	222.3	198.0	35.2	162.8	24.4	115.6	93.9	21.6
Other Professional Services	45.6	30.6	27.9	11.8	16.1	2.7	14.9	10.36	4.6
Dental Services	73.3	69.0	68.9	32.3	36.6	0.1	4.3	2.6	1.8
Other Personal Health Care	46.3	4.7	–	–	–	4.7	41.6	24.3	17.4
Nursing Home and Home Health	139.9	53.2	48.3	34.5	13.8	4.9	86.7	61.7	25.1
Home Health Care	34.2	10.9	10.0	4.9	5.1	0.8	23.4	17.2	6.2
Nursing Home Care	105.7	42.3	38.3	29.6	8.7	4.0	63.4	44.5	18.9
Retail Outlet Sales of Medical Products	209.6	162.6	162.6	81.8	80.8	–	45.9	30.3	16.6
Prescription Drugs	157.9	118.6	40.4	78.2	–	39.9	23.1	16.3	
Other Medical Products	51.6	44.0	44.0	41.4	2.6	–	7.6	7.2	0.4
Durable Medical Equipment	20.8	14.8	14.8	12.2	2.6	–	6.0	5.6	0.4
Other Non-Durable Medical Products	30.9	29.3	29.3	29.3	–	–	1.6	1.6	–
Government Administration and Net Cost of Private Health Insurance	105.2	70.8	69.5	–	69.5	1.3	34.4	19.6	14.8
Government Public Health Activites	52.4	–	–	–	–	–	52.4	8.0	4.4
Investment	104.0	58.9	–	–	–	58.9	45.1	32.0	13.1
Research	32.5	3.1	–	–	–	3.1	29.5	25.7	3.8
Structures and Equipment	71.5	55.9	–	–	–	55.9	15.6	6.3	9.3

2003									
National Health Expenditures	1,733.4	9558.8	828.4	224.5	603.8	127.4	777.7	553.1	224.6
Health Services and Supplies	1,621.7	893.0	828.4	224.5	603.8	64.7	728.7	518.0	210.7
Personal Health Care	1,446.3	807.6	744.2	224.5	519.7	63.4	638.6	487.9	150.8
Hospital Care	525.4	227.6	203.2	17.0	186.2	244.4	297.8	241.8	56.0
Professional Services	543.0	351.1	317.2	84.4	232.7	34.0	191.9	143.7	48.2
Physician and Clinical Services	366.7	240.8	214.7	37.4	177.2	26.1	126.0	102.9	23.0
Other Professional Services	49.0	33.2	30.3	12.7	17.6	2.9	15.8	10.9	4.9
Dental Services	76.9	72.2	72.2	34.3	37.9	0.0	4.6	2.8	1.8
Other Personal Health Care	50.4	4.9	–	–	–	4.9	45.4	27.0	18.4
Nursing Home and Home Health	148.5	54.2	49.1	35.3	13.9	5.1	94.3	66.5	27.8
Home Health Care	38.0	10.9	10.0	4.8	5.2	0.9	27.1	20.4	6.7
Nursing Home Care	110.5	43.3	39.1	30.5	8.7	4.2	67.2	46.1	21.1
Retail Outlet Sales of Medical Products	229.4	174.7	174.7	87.8	86.9	–	57.7	35.9	18.8
Prescription Drugs	174.6	128.6	128.6	44.4	84.1	–	46.1	27.7	18.4
Other Medical Products	54.7	46.1	46.1	43.4	2.7	–	8.6	8.2	0.4
Durable Medical Equipment	22.4	15.6	15.6	12.8	2.7	–	6.9	6.5	0.4
Other Non-Durable Medical Products	32.3	30.6	30.6	30.6	–	–	1.7	1.7	–
Government Administration and Net Cost of Private Health Insurance	122.6	85.4	84.2	–	84.2	1.3	37.2	21.0	16.2
Government Public Health Activities	52.8	–	–	–	–	–	52.8	9.1	43.8
Investment	111.7	62.7	–	–	–	62.7	49.0	35.1	13.9
Research	35.8	3.4	–	–	–	3.4	32.4	28.3	4.1
Structures and Equipment	75.9	59.3	–	–	–	59.3	16.6	6.9	9.8

Continued

TABLE 6.2 ***Continued***

		Private					Public		
			Consumer						
Year and Type of Expenditure	Total	All Private Funds	Total	Out-of-Pocket Payments	Private Health Insurance	Other	Total	Federal	State and Local
2004				Amount in Billions					
National Health Expenditures	$1,858.9	$1,020.9	$887.2	$235.8	$651.5	$133.6	$838.0	$600.6	$237.4
Health services and Supplies	1,738.9	963.6	887.2	235.8	651.5	66.4	785.3	563.4	221.9
Personal Health Care	1,551.3	858.9	793.9	235.8	558.1	65.0	692.4	530.6	161.8
Hospital Care	566.9	245.7	220.3	18.6	201.7	25.4	321.2	261.2	60.0
Professional Services	581.1	373.8	339.4	89.6	249.8	34.4	207.3	156.2	51.1
Physician and Clinical Services	393.7	256.3	230.1	39.9	190.2	25.2	137.4	112.8	24.6
Other Professional Services	52.6	36.6	32.7	13.7	19.0	2.9	17.0	12.2	4.8
Dental Services	81.5	76.6	76.6	36.1	40.5	0.0	4.9	2.9	2.0
Other Personal Health Care	53.3	5.3	–	–	–	5.3	48.0	28.2	19.8
Nursing Home and Home Health	157.7	54.6	49.5	35.7	13.8	5.2	103.1	73.2	29.9
Home Health Care	42.7	11.2	10.2	5.0	5.2	0.9	31.5	23.9	7.7
Nursing Home Care	115.0	43.5	39.3	30.6	8.6	4.2	71.5	49.3	22.2
Retail Outlet Sales of Medical Products	245.5	184.7	184.7	91.9	92.8	–	60.8	40.0	20.8
Prescription Drugs	189.7	137.8	137.8	47.9	90.0	–	51.8	31.4	20.4
Other Medical Products	55.9	46.9	46.9	44.0	2.9	–	9.0	8.6	0.4
Durable Medical Equipment	23.1	16.1	16.1	13.2	2.9	–	7.1	6.7	0.4
Other Non-Durable Medical Products	32.8	30.9	30.9	30.9	–	–	1.9	1.9	–
Government Administration and Net Cost of Private Health Insurance	135.2	94.7	93.4	–	93.4	1.3	40.5	23.5	17.0
Government Public Health Activities	52.5	–	–	–	–	–	52.5	9.3	43.2
Investment	119.9	67.3	–	–	–	67 3	52.7	37.2	15.5
Research	38.3	3.5	–	–	–	3.5	34.8	30.2	4.6
Structures and Equipment	81.7	63.8	–	–	–	63.8	17.9	7.0	10.8

2005									
National Health Expenditures	1,987.7	1,085.0	943.8	249.4	694.4	141.2	902.7	643.7	259.0
Health Services and Supplies	1,860.9	1,013.5	943.8	249.4	694.4	69.8	847.3	605.1	242.2
Personal Health Care	1,661.4	914.5	846.1	249.4	595.7	68.4	746.9	568.5	178.4
Hospital Care	611.6	264.5	237.1	20.1	217.0	27.4	347.1	279.4	67.7
Professional Services	621.7	397.3	361.9	95.4	266.6	35.4	224.4	168.7	55.6
Physician and Clinical Services	421.2	272.7	245.8	42.5	203.3	26.8	148.5	121.8	26.7
Other Professional Services	56.7	37.7	34.8	14.5	20.2	2.9	19.1	14.2	4.9
Dental Services	86.6	81.4	81.4	38.3	43.1	0.1	5.2	3.1	2.1
Other Personal Health Care	57.2	5.6	–	–	–	5.6	51.6	29.7	21.8
Nursing Home and Home Health	165.3	57.9	52.3	37.4	14.9	5.6	111.4	78.5	32.9
Home Health Care	47.5	12.0	10.9	5.1	5.8	1.1	35.5	26.5	9.0
Nursing Home Care	121.9	46.9	41.4	32.3	9.1	4.5	75.9	52.0	23.9
Retail Outlet Sales Medical Products	258.8	194.7	194.7	96.6	98.1	–	64.1	41.9	22.2
Prescription Drugs	200.7	146.1	146.1	50.9	95.2	–	54.6	32.9	21.7
Other Medical Products	58.1	48.6	48.6	45.7	2.9	-	9.5	9.1	0.4
Durable Medical Equipment	24.0	16.6	16.6	13.7	2.9	–	7.4	7.0	0.4
Other Non-Durable Medical Products	34.1	32.0	32.0	32.0	–	–	2.1	2.1	–
Government Administration and Net Cost of Private Health Insurance	143.0	99.1	97.7	–	97.7	1.4	43.9	25.9	18.0
Government Public Health Activities	56.6	–	–	–	–	–	56.6	10.7	45.8
Investment	126.8	71.5	–	–	–	71.5	55.3	38.6	16.8
Research	40.0	3.7	–	–	–	3.7	36.3	31.3	5.0
Structures and Equipment	86.8	67.7	–	–	–	67.7	19.1	7.3	11.8

Note: Research and development expenditures of drug companies and other manufacturers and providers of medical equipment and supplies are excluded from research expenditures. These research expenditures are implicitly induced in the expenditure class in which the product falls, in that they are covered by the payment received for that product. Numbers may not add to totals because of founding. The figure 0.0 denotes amounts less than $50 million. Dashes (–) indicate "not applicable". $ amounts shown are in current dollars.

Source: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group.

TABLE 6.3 Personal Health Care Expenditures Aggregate, Per Capita Amounts, and Percent Distribution, by Source or Funds: Selected Calendar Years 1970–2005

			Third-Party Payments							
						Public				
Year	Total	Out-of-Pocket Payments	Total	Private Health Insurance	Other Private Funds	Total	Federal[1]	State and Local[1]	Medicare[2]	Medicaid[3]
					Amount In Billions					
1970	$62.9	$24.9	$38.0	$14.1	$1.7	$22.2	$14.4	$7.8	$7.3	$5.0
1980	215.3	58.6	156.7	61.2	9.3	86.2	62.3	23.9	36.1	24.7
1993	773.6	145.2	628.5	257.6	38.2	332.7	251.5	81.2	146.2	116.5
1998	1,010.5	175.5	835.0	344.7	55.4	434.9	332.2	102.7	202.4	158.2
1999	1,068.3	184.1	884.2	371.8	57.5	454.9	346.6	108.3	206.1	171.3
2000	1,139.9	192.9	946.9	403.2	56.9	486.8	370.1	116.7	216.4	187.0
2001	1,239.0	200.0	1,039.0	441.3	56.3	541.4	412.6	128.7	239.9	208.9
2002	1,341.2	211.3	1,130.0	481.5	58.2	590.2	449.8	140.4	257.6	230.7
2003	1,446.3	224.5	1,221.7	519.7	63.4	638.6	487.9	150.8	275.6	250.9
2004	1,551.3	235.8	1,315.5	558.1	65.0	692.4	530.6	161.8	303.4	269.9
2005	1,661.4	249.4	1,411.9	596.7	68.4	746.9	568.5	178.4	331.4	289.3
					Per Capital Amount					
1970	$299	$119	$181	$67	$8	$106	$69	$37	(4)	(4)
1980	935	254	680	266	40	374	271	104	(4)	(4)
1993	2,941	552	2,389	979	145	1,264	956	308	(4)	(4)
1998	3,647	633	3,014	1,244	200	1,570	1,199	371	(4)	(4)
1999	3,818	658	3,160	1,329	205	1,626	1,239	387	(4)	(4)
2000	4,034	683	3,351	1,427	201	1,723	1,310	413	(4)	(4)

2001	4,340	701	3,640	1,546	197	1,896	1,446	451	(4)	(4)
2002	4,652	733	3,919	1,670	202	2,047	1,560	487	(4)	(4)
2003	4,966	771	4,195	1,784	218	2,193	1,675	518	(4)	(4)
2004	5,276	802	4,474	1,898	221	2,355	1,805	550	(4)	(4)
2005	5,598	840	4,757	2,010	230	2,517	1,915	601	(4)	(4)
					Percent Distribution					
1970	100.0	39.6	60.4	22.3	2.8	35.3	22.9	12.4	11.6	8.0
1980	100.0	27.2	72.8	28.4	4.3	40.0	28.9	11.1	16.7	11.5
1993	100.0	18.8	81.2	33.3	4.9	43.0	32.5	10.5	18.9	15.1
1998	100.0	17.4	82.6	34.1	5.5	43.0	32.9	10.2	20.0	15.7
1999	100.0	17.2	82.8	34.8	5.4	42.6	32.4	10.1	19.3	16.0
2000	100.0	16.9	83.1	35.4	5.0	42.7	32.5	10.2	19.0	16.4
2001	100.0	16.1	83.9	35.6	4.5	43.7	33.3	10.4	19.4	16.9
2002	100.0	15.8	84.2	35.9	4.3	44.0	33.5	10.5	19.2	17.2
2003	100.0	15.5	84.5	35.9	4.4	44.2	33.7	10.4	19.1	17.3
2004	100.0	15.2	84.8	36.0	4.2	44.6	34.2	10.4	19.6	17.4
2005	100.0	15.0	85.0	35.9	4.1	45.0	34.2	10.7	19.9	17.4

[1] Includes Medicaid SCHIP Expansion & SCHIP

[2] Subset of Federal funds.

[3] Subset of Federal and State and local funds.

[4] Calculation of per capita estimates is inappropriate.

NOTE: Per capita amounts based on July 1 Census resident based population estimates for each year. Numbers and percents may not add to totals because of rounding. $ amounts shown are in current dollars.

SOURCE: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group; U.S. Bureau of the Census.

Chapter 7

Health Care System Performance

INTRODUCTION

Participating in the evaluation of our health care system's performance is an increasingly important function of health care professionals. Whether you are entering the health care field to provide direct care to patients as a nurse, therapist, physician, or other clinician, or to assume a role in the management of a health care organization—be it a hospital, nursing home, health insurance company, or other organization—you must be aware of the significant efforts and potential consequences of the activities related to evaluating the performance of the health care system. These efforts will affect your day-to-day work as well as the future of your profession.

Health care systems are generally evaluated on three criteria: (1) quality of health care; (2) equity of health care; and (3) efficiency of health care (Aday, Begley, Lairson, & Balkrishnan, 2004; Aday, Begley, Lairson, & Slater, 1993). Health care performance may be assessed at the micro level—for physician practices, hospitals, or other health care settings—or at the macro level—for regions, states, and nations. For example, at the micro level, we may be interested in the quality of health care at a specific hospital, ambulatory surgery center, or physician practice. At the macro level, we may want to know about the quality of health care available in our state compared to other states. We can evaluate performance against several types of referents. We can use a "gold standard" to determine whether we have achieved the recognized "best" possible performance. We can use our own previous performance as a "benchmark" to determine whether we have improved over time. We can use a "benchmark" from another entity to determine whether we are doing as well as or better than an appropriate referent—provider practice, hospital, region, state, or nation.

In this chapter, we discuss each of the indicators of health care performance—quality, equity, and efficiency. We conclude the chapter with a discussion of the importance of data and information systems for evaluating performance in health care.

QUALITY OF HEALTH CARE

Using the model originally developed by Dr. Avedis Donabedian, health care quality is assessed in terms of structure, process, and outcomes (Donabedian, 1980–1985). "Structure . . . is meant to designate the conditions under which care is provided" (Donabedian, 2003, p. 46). It includes material resources, such as facilities and equipment; human resources, such as number and qualities of professional and support personnel providing health care; and organizational characteristics, such as (for individual facilities such as hospitals) nonprofit status, academic affiliation, and governing structure. Examples of structure-oriented questions are: What is the nurse-to-patient ratio on a hospital floor? What is the age of the facility? What proportion of a hospital's patients lack insurance, are receiving Medicaid, or are covered by Medicare? Are the physicians in a practice salaried employees or paid on a fee-for-service basis?

Process "is taken to mean the activities that constitute health care—including diagnosis, treatment, rehabilitation, prevention, and patient education—usually carried out by professional personnel, but also including other contributions to care, particularly by patients and their families" (Donabedian, 2003, p. 46). For example, a study of health care process might ask the following questions: Is infection control policy followed by the hospital staff? How long does it take for the primary care physician to receive the test results needed for diagnosis? How does the treating physician transmit information about a drug's side effects to the patient? What is the waiting time in the emergency room? How much time does a physician spend with a patient, on average, for an annual physical? What is the standard practice among the physician staff for treating a particular health condition such as acute myocardial infarction or stroke?

Structure and process influence the outcomes, or effectiveness, of health care. For example, each of the structure- and process-oriented issues just mentioned may lead to poor health care outcomes, but they are not outcomes in themselves. Outcomes "are taken to mean changes (desirable or undesirable) in individuals and populations that can be attributed to health care" (Donabedian, 2003, p. 46). Generally speaking, there are two types of outcomes used to assess the quality of health care systems: (1) the outcomes of persons who have received care, that is, patients; and (2) population health outcomes, that is, the outcomes of both people who have and people who have not received health care. We will begin with population health outcomes and then consider the health outcomes of patients.

Population Health Outcomes

Health outcomes can be measured at the population level and used to evaluate the quality of a health care system (Kindig, 1997). Population health indicators include population mortality and morbidity rates. These are used in macro-level performance evaluations of regions, states, and nations. We assume the impact of health care on these rates even though we are not directly measuring use of health care among the population considered. If, for example, a disease-specific mortality rate is higher in one region than another, we assume that the health care system has not been optimal in the region with the higher mortality rate.

Historically, population health indicators have been age-adjusted death rates, disease-specific death rates, life expectancy, time lost to premature death, and infant mortality rate.[1] The UNICEF (United Nations International Children's Emergency Fund) definition of infant mortality rate, or IMR, is the probability of dying between birth and exactly 1 year of age (UNICEF, 2006). This rate is expressed per 1,000 live births per year. IMR is an important measure that indicates the well-being of infants, children, and pregnant women, as it is associated with maternal health, quality and access to care, and public health in a given population.

Life expectancy is defined by the World Health Organization (WHO) as the number of years of life that can be expected on average in a given population. By using the life expectancy within that population, the time lost to premature death, also called years of potential life lost, or YPLL, can be calculated. YPLL is the difference between actual age at death and expected age at death. It illustrates that the more premature a death, the greater the loss of life (WHO, 2006a).

A more recent concept of population health takes into account quality of life. Healthy life expectancy at birth (HALE) is defined by WHO as the "average number of years that a person can expect to live in 'full health' by taking into account years lived in less than full health due to disease and/or injury" (WHO, 2006a). HALE is a measure that combines length and quality of life into a single estimate that indicates years of life that can be expected in a specified state of health (Kindig, 1997, p. 45). Other health-adjusted life expectancy measures are quality-adjusted life years (QALY), which emphasizes the individual's perceived health status as the indicator of quality of life; disability-adjusted life years (DALY), which combines mortality and disability measures; and years

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[1] All of these statistics from WHO and UNICEF were the most recently published as of the writing of this book.

of healthy life (YHL), which combines perceived health and disability activity limitation measures from the National Health Interview Survey (Kindig, 1997).

Mortality rate is the number of deaths in a given population per year (WHO, 2006a). The *age-adjusted mortality rate* takes into account the population's age distribution when calculating mortality rate. Using a statistical method that "standardizes" the target population to a reference population, this measure is commonly used when comparing mortality rates across different populations.

Next we will briefly consider the quality of the U.S. health care system based on population health indicators.

Life Expectancy and Age-Adjusted Mortality

Life expectancy can be used as a health care assessment measure in at least two ways. First, we can compare the life expectancy in one society to life expectancy in another. Second, we can compare life expectancies among subgroups within one society. In both cases, life expectancy rates indicate that the United States has a problem.

First, we consider life expectancy in the United States compared to other nations. In 2004, WHO comparisons of 13 peer countries indicated that the United States ranked 10th of 13 in life expectancy at birth for males, and 12th of 13 in life expectancy at birth for females (WHO, 2006b). These peer countries are Australia, Belgium, Canada, Denmark, Finland, France, Germany, Japan, The Netherlands, Spain, Sweden, the United Kingdom, and the United States.

Next, we examine life expectancy among subgroups within the United States. There are significant differences between population subgroups (Adler et al., 1993; Institute of Medicine, 2002; Pappas et al., 1993). In 2002, the projected life expectancy at birth for U.S. residents was 77.3 years (U.S. Census Bureau, 2005, Table 96). For men, it was 74.5 years; for women, 79.9 years. These numbers were all improved from those observed in 1990, respectively, 75.4, 71.8, and 78.8.

However, in 2002, as in all previous years, there was a marked difference in life expectancy at birth by race: 75.1 for White males, and 68.8 for African American males (U.S. Census Bureau, 2005, Table 98). Similarly, White females had a life expectancy at birth of 80.3, compared to 75.6 for African American females. In 2002, the age-adjusted death rate was 8.5 per 1,000 population, 10.1 for males, and 7.2 for females (U.S. Census Bureau, 2005, Table 99). (Age adjustment statistically accounts for the fact that life expectancy from birth is shorter for males than for females.) Again, this was an improvement over 1990 when the age-adjusted death rate was 9.4 per 1,000 population, 12.0 for males, and 7.5 for females. Yet the age-adjusted death rate for White males in 2002 was 9.9 per 1,000 population, and for African American males it was 13.4 (U.S. Census Bureau, 2005, Table 99). White females had an age-adjusted mortality rate of 7.0 compared to that of African American females with 9.0. The difference in life expectancy and mortality between Whites and African Americans is thought in part to reflect differences in standard of living, as well as access to health services (Geiger, 1996; Institute of Medicine, 2002; Schwartz et al., 1990).

Quality of Life Adjusted Measure

The WHO (2006b) comparisons of the United States to the same 12 peer countries indicate, once again, that the U.S. population is not as healthy as we would expect. In 2002, HALE at birth for males was 67.2 years in the United States, the lowest ranked country of the 13. Japan was ranked 1 (72.3 years). For HALE at birth for females, the United States was ranked 12th of 13 in 2002. In 2002, the age-standardized DALY per 100,000 population for all causes of death was higher in the United States than in any of its 12 peer countries (12,781/100,000 population). The next highest DALY was 10,878/100,000 population in Belgium.

Infant, Neonatal, and Maternal Mortality

Comparison of infant mortality rates in the United States to the same 12 peer countries also indicates a problem in the United States. In 2004, the U.S. infant mortality rate was 6.0 per 1,000 live births (WHO, 2006b). Although this rate is low, it is the highest of the 13 peer countries. In 2000, neonatal mortality was also highest in the United States (5 per 1,000 live births), compared to its peer countries, and maternal mortality was third highest (14 maternal deaths per 100,000 live births).

The subgroup comparison of infant mortality within the United States also indicates problems. The difference in the infant mortality rate in the United States between Whites and African Americans is striking. In 2002, it was 5.8 for Whites and 13.8 for African Americans (U.S. Census Bureau, 2005, Table 105). The African American infant mortality rate has been at least double that for Whites since 1915, when the rate was first recorded as 99.9 per thousand overall (Grove & Hetzel, 1968).

Clinical Outcomes

Health outcomes that are specific to the persons who receive care are often called clinical outcomes. We frequently use the following outcome measures in studies of health care quality among patients: readmission to the hospital after a surgical procedure; functional capacity after medical intervention; long-term pain and discomfort after medical treatment; infection acquired during a hospital stay (nosocomial); 5-year mortality rates among patients treated for cancer, heart disease, or other diseases; development of comorbidities after medical therapy; and satisfaction of the patient with the outcomes of health care treatment. Clinical outcomes research is the term given to studies that focus on the persons who receive care (patients) and the outcomes of their treatment.

Following is a discussion of health care quality at the micro level of clinical outcomes. We examine two aspects related to micro-level evaluation of health care quality: clinical effectiveness and patient safety.

Clinical Effectiveness

A major concept used in defining the quality of health care in the present era is the evaluation of its *effectiveness*, that is, whether the care produces the desired or intended result. This term is synonymous with *efficacy*. Assessing the effectiveness, or efficacy, of health care at the micro-level of physician practices, hospitals, and other health care settings is becoming increasingly evidence-based, that is, based on scientifically valid, empirical research. One of the best and most well-known definitions of evidence-based medicine is from an article in the *British Medical Journal* (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996):

> Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research. (p. 71)

Thus, the standards against which quality is measured are based on clinical research. Clinical outcomes research is the foundation of quality improvement efforts at the micro-level. Beginning in the last decade of the 20th century, and funded by the Agency for Healthcare Research and Quality, the Centers for Disease Control and Prevention, the National Institutes of Health, and other organizations, researchers have continually generated, updated, and published the results of clinical outcomes studies.

These studies have then been synthesized by experts in the field, and the synthesized results are translated into clinical practice guidelines (or alternatively, clinical practice protocols). A standard definition of clinical practice guidelines was developed by Field and Lohr (1992): “systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances.”

Clinical practice guidelines are published by government agencies, such as the Preventive Services Task Force, and voluntary agencies, such as the medical specialty societies and the disease-specific advocacy organizations such as the American Cancer Society. Each set of practice guidelines or protocols is the result of the distillation of the evidence provided by hundreds of studies. Performance assessment and the development of evidence-based “best practices” focuses on the quality of care in clinical settings such as hospitals, ambulatory care centers, and nursing homes, for categories of disease conditions, such as heart disease, infectious diseases, diabetes, or asthma.

The following abstract from a study by Carson, McDonagh, and Peterson (2006) is an example of a clinical outcomes study. It compares the effectiveness of different atypical antipsychotic drugs for people with dementia:

> Although the Food and Drug Administration (FDA) has not approved atypical antipsychotics for use in patients with dementia, they are commonly prescribed in this population. Recent concerns about increased risk of cerebrovascular events and mortality have led to warnings. A systematic review was conducted to assess the benefits and harms of atypical antipsychotics when used in patients with behavioral and psychological symptoms of dementia. Electronic searches (through March 2005) of the Cochrane Library, Medline, Embase, and PsycINFO were supplemented with hand searches of reference lists, dossiers submitted by pharmaceutical companies, and a review of the FDA Website and industry-sponsored results database. Using predetermined criteria, each study was assessed for inclusion, and data about study design, population, interventions, and outcomes were abstracted. An overall quality rating (good, fair, or poor) was assigned based on internal validity. The evidence for olanzapine and risperidone supports their effectiveness compared with placebo. Short-term adverse events were similar to placebo. Risperidone had no advantage over haloperidol on efficacy measures in the better-quality studies. Risperidone had an advantage over haloperidol on some measures of extrapyramidal symptoms. Evidence for the other atypical antipsychotics is too limited to assess efficacy and safety. Trials were short term and conducted in highly selected populations. The potential for increased risk of cerebrovascular adverse events and mortality is a serious concern. To make judgments about when the benefits of atypical antipsychotics outweigh the potential harms, clinicians need more information. Additional data from existing trials and more complete reporting of trial results could provide this information. (p. 354)

The study used as an example here is typical of evidence-based research, where the results are suggestive but inconclusive, and therefore, the implications for clinical guidelines are not certain. However, evidence-based medicine uses the results of many such studies to determine the clinical efficacy of a set of clinical practices (that is, clinical guidelines or protocols) in order to overcome the limitations of a single study.

Although clinical practice guidelines are sometimes deridingly referred to as "cookbook medicine," they are proliferating and increasingly used by insurers and other payers to evaluate the quality of medical care provided to patients.

Patient Safety

Another aspect of health care quality is patient safety. The patient safety movement of the 1990s led to a great deal of interest in improving the quality of health care delivery through the application of methods borrowed from other industries and pioneered by W. Edwards Deming. Deming was an American statistician, considered the father of the modern quality assurance movement. He developed his system following the end of World War II. Unable to get a hearing in this country, he went to Japan. His methods, designated *Statistical Process Control* (SPC) and *Total Quality Management* (TQM), strongly influenced the rebirth and eventual massive expansion of Japanese industry post–World War II. *Patient safety* has been defined by the Institute of Medicine (2000) as "freedom from accidental injury; ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximizes the likelihood of intercepting them when they occur" (p. 211). Therefore, patient safety encompasses all events and situations that result in accidental harm to patients including medication errors, surgical mistakes, falls, improper use of medical devices, and nosocomial infection.

The Institute of Medicine report *To Err Is Human* (2000) has played a major role in bringing national attention to the issue of patient safety.

> The Report converted an issue of gradually growing professional awareness over a great deal of time to one of substantial public concern in a manner and pace unprecedented in modern experience with matters of healthcare quality. The epidemiologic finding that more than 1 million injuries and nearly 100,000 deaths occur in the United States annually as a result of mistakes in medical care came from studies nearly a decade old. But this was new information for the public, and it resonated strongly. (Leape, Berwick, & Bates, 2002, p. 501)

To Err Is Human brought a new perspective to health care quality assurance by supporting the importation of industrial quality improvement practices into health care settings. Using Charles Perrow's analysis of the Three Mile Island accident (Perrow, 1984) as a model, the report advocates a systems approach to health care improvement in order to understand and modify the conditions that contribute to errors. The authors conclude (Institute of Medicine, 2000):

> The application of human factors in other industries has successfully reduced errors. Health care has to look at medical error not as a special case of medicine, but as a special case of error, and to apply the theory and approaches already used in other fields to reduce errors and improve reliability. (p. 66)

There are many excellent books on the application of health improvement methods to health care including the classic by Berwick and his colleagues (Berwick, Gladfrey, & Roessner, 1990) and the more recent by Dlugacz and his colleagues (Dlugacz, Restifo, & Greenwood, 2004). A number of organizations provide training in quality improvement methods. Hospitals that have applied these quality improvement methods have reported significant success in improving safety (e.g., Van den Heuvel, Bogers, Does, van Dijk, & Berg, 2006).

A Health Care Quality Improvement Example: Nosocomial Infections

In this section, we will examine in detail one health care delivery problem that has been the focus of a great deal of concern in recent years: hospital-acquired infections. Hospital-acquired infections have been identified by the Centers for Disease Control and Prevention (CDC) as a major health problem in the United States. Also called *nosocomial infections*, these are infections that were not present or incubating in the patient at the time of admission to the hospital. Infections that occur 72 hours after hospital admission are considered *nosocomial*.

Preventing the occurrence of hospital-acquired infections is a challenging job. The microorganisms that cause infection are ubiquitous in hospitals. In addition, hospitals inadvertently assist infective microorganisms to enter and multiply freely in a human host. For example, the abundance of couriers in hospitals makes it easier for infective microbes to reach susceptible humans. Every staff member—maintenance, cleaning, and food service; laboratory, imaging, and other technician; nurse, aide, physician, and resident—is a possible carrier. In the course of performing their jobs, hospital staff members move from patient to patient, potentially exposing them to pathogens acquired from prior contact with contaminated persons, surfaces, and equipment.

A single lapse in infection control protocol on a single day by just one of the many people who comes into contact with a patient during a hospitalization may result in that patient's exposure to an infective agent. Further, the chance that infection control procedures will not be followed increases if hospitals are understaffed, as many are today. If infective microorganisms reach a patient, routine hospital procedures provide them with new pathways into the body. Treatment with antibiotics can further exacerbate the problem by increasing antimicrobial resistance among the organisms that cause hospital-acquired infections. It is difficult not to conclude that hospital staff members seeking to prevent patient infection are at a disadvantage compared to their microscopic companions that cause infection.

We will discuss (1) the magnitude of the nosocomial infection problem; (2) how we presently attempt to prevent nosocomial infections; (3) why the current approach to preventing nosocomial infections is not more successful; (4) what initiatives have been undertaken by the major stakeholders to address the problem; and (5) recommendations for achieving additional improvement.

What Is the Magnitude of the Nosocomial Infection Problem?

The figures currently cited by nearly every author writing on the topic are about 2 million patients affected annually by nosocomial infections, resulting in about 80,000 deaths and adding at least $5 billion to U.S. health care costs every year (e.g., Institute of Medicine, 2000). These figures were estimated from a few studies conducted in the 1990s (Institute of Medicine, 2000), and they are difficult to confirm because we lack uniform, consistently collected data from all U.S. hospitals regarding their infection rates. This lack of data inhibits our ability to compare infection rates for hospitals, regions, and states and track infection rates over time. Therefore, we cannot answers questions such as the following: Which hospitals, states, or regions are doing better than others? How much better are some hospitals, states, or regions doing than others? How much has the nosocomial infection rate in the United States changed over time? Is the U.S. rate generally going up or down?

However, even without infection rates that are comparable across hospitals, states, regions, and time, there are several reasons to conclude that the present situation is not satisfactory. The primary evidence comes from the magnitude of nosocomial infection rates that are reported in studies conducted by individual hospitals or hospital systems and the National Nosocomial Infection Surveillance (NNIS) System. Although there is no standard infection rate that is held up as the "gold standard," other industries would not accept the failure rates that hospitals accept in terms of nosocomial infections. In other industries, the goal for errors that are as costly as nosocomial infections and that can be fatal or disabling would be close to zero. Yet, the evidence we have about nosocomial infection rates indicates that they are much higher than desirable, given the potential of these infections to cause death or disability and to raise hospital costs substantially (CDC, 1996, 2001; Richards et al., 2001).

In addition, evidence of a high and increasing rate of antimicrobial resistance among the major infective organisms indicates poor overall control of nosocomial infections. Bacteria, fungi, and even viruses can become resistant to drugs. However, bacteria cause most of the drug-resistant problems in hospitals. The development of antimicrobial resistance is largely associated with antibiotic overuse or misuse, and the rapid increase in the number and prevelance of resistant pathogens over the past two decades can be attributed in part to the fact that an estimated 50% of all antibiotics currently prescribed are either the wrong drug or the wrong dose, or taken for the wrong duration (U.S. Congress, 1995). Primary prevention of nosocomial infections would reduce the use of antimicrobials and, therefore, would have a positive impact on the development of antimicrobial resistance (CDC, 1996, 2001; Richards et al., 2001).

How Do We Attempt to Prevent Nosocomial Infections Now?

Infection Control Programs are the foundation of efforts to prevent hospital-acquired infections. They have their origin in the nosocomial *Staphylococcus aureus* infection outbreaks of the 1950s and the subsequent recommendation of the American Hospital Association to include infection surveillance as a regular hospital function (Haley et al., 1985). The interest in preventing hospital-acquired infections led to the development of Infection Control Guidelines. Between 1974 and 1983, the Study on the Efficacy of Nosocomial Infection Control (SENIC) established the scientific basis for infection control programs. The SENIC project and the massive number of clinical research studies that followed have been the basis for evidence-based recommendations about how to prevent nosocomial infections.

Today, the professional infection control organizations, particularly the Association for Professionals in Infection Control and Epidemiology (APIC), the Society for Healthcare Epidemiology of America (SHEA), the Surgical Infection Society, and the CDC's Division of Healthcare Quality Promotion and Hospital Infection Control Practices Advisory Committee (HICPAC) (CDC, 2006b), continually generate, update, and publish Infection Control Guidelines, based on expert review, assessment and synthesis of current research, and integration of new findings. Thus, the Infection Control Guidelines are evidence-based, having been distilled from the research on each infection control area. The guidelines reflect the current state of knowledge about infective agents—detection, prevention of their transmission, and treatment—derived from research in the basic and clinical sciences. The guidelines are based on evidence from thousands of scientific studies.

Some of the areas for which guidelines have been developed are surgical site infections (Mangram et al., 1999), intravascular catheter-related infections (CDC, 2002a), construction and environmental risks (Bartley & 1997 and 1999 APIC Guidelines Committee, 2000; CDC, 2003), isolation precautions (Garner, 1996), disinfection and sterilization (Rutala & 1994 and 1996 APIC Guidelines Committee, 1996; Rutala & Weber, 2001), health care–associated pneumonia (CDC, 2004), nosocomial transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant *Enterococcus* (VRE) (HICPAC, 1995; Muto et al., 2003), emerging antimicrobial resistance (Houghton, 2002; Shlaes et al., 1997), hand hygiene (CDC, 2002b), bloodborne pathogens (OSHA, 1991), surveillance (CDC, 1999), and employee health policies (Bolyard et al., 1998).

Why Isn't the Current Approach More Successful?

There are two major reasons for our current lack of success in controlling nosocomial infections: (1) Infection Control Guidelines are not fully implemented; and (2) acceptance within the health care community that a large proportion of nosocomial infections are not "preventable." Each issue is briefly discussed next.

Research suggests that when hospitals fully implement the Infection Control Guidelines, the rate of nosocomial infection falls dramatically, in some cases to the desired level of close to zero. We know that the Infection Control Guidelines have dramatically reduced nosocomial infection rates when they have been fully implemented, for instance within individual hospitals and in some

European countries (e.g., IHI, 2006; Muto et al., 2003). Therefore, improving compliance with the guidelines should be remarkably effective in reducing the nosocomial infections in U.S. hospitals.

However, whereas a great deal of effort is, and has been, expended on developing the Infection Control Guidelines and training infection control professionals, less effort has been devoted to ensuring that the Infection Control Guidelines are implemented, fully and appropriately, in each U.S. hospital (e.g., Goldsteen, Goldsteen, Gladwin, & Jefferson, 2004). This is the hard part. Within hospitals, competing priorities, declining budgets, and entrenched behaviors and beliefs about infection control have inhibited the implementation of practices that research has shown prevent nosocomial infections. However, hospitals that have attempted to reduce their nosocomial infection rates have demonstrated that two key programmatic elements can overcome these problems: (1) application of quality improvement methods borrowed from other industries; and (2) institutional will. These ingredients must be present if change is to occur and be sustained.

In addition to ensuring that the Infection Control Guidelines are fully implemented, clinical and technological breakthroughs can lead to improvement of the guidelines. The current Infection Control Guidelines pertain to what are considered "preventable" infections. At present, the CDC estimates that a minimum of 33% of all nosocomial infections are preventable (Weinstein, 1998). A review of studies by Harbarth, Sax, and Gastmeier (2003) concluded that 20% of infections are preventable. In both cases, the proportion of infection considered preventable is quite low. However, new technologies and new discoveries in the basic sciences of genetics, microbiology, biochemistry, and so forth will undoubtedly have a tremendous impact on our ability to detect and prevent transmission of infectious disease organisms in hospital settings. They will be used to improve the Infection Control Guidelines and increase the proportion of nosocomial infections that are considered "preventable."

What Initiatives Have the Major Stakeholders Undertaken to Address the Problem?

Many relatively new initiatives are underway to facilitate infection control excellence among U.S. hospitals. They are the result of the patient safety movement discussed earlier, as well as increased public attention to the problem of nosocomial infections, particularly because of media coverage. These initiatives are:

- Strengthening Joint Commission on Accreditation of Healthcare Organizations (JCAHO) oversight of Infection Control Programs
- Providing process-oriented infection control performance information to consumers and purchasers

  - National Quality Forum
  - Leapfrog Group
- Providing hospital-level, nosocomial infection rates to consumers and purchasers
  - State Public Disclosure Legislation
  - Consumers Union Public Disclosure Initiative
- Providing quality improvement expertise to individual hospitals
  - Private efforts, most notably by the Institute for Healthcare Improvement (IHI)
  - Public efforts led by the Centers for Disease Control and Prevention
- Developing clinical and technical breakthroughs in the prevention of nosocomial infections

The first four types of initiatives are aimed at ensuring full implementation of the Infection Control Guidelines. Of these, strengthening JCAHO oversight of Infection Control Programs, providing process-oriented infection control performance information to consumers and purchasers, and providing hospital-level nosocomial infection rates to consumers and purchasers will have an impact on institutional will, via external pressures for change. Each of these initiatives has the potential to motivate hospital leadership to give nosocomial infection control priority within the organization because of its possible adverse impact on a hospital. The fourth type of initiative—providing quality improvement expertise to individual hospitals—assists hospitals to respond to external pressures for better nosocomial infection control, via training in the quality improvement methods that have been shown to be effective in bringing about organizational excellence. The fifth type of initiative focuses on the other main thrust of efforts to prevent nosocomial infections: that is, improving the Infection Control Guidelines themselves through clinical and technical advances.

What Additional Improvement Efforts Are Needed?

Despite current, significant efforts, there is still much that must be done to prevent hospital-acquired infections in terms of (1) ensuring that the Infection Control Guidelines are fully implemented in all U.S. hospitals and (2) advancing clinical and technical breakthroughs that will improve the Infection Control Guidelines themselves. Following are activities that would contribute to the prevention of hospital-acquired infections without duplicating the current efforts of major infection control stakeholders.

- Develop support for a system to collect outcomes data (nosocomial infection rates) from all U.S. hospitals and disclose these data to external stakeholders

- Develop cost benefit information to justify expenditures and guide allocations for Infection Control Programs
- Study the impact of public disclosure legislation
- Identify internal barriers to implementing infection control practices and develop appropriate measures to address these barriers
- Develop nonproprietary software to improve infection surveillance in hospitals
- Develop more Model Infection Control programs, with greater visibility for them
- Fund research on clinical and technological breakthroughs to improve infection control guidelines
- Improve the training and education of all health care workers at all levels in infection control with continuing education and ongoing evaluation of clinical performance at the bedside.

Organizations With Major Influence on Health Care Quality

The following section describes the efforts of public and private organizations to improve the quality of health care in the United States. These efforts are increasingly collaborative. Many businesses that pay for the health care of their employees have banded together. Public initiatives are increasingly coordinated. And, private-public partnerships have developed. However, it is difficult to say which organizations are the most influential. Clearly the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and the Centers for Medicare and Medicaid Services (CMS), as one of the largest payers of health care services in the country, are extremely influential. However, private organizations and other public agencies have very important roles, as well. The impact of these significant efforts on the quality of U.S. health care is yet to be determined.

Joint Commission on Accreditation of Healthcare Organizations

The Joint Commission on Accreditation of Healthcare Organizations is the largest health care accrediting organization in the country, accrediting nearly 16,000 or about 80% of all health care organizations in the United States, including approximately 4,700 (80%) of the nation's hospitals (JCAHO, 2006a). Of all inpatient admissions, 96% are made to the 80% of U.S. hospitals accredited by JCHAO. Though a private organization funded by the sizable fees it charges for accreditation, nearly three-quarters of all states make licensure of hospitals either wholly or partially conditional on JCAHO accreditation. Also, the Centers for Medicare and Medicaid Services have mandated that hospitals and other medical facilities wanting to participate in the Medicare and Medicaid systems must be accredited by JCAHO, referred to as *deemed status*.

Thus, in many cases, JCAHO assumes a quasigovernmental regulatory status, as its policies and standards for accreditation effectively carry the same weight as state laws or administrative policies governing conditions for hospital licensure. Amendments to the Social Security Act added in 1972 require the CMS to review the accrediting process of JCAHO and other accrediting organizations. States as well as health insurers also use JCAHO accreditation to determine which hospitals are approved for reimbursement of services. Therefore, JCAHO has tremendous direct and indirect influence on quality assurance and improvement in health care.

JCAHO aims to provide standards for high-quality care that will ensure both patient and staff safety. Accreditation is designed to ensure quality care, maintain infection control, and help reduce the occurrence of medical errors. The performance measurement tools used by JCAHO have developed over the years. For example, in 1986, JCAHO developed the Indicator Measurement System or IMS. It had six sets of performance measures, for peri-operative care, obstetrical care, trauma care, oncology care, infection control, and medication use. This system was not implemented, but it set the stage for the current ORYX initiative, which is based on multiple measurement systems. As described by JCAHO (2006b), the ORYX system

> integrates outcomes and other performance measurement data into the accreditation process. ORYX measurement requirements are intended to support Joint Commission accredited organizations in their quality improvement efforts. In 2002, accredited hospitals began collecting data on standardized—or "core"—performance measures. In 2004, The Joint Commission and the Centers for Medicare and Medicaid Services began working together to align measures common to both organizations. These standardized common measures, called "Hospital Quality Measures," are integral to improving the quality of care provided to hospital patients and bringing value to stakeholders by focusing on the actual results of care. Measure alignment benefits hospitals by making it easier and less costly to collect and report data because the same data set can be used to satisfy both CMS and Joint Commission requirements.

The principal objective of measurement activities including ORYX is to create the technical infrastructures within health care organizations and at the JCAHO to support performance measurement and improvement in the health care system (JCAHO, 2006c).

Federal Agencies

The major federal government agencies that focus on ensuring and improving the quality of health care are described next. Each of these agencies has been discussed previously in chapters 5 and 6, but the following discussion focuses on their role in ensuring quality and evaluating health systems performance.

Centers for Medicare and Medicaid Services. The Centers for Medicare and Medicaid Services (CMS) is a federal agency within the U.S. Department of Health and Human Services. (Until 2001 it was known as the Health Care Financing Administration or HCFA.) CMS has several offices and initiatives that focus on improving the quality of health care including the Office of Clinical Standards and Quality, the Quality Initiatives, and the Medicare Health Outcomes Survey. Because Medicare and Medicaid pay for so much health care in the United States, their ability to influence quality throughout the health care system is enormous.

The Office of Clinical Standards and Quality (OCSQ)

> serves as the focal point for all quality, clinical and medical science issues and policies for CMS programs.... It coordinates quality-related activities with outside organizations. OCSQ also monitors the quality of Medicare and Medicaid programs and evaluates the success of interventions. (CMS, 2007a)

The overall goal of the Quality Initiative (QI) is to improve the quality of services of Medicare and Medicaid recipients through methods of provider accountability and public disclosure. The QI was launched nationally in 2002 with the Nursing Home Quality Initiative (NHQI) and expanded in 2003 with the Home Health Quality Initiative (HHQI) and the Hospital Quality Initiative (HQI). In 2004, the Physician Focused Quality Initiative, which includes the Doctor's Office Quality Project, was developed. In 2004, the Quality Initiative was expanded to officially include kidney dialysis facilities. The End Stage Renal Disease (ESRD) Quality Initiative promotes ongoing CMS strategies to improve the quality of care provided to ESRD patients. In 2005, CMS announced the launch of the Physician Voluntary Reporting Program to begin in 2006 (CMS, 2007b).

CMS, in collaboration with the National Committee for Quality Assurance (NCQA), launched the Medicare Health Outcomes Survey (HOS) in 1998 to study the outcomes of Medicare managed care. The Medicare HOS is being used as part of the effectiveness of care component of the Health Plan Employer Data and Information Set (HEDIS). The HOS measure includes physical and mental health outcomes and risk adjustment techniques. In addition to health outcomes measures, the HOS is used to collect the Urinary Incontinence in Older Adults and Physical Activity in Older Adults HEDIS measures (CMS, 2007c).

Agency for Healthcare Research and Quality. The Agency for Healthcare Research and Quality (AHRQ) is the division of the U.S. Department of Health and Human Services charged with coordinating, conducting, and supporting research, demonstrations, and evaluations related to the measurement and improvement of health care quality. The AHRQ Mission is "to improve the quality, safety, efficiency, and effectiveness of health care for all Americans" (AHRQ, 2007a). AHRQ is charged with disseminating scientific findings about clinical practice guidelines and facilitating public access to information on the quality of health care. AHRQ research provides evidence-based information on health care outcomes; quality; and health care cost, use, and access. The information helps health care decision makers—patients and clinicians, health system leaders, purchasers, and policymakers—make more informed decisions and improves the quality of health care services. Beginning in 2005, AHRQ's "research agenda reflected a shift to emphasize the translation of research into practice" (AHRQ, 2007b). Nearly 80% of AHRQ's annual budget of approximately $300 million is awarded as grants and contracts to researchers at universities and other research institutions across the country through its evidence-based practice centers and the National Quality Measures Clearinghouse (AHRQ, 2007c,d). Researchers are funded to conduct systematic, comprehensive analyses and syntheses of the scientific literature and to develop reports and technology assessments based on the research-supported evidence (i.e., clinical practice guidelines). To ensure that report findings are translated into improvements in clinical practice, AHRQ enlists partners such as specialty societies and health systems, which use the findings of evidence-based practice centers to develop tools and materials that will improve the quality of care.

Centers for Disease Control and Prevention. The Centers for Disease Control and Prevention (CDC) is the nation's primary government agency for developing disease prevention and control initiatives and health promotion and education activities. In terms of health care quality, it has a particularly important role in the control of nosocomial infection. The Division of Healthcare Quality Promotion (DHQP) undertakes initiatives in conjunction with other CDC divisions, such as the National Center for Infectious Diseases, when appropriate. The DHQP is charged with protecting patients and health care personnel and promoting safety, quality, and value in the health care delivery system (CDC, 2005a). Among the DHQP priorities are the following:

- Measuring, validating, interpreting, and responding to data relevant to health care outcomes, health care–associated infections/antimicrobial resistance, related adverse events, and medical errors among patients and health care personnel. This priority is primarily addressed through the National Nosocomial Infection Surveillance system discussed previously in this chapter.
- Investigating and responding to outbreaks and emerging antimicrobial-resistant pathogens and infections among patients or associated with the health care environment.
- Identifying and evaluating the efficacy of interventions designed to prevent health care–associated infections or antimicrobial resistance, related adverse events, and medical errors.
- Promoting clinical microbiology laboratory quality.

The CDC provides extensive information on infection control guidelines, infectious disease outbreak management, antimicrobial resistance, laboratory practice, sterilization and disinfection, and surveillance. The CDC further offers advice and consultation to health care providers or regional health departments on matters relating to infection control. It also operates a free rapid notification system through which time-sensitive e-mail messages about important health care events (e.g., outbreaks, product recalls) and publications (e.g., new health care guidelines) are sent to persons active in the prevention of health care–acquired infections and antimicrobial resistance.

The CDC's Healthcare Infection Control Practices Advisory Committee (HICPAC) is a federal advisory committee made up of 14 external infection control experts who provide advice and guidance to the CDC regarding the practice of health care infection control, strategies for surveillance, and prevention and control of health care–associated infections in United States health care facilities. One of the primary functions of the committee is to issue recommendations for preventing and controlling health care–associated infections in the form of guidelines, resolutions, and informal communications. HICPAC has issued practice guidelines on the following subjects: Environmental Infection Control in Healthcare Settings; Hand Hygiene in Healthcare Settings; Intravascular Device-Related Infections; Surgical Site Infections; Isolation Precautions; Nosocomial Pneumonia; and Catheter-Associated Urinary Tract Infection.

As part of the Prevent Antimicrobial Resistance in Healthcare Settings Campaign (CDC, 2006a), the CDC has entered into partnerships with hospitals, state and local health departments, medical and professional associations, health insurers, private industry, continuing medical education organizations, and other health agencies to promote universal adoption of several practice recommendations concerning infection prevention, effective diagnosis and treatment, wise antimicrobial use, and transmission prevention designed to prevent antimicrobial resistance among patients. As part of this campaign, the CDC provides clinicians with information for preventing antimicrobial resistance among specific patient populations (e.g., surgical, children), including fact sheets listing the particular steps that should be taken to prevent resistant infections in targeted populations and materials for distribution to patients with tips on infection prevention.

National Institutes of Health. The National Institutes of Health (NIH) are a primary source of funding for medical and behavioral research in the United States. An agency under the federal Department of Health and Human Services, the NIH funds a broad array of extramural projects, grants, contracts, and cooperative agreements conducted primarily by universities, hospitals, and other research institutions. Much of the patient-oriented research includes studies into the development of new technologies, human disease mechanisms, therapeutic interventions, and clinical trials. Other clinical research includes epidemiological and behavioral studies and outcomes research and health services research. The NIH is the source of much funding for clinical outcomes studies that are used for evidence-based medicine and clinical practice guidelines.

Public/Private Partnerships and Private Initiatives

There are also a number of private initiative or private-public partnerships providing health care performance information to consumers and purchasers. Both the consumers and the purchasers of hospital services, such as insurance companies and the Medicare program, have a vital interest in the quality of those services. However, until fairly recently, consumers and purchasers had very limited ability to evaluate the quality of a hospital's performance in any aspect of care. Now, two organizations—the National Quality Forum and the Leapfrog Group—are attempting to rectify this problem by developing standard measures of hospital quality and disseminating information about hospital performance to purchasers and consumers. The effectiveness of providing consumers and payers with information about health care quality is controversial and untested, as yet.

National Quality Forum. The National Quality Forum (NQF) is a nonprofit organization created to develop a national strategy for health care quality measurement and reporting (National Quality Forum, 2006). Established in 1999 as a partnership between public and private stakeholders, the NQF aims to promote health care quality improvement by developing the intellectual framework for nationally standardized performance measures and quality data reporting so that individual hospitals and health systems can be compared. The NQF encourages the use of standardized measures by consumers and stakeholders within the health care system. However, it should be noted that the NQF has no authority to implement its standards, although payers of hospital services such as insurance companies and the Medicare program can demand compliance with their standards.

The NQF enjoys broad participation from health care consumer advocacy groups, public and private purchasers, health care professionals, employers, provider organizations, health plans, accrediting bodies, organized labor, and organizations involved in health care research and quality improvement. The organization is governed by a 23-member board of directors representing consumers, purchasers, providers, insurers, health services experts, and representatives from the Centers for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ). Currently, there are more than 200 member organizations active in the NQF.

The NQF seeks not only to promote new guidelines, standards, and quality measures to rectify serious and pervasive quality deficiencies, but also to reconcile the redundant and often incompatible guidelines, standards, and reporting measures offered by various organizations and agencies dedicated to health care quality improvement. The NQF consensus process was developed pursuant to and in accordance with the National Technology Transfer Act of 1995 (U.S. Office of Management and Budget Circular A-119). This means that NQF endorsement of hospital performance measures and standards confers on them the special legal status of *voluntary consensus standards*. This status makes NQF-endorsed recommendations more easily adopted for use by Medicare, Medicaid, and other federally funded health care programs; that is, federal health care programs can require hospitals to adopt NQF recommendations in order to qualify for federal insurance programs.

The NQF has issued reports endorsing a set of quality measures and endorsing patient safety practices. The measures are designed to provide consumers, providers, purchasers, and quality improvement professionals the tools to evaluate and compare the quality of care in hospitals across the nation using a standard set of measures. The goal is to make data on these performance measures publicly available and thus enable performance-based decisions about hospital selection, create incentives for hospital performance improvement, enhance value-based purchasing, and generally stimulate the improvement of health care.

The Leapfrog Group. The Leapfrog Group (2006) is a coalition of more than 150 public and private organizations and major corporations that provide health care benefits, established in 2000 to

> reward hospitals for advances in patient safety and quality and to educate employees, retirees, and families about the importance of hospitals' efforts in this area. Leapfrog purchasers provide health benefits to more than 34 million Americans and spend billions on healthcare annually.

Leapfrog was founded by the Business Roundtable, and its funding comes from its members. Leapfrog aims to give consumers information on hospital quality so that they are able to make more informed hospital choices and to mobilize employer health care purchasing power to improve patient safety. Focusing on quality of care issues relevant to urban area hospitals, the group works with medical quality improvement experts to identify problems and propose solutions believed to improve hospital patient care.

The Leapfrog Group's strategy is to recommend a set of safety practices, and then survey hospitals regarding the practice areas targeted. For each recommended practice, the hospital is rated on the following scale: fully implemented recommended practice, good progress in implementation, good early stage in implementation, willing to report but does not meet criteria for good early stage, and did not disclose. Leapfrog collects and makes publicly available comparative hospital ratings based on implementation of the recommended practices. This information is available through the HealthGrades Web site and through the Leapfrog Group Web site (http://www.leapfroggroup.org/cp?form=cp_start&p=1).

The Leapfrog Group encourages health care purchasers to provide incentives to hospitals that implement and report on the recommended practices. Incentives such as increased patient volume, price variation based on performance, and public recognition are expected to encourage hospitals to adopt Leapfrog's recommendations. The Leapfrog Group further encourages corporate purchasers who utilize health plans as intermediaries to hold the health plans accountable for ensuring application of Leapfrog standards.

As of 2006, Leapfrog had developed a system for evaluating hospitals based on the 30 recommended safe practices endorsed by the National Quality Forum (NQF). The Leapfrog Group has designed a system whereby each of the 30 NQF practices will be weighted and hospitals will be assigned an aggregate score based on their overall implementation of the NQF practices. Although consumers will not be able to access data on a hospital's performance concerning an individual practice, failure to implement any of the practices will lower a hospital's overall score, thus providing hospitals with the incentive to implement all NQF standards.

Institute for Healthcare Improvement. A number of private organizations provide expertise and leadership to hospitals that voluntarily determine to improve their quality of health care. Foremost among these organizations is the Institute for Healthcare Improvement (IHI). The IHI is a not-for-profit organization with a mission to improve health by advancing the quality and value of health care (IHI, 2006). IHI attempts to bring change by identifying gaps; helping the public to understand and demand the improvement that is needed and possible; spreading improvement knowledge across the globe; and providing methods, tools, and other supports, largely through partnerships, for thousands of health care organizations to turn knowledge into improved results. IHI initiates and supports innovation efforts, so as to discover, cultivate, and demonstrate the feasibility of new, more capable designs. In terms of health care quality improvement, the IHI orientation is the Deming model of continuous quality improvement. The IHI states that its mission is to "transform health care" by closing the gap between what is known to be the best care and the care that is actually delivered. They work with health care organizations around the world to transform "what-if" thinking—for example, "What if nosocomial infections were reduced to zero?"—into reality.

Legislative Initiatives

In addition to the federal, private, and private/public efforts just discussed, state legislatures have become involved in quality health care issues. For example, several states have passed or have pending legislation that mandates hospitals to disclose their infection rates to the public. The rationale behind these initiatives is that hospitals will improve their Infection Control Programs if threatened by the loss of patients or purchasers to competitors that seem to have better infection control performance than their own. ("Sunlight is the best disinfectant.")

Pennsylvania and Illinois were leaders in this area. Following widely publicized investigative series on preventable deaths attributable to nosocomial infection in the *Chicago Tribune* and the *Pittsburgh Tribune-Review*, Illinois and Pennsylvania instituted policies requiring hospitals to report data on nosocomial infections to oversight agencies and adopted plans to make comparative data on infection rates available to the public. These states were the first to require systematic, ongoing reporting on nosocomial infection data.

The Illinois and Pennsylvania initiatives fall within a clear consumer choice model for addressing nosocomial infections. Rather than compelling hospitals to adopt new infection control practices, the legislation works by publicly disclosing infection rates, which proponents assert will better enable consumers to make appropriate health care decisions as well as provide a market incentive for health care providers to improve infection control in their facilities. Both the Illinois legislation (Hospital Report Card Act) and the new reporting rules promulgated by the Pennsylvania Health Care Cost Containment Council went into effect on January 1, 2004. After the Illinois and Pennsylvania programs were adopted, Missouri and Florida also passed laws instituting nosocomial infection reporting requirements. Finally, a piece of federal legislation titled "The Patient Safety and Quality Improvement Act" was enacted in 2005 (White House, 2005). This legislation created a voluntary, confidential medical errors reporting database and had widespread support from representatives of the health care industry at the time of signing.

Whereas consumer advocates support programs that require public disclosure of quality information such as infection rates, the hospital industry regularly opposes such programs, expressing concern that publicizing quality data will lead to increased tort litigation against providers. It is unclear as of the writing of this book what effects these legislative initiatives will have on the quality of health care. Also, another problem with the "consumer choice" approach is that in most cases consumers do not have a choice. Their doctor tells them what hospital they are going to, or there is only one hospital that is accessible anyway. Furthermore, most people on their way to a hospital are sick enough that they do not want to stop to evaluate their choices and could not do much with the information anyway. They just want to be admitted and taken care of.

EQUITY OF HEALTH CARE

Equity is the second criterion used to evaluate the performance of health care systems.

> Equity or distributive justice is concerned with the fair allocation of benefits and burdens among those who are deserving of care and those who are in a position to pay for it—the two groups may or may not be the same. (Aday et al., 1993, p. 120)

We are concerned about inequities in access to health care as well as inequities in the quality of health care—as measured and evaluated by standards established for structure, process, and outcomes. We use disparities in access and quality of health care to indicate inequity.

The factors that are consistently associated with inequities in health care access and quality are socioeconomic status, race and ethnicity, and geographic location. We find in study after study that people with low income, low education, and low-status occupations; people belonging to minority racial and ethnic groups, particularly African American and Hispanic; and people who live in rural areas or inner cities are more likely to have poor access to care and poor-quality health care (Institute of Medicine, 2003).

Equity and the Quality of Health Care

Is the distribution of quality health care equitable in the United States? An examination of disparities in quality of care suggests that it is not (Fiscella, Franks, Gold, & Clancy, 2000). For example, lower socioeconomic status (SES) is associated with receiving fewer Papanicolaou tests, mammograms, childhood and adult influenza immunizations, and diabetic eye exams. Lower SES is also associated with late enrollment in prenatal care and lower quality ambulatory and hospital care. Racial and ethnic status is linked to quality of care received. Elderly African Americans receive fewer preventive medicine procedures when compared with elderly Whites. African Americans, in general, receive less intensive hospital care, and Hispanic women receive fewer medical procedures and preventive measures as compared to Whites. African Americans have also been found to have higher rates of end-stage diabetic conditions such as amputations, indicating poor-quality ambulatory care.

However, a recent study by the RAND Corporation (Asch et al., 2006) suggests that inequities in health care quality may not be as important as deficiencies in the overall level of quality in the United States. In the RAND study, health care quality differed little between people in different socioeconomic, racial, ethnic, and geographic groups. Rather, the researchers found that health care was mediocre for all groups, equally. The study suggests that disparities in quality of care may be closing, but the overall quality of health care for all Americans needs much improvement. The discrepancy between the RAND study findings and those of previous research had not been resolved at the time this book was written, but it is an important issue that should generate a great deal of research in the future.

Equity and Access to Health Care

Is access to health care equitable in the United States? Here the evidence is quite clear. People without health insurance (or with poor health insurance) have much reduced access to health care. As we have discussed, the United States finances health care through a mixed system, based largely on employer-based health insurance and the public insurance programs for the elderly and disabled (Medicare) and the poor (Medicaid). This patchwork system leaves 46.1 million people without health insurance (U.S. Census Bureau, 2006). Millions more are underinsured, that is, they do not have comprehensive coverage. This can mean high deductibles and copays and limited coverage for a variety of health care services including mental health services, medical equipment, and preventive care (Lee & Tollen, 2002).

The health care access problems of the uninsured are well documented. The uninsured are much less likely to have a "usual place to go" for medical care. If they have a usual place for health care, they are less likely than insured persons to have a physician's office as their site of care. Uninsured adults are more likely to use "safety net" providers such as community health centers, emergency rooms, and public health or free clinics as their usual place for health care. They are less likely than the insured person to see the same health care provider each time they obtain health care. They are more likely to report that they do not get needed health care, and they have fewer ambulatory care visits. Research has shown that uninsured persons are significantly more likely to delay seeking health care. Lack of health insurance has been found to be significantly related to the failure to fill a recommended prescription, and it is found that medications, even when filled, are not taken as directed, but saved or spread out over a longer than prescribed period of time to save money (Kaiser Family Foundation, 2002).

Further, not all Americans have the same probability of being uninsured. National surveys have consistently found that age, socioeconomic status, race, and ethnicity are predictors of being uninsured or underinsured. The majority of the uninsured and underinsured are employed. Typically, 18- to 34-year-olds are the least likely to have health insurance, either because they cannot afford it or because they choose not to be insured, preferring to spend that money on something else. People who have had only a high school education or less schooling are more likely to be uninsured. A higher percentage of Hispanics and African Americans are uninsured compared to non-Hispanic Whites.

Foreign-born noncitizens rank the highest of all in rate of being uninsured (Jonas & Kovner, 2005; Kaiser Family Foundation, 2006).

Another factor leading to inequities in access to health care is geographic location. People who live in rural America and those who live in inner cities have reduced access to health care, even if they have health insurance. These areas often lack health care resources including physicians and other health care providers and facilities, particularly easy-to-reach, comprehensive hospitals. Rural residents generally face a greater financial burden for obtaining care than do urban and suburban residents, and mental health services can be scarce (Reschovsky & Staiti, 2005). Rural areas tend to attract fewer doctors than urban areas. Even though 20% of Americans live in rural areas, only 9% of U.S. physicians practice in rural areas (AHRQ, 2005).

The problem of equity, in both access to and quality of health care, is well known, and there have been efforts to remedy the problem starting early in the 20th century when reformers began to focus on securing universal health care coverage in the United States. The history of the efforts to correct the inequities in the U.S. health care system is described at length in the final chapter—"Health Care Reform."

EFFICIENCY OF HEALTH CARE

Efficiency is the third criterion for judging a health care system. "Efficiency requires that we produce the combination of goods and services with the highest attainable total value, given our limited resources and technology" (Aday et al., 1993, p. 73). Efficiency is either *allocative* or *production*. Allocative efficiency concerns attaining the most valued mix of health care services. Production efficiency refers to producing a given level of health care services at minimum cost. As an example, an allocative efficiency issue is how much to invest in preventive versus curative medical services, whereas a production efficiency issue might concern whether and when to substitute relatively low-cost nurses for higher-cost physicians in the provision of health care services.

At the micro-level of physician practices, hospitals, and other health care settings, efficiency is assessed using (1) production functions and (2) cost-effectiveness, cost-benefit, and related cost-utility analysis (Aday et al., 1993). These analyses are used to determine, for example, which of two equally effective treatments should be recommended to clinicians. If both are effective, the goal of efficiency suggests that the least expensive treatment is preferable. These kinds of decisions are increasingly made by health care payers. For example, the Commonwealth Fund Newsletter (March 2006) reports:

> Washington State's Health Care Authority, which coordinates the Prescription Drug Program for the state's Medicaid, public employee, and worker

> compensation programs, is using an integrated approach to value-based pharmaceutical purchasing. The evidence-based drug review process involves a thorough analysis of quality and effectiveness before applying cost considerations. The process, which includes an evidence-based preferred drug list and supplemental rebates from pharmaceutical manufacturers, is producing savings of about $20 million each year to the state—over 5 percent of its Medicaid fee-for-service drug spending—and about $40 million in combined state–federal spending.

At the macro-level, efficiency analysis is based on comparisons between regions, states, and nations. Often we use international comparisons of health care systems (Aday et al., 1993). For example, we can use World Health Organization (WHO) statistics to contrast the United States with peer nations including Australia, Belgium, Canada, Denmark, Finland, France, Germany, Japan, The Netherlands, Spain, Sweden, and the United Kingdom on numerous indicators of cost and available health care resources. In 2003, the United States was ranked first in proportion of its gross domestic product spent on health services (15.2%) and ranked first in per capita total expenditures on health. At the average exchange rate in U.S. dollars, per capita expenditure was $5,711 in the United States, close to twice as high as in Germany, the country ranked second. Yet, the United States was ranked 9th of 13 in physicians and nurses per 1,000 population, and we ranked 5th of 13 in pharmacists per 1,000 population. The United States ranked 12th of 13 in number of hospital beds per 10,000 population. The United States is spending more per capita on health care and providing fewer basic health care resources—physicians, nurses, pharmacists, and hospital beds. Further, the U.S. rankings on various measures of mortality discussed previously in this chapter (see Population Health Outcomes) also suggest that the U.S. health care system is not efficient, because our rankings on life expectancy, quality-of-life adjusted life expectancy, infant mortality, and other mortality rates are consistently lower than those of peer nations spending less on health care.

A NATIONAL SCORECARD

There is increasing interest in evaluating the performance of the U.S. health care system comprehensively, rather than piece by piece. One substantial effort is that of Schoen, Davis, How, and Schoenbaum (2006). They have developed a scorecard that evaluates the U.S. health system on quality, equity, and efficiency by comparing national scores to benchmarks. This macro-level evaluation of the health care system uses 37 indicators, many of which are composites, some of which are old and others newly developed for the scorecard. There are five broad domains: health outcomes, quality, access, efficiency, and equity. Within the domain of quality, there are four subdomains: effectiveness, coordination of care, safety, and patient-centered, timely care. The benchmarks generally reflect the performance of top-performing groups, but not "perfection." They are measured on a scale with a maximum score of 100.

The scorecard combines many old indicators of health system performance with new ones, but the story it tells is familiar. Based on the data presented in this chapter, it is quite clear that the U.S. health care system could use improvement. The benefit of the scorecard is that it has assembled multiple measures, has quantified them on the same scale, and can provide a composite score, which we can use now as a benchmark for improvement efforts. The authors conclude:

> The overall picture that emerges from the scorecard is one of missed opportunities and room for improvement. Despite high expenditures, the United States lags behind other countries on indicators of mortality and healthy life expectancy. Within the United States, there is often a substantial spread between the top and bottom groups of states, hospitals, or health plans as well as wide gaps between the national average and top rates. As a result, the U.S. performance relative to benchmarks averages near 50 for efficiency to 70 for healthy lives, quality, access, and equity, for an overall average score of 66 across the main domains of performance. On multiple indicators, the United States would need to improve its performance by 50 percent or more to reach benchmark countries, regions, states, hospitals, health plans, or targets. (p. w472)

DATA AND INFORMATION TECHNOLOGY

Every major organization with an interest in health care performance recognizes the need for better data in order to benchmark the current situation and then determine if improvements have occurred in quality; access and equity; and cost and efficiency. These organizations include the payers for health care such as the Medicaid and Medicare programs and private health insurance companies; providers of health care including hospitals; private foundations such as the Robert wood Johnson Foundation with a focus on health policy; the public-private partnerships such as the National Quality Forum and JCAHO; and many consumer groups such as Consumers Union, which has an interest in nosocomial infection control. It is generally agreed, as Hanrahan and his colleagues write, "Proper functioning of health care systems requires an advanced health information network that supports clinical care, personal health management, population health, and research. But this infrastructure does not yet exist in the United States" (Hanrahan, Foldy, Barthell, & Wood, 2006, p. 16).

The health information systems needed to evaluate performance are both internal to health care organizations and external between health care organizations. The latter are called regional health information organizations or RHIOs.

The electronic medical record (EMR) or electronic health record (EHR) is one of the basic sources of data for internal health information systems as well as for RHIOs, but both types of systems will include other data as well. These systems will be used to: (1) conduct clinical outcomes studies; (2) measure population health outcomes such as morbidity and mortality rates for regions, states, and the nation; and (3) design and evaluate interventions to improve clinical practice; and increase access, equity, and efficiency.

Office of the National Coordinator for Health Information Technology

Perhaps the most influential health information initiative is that of the Office of the National Coordinator for Health Information Technology (ONC) located in the U.S. Department of Health and Human Services. The ONC has four sequential goals: informing clinicians, interconnecting clinicians, personalizing health care, and improving population health (U.S. Department of Health and Human Services, 2006). The ONC initiative in health information includes a great deal of private-sector reliance on developing communication standards, software, hardware, and training for those who will use the system.

Informing Clinicians

Although using EHRs promotes quality and efficiency in health care settings, few health care organizations and practices in the United States have computerized their medical records as of the writing of this book. Acceptance is growing, and many hospitals, in particular, have or are obtaining electronic medical record systems. However, most small practices still use paper records exclusively. The ONC has identified several reasons for the slow adoption of EHRs among health care organizations and practices, including the cost of hardware, software, and training and disruption of the present workflow. Therefore, one goal of the ONC is to arrange for the investment in EHRs to be shared between clinicians and others in the health care system. The office is exploring financial and nonfinancial incentives for investors. Second, the ONC will certify EHR software vendors to help clinicians choose vendors with standard products. Third, the ONC will develop a strategy to provide access to EHRs in rural and underserved areas.

Interconnecting Clinicians

The ONC initiative is patient record based, and the second goal of the initiative is to provide access to patient health information in any health care setting, any place in the United States

> The current practice of using separate paper files for one patient in multiple clinical settings is limiting and can compromise the quality of healthcare received. Conversion to an EHR system is necessary but not sufficient to solve the portability problem. That's because each clinician or medical practice may purchase an EHR system from different vendors, which may not be compatible with one another. Unless EHR systems can communicate, they are simply islands of data where patient information does not flow seamlessly from one clinical setting to the next. Without clinicians' ability to exchange information with one another electronically, whether it is across town or across the country, patients' information may not be readily available when and where it is needed. To remedy this, an interoperable system based upon a common architecture must be developed. Patient records would then be available electronically virtually anywhere in the country.

The ONC strategy to create a national health care information network that can be accessed by any health care provider is to foster the development of RHIOs; develop a common set of communication standards to be used by the RHIOs through a National Health Information Network (NHIN); and apply the same standards as developed for the private health care sector to government health care.

Personalizing Health Care

The ONC's third goal is to equip patients to participate actively in their own health care and in health care decision making through the development of a national health information system.

> Innovations in technology are emerging to give patients electronic access to their health record and the ability to gather specific information tailored to their illnesses, chronic conditions and health characteristics. Widespread adoption of these innovations, via a concept known as a Personal Health Record (PHR), will revolutionize consumer health care decision-making.

The ONC's strategy for facilitating patient participation in their own health care involves promoting the use of PHRs, stimulating informed consumer choice, and encouraging the use of telehealth systems to improve the quality and cost-effectiveness of health care in rural and underserved areas.

> The PHR is an electronic application through which individuals can maintain and manage their health information (and that of others for whom they are authorized) in a private, secure, and confidential environment. . . . For example, a PHR can be

> used to effectively synthesize an abundance of health information and tailor it to a patient's specific needs.

In order to stimulate informed consumer choice, the ONC supports providing patients or potential patients with information about the quality of their health care providers and organizations and the clinical effectiveness of treatments. The ONC supports and will promote "efforts in the federal government and elsewhere to develop useful clinical performance measures in hospitals, nursing homes, home health agencies and other settings of care."

Population Health

The fourth goal of the ONC is to improve population health through the use of the proposed national health care information system. The ONC supports the use of the system to unify public health surveillance; streamline quality and health status monitoring of populations; and accelerate the rate at which scientific discoveries in medicine are disseminated into medical practice.

> By knitting together a unified network of surveillance systems from hospital organizations, physician practices, public health agencies and other sources of incoming data on medical threats, public health professionals will have the relevant information they need to react early or issue preventive measures.

A Health Information Example: National Healthcare Safety Network

The CDC developed an Internet-based data collection and information retrieval system called the National Healthcare Safety Network (NHSN) that became available in 2005. This network is an expansion and enhancement of current surveillance and monitoring capabilities, and once implemented will replace three existing CDC surveillance systems: NNIS, the National Surveillance System for Health Care Workers, and the Dialysis Surveillance Network (CDC, 2005b).

The goal is to create a common interface Web-based system for accumulating, exchanging, and integrating relevant information and resources among stakeholders, in an effort to support local efforts to promote patient safety. The two main aspects of the network are reporting of adverse events—including nosocomial infections—and disseminating information on preventing such events. Ultimately, the CDC aims to work with other public health agencies to create a national system integrating data from a variety of surveillance systems into a national aggregate data repository through which health care providers and federal, state, and private stakeholders can exchange data and retrieve information. In the beginning, however, the system will be restricted to providers submitting data in the areas currently covered by the three systems identified earlier, with the CDC acting as the central repository.

Participation

A major benefit of the proposed system will be the collection of data that essentially have been unavailable, as CDC surveillance systems have been focused on a limited number of facilities and procedures. In the current NNIS system, membership is restricted to only approximately 315 hospitals. Participating hospitals must also meet certain thresholds of bed number and size of infection control staff. Under the NSHN, all bona-fide health care delivery entities (participants in the Centers for Medicare and Medicaid Services, members of the American Hospital Association, and Veterans Administration stations) whose practice generates relevant data will be encouraged to participate. Nationwide implementation of the system will be phased in, first being available to existing CDC surveillance participants, then to their affiliates, and finally to all health care entities. Nationwide availability of the system was expected sometime in 2006.

Surveillance and Data Collection

The system will be divided into various adverse event modules, including device-associated adverse events, procedure-associated adverse events, and medication-associated adverse events. The infection data collected will be similar to that collected through the NNIS, but with important differences.

Device-Associated Module. Currently, in the intensive care unit and high-risk nursery components of the NNIS system, data are collected on incidence rates and distributions for infections at all sites. In the NHSN system, infection data will initially only be collected for central-line associated bloodstream infections, catheter-associated urinary tract infections, ventilator-associated pneumonia, and infections related to dialysis treatments. Although data on fewer infection sites will be collected under the new system, surveillance will not be limited to the ICU and HRN only. Facilities may also choose to collect and report device-associated infection data for specialty care units, other wards, long-term care facilities, and home therapy. This will provide further flexibility in selecting the event and population under surveillance so that facilities may better tailor surveillance activities to their particular needs.

Procedure-Associated Module. Data will be collected on in- and outpatients undergoing NHSN-defined operative procedures. Under NSHN, seven more categories of procedure are covered than under NNIS, and whereas in the NNIS system only information on surgical site infections is collected, under the NSHN information on other surgical complications will also be collected. Further, the data collection protocols being designed for the NSHN will allow for more robust information on infections in surgical patients, including the ability to link bloodstream infections, pneumonia, and urinary tract infections occurring after an operative procedure to the procedure and the ability to monitor—by type of operation—procedure-associated pneumonia regardless of whether a ventilator is used.

Medication-Associated Module. Antimicrobial resistance and antibiotic prescription monitoring will remain essentially unchanged in the transition from current surveillance activities to the NSHN.

Data Analysis and Feedback

The Web-based system and central data repository being designed for the NSHN will allow participants to share data in a timely manner between users and public health agencies as well as among users (e.g., a multihospital system). The system will include data analysis wizards and statistical calculators, which will allow facilities (or groups of facilities) to generate custom reports, line lists, tables, graphs, and control charts easily. The ready availability of customizable internal and comparative analysis of infection rates is designed to facilitate the ability of health care providers to engage in continuous performance improvement.

The system will also include a repository of prevention tools, lessons learned, and best practices. It is also designed to provide automatic feedback including alerts for selected adverse events or near misses, identifying sentinel events that require an immediate response and need for root cause analysis, and identifying unusual events that might signal a preventable threat to patient safety.

CONCLUSIONS

We have discussed health care system performance from the perspective of three recognized criteria: (1) quality of health care; (2) equity of health care; and (3) efficiency of health care. Of the three, we have spent the most time on the quality of health care, mainly because over the past 20 years an increasingly large effort has developed to measure and improve quality at the micro-level. Evaluations of clinical effectiveness and patient safety are based on empirical studies that provide evidence about best practices and are the foundation of clinical practice guidelines. These studies have been well funded, and the practice guidelines that have resulted are increasingly used to evaluate the performance of health care providers—individual providers and organizations. Public as well as private organizations are involved in this effort.

Equity in access to and quality of health care, although not a major focus of this chapter, is a major concern to policy makers in the United States. Our history is replete with attempts to make our system equitable by extending health care coverage to all Americans. This history is detailed in the final chapter, but no attempts have been completely successful. The efficiency of the health care system is another area that, although important, has received less attention in this chapter. However, many of the quality initiatives are driven by two equal interests: making our system more efficient.

Finally, we have briefly touched on the importance of data for evaluating health care performance. In the area of health information, there is tremendous activity, partially driven by improvements in the technological capability to computerize information. The electronic medical record will be the standard very shortly for all health care providers—individual and institutional—and the digitizing of this information and other information about patients will follow. Again, this development will have a significant impact on the way care is delivered and how easily it is able to be evaluated. Thus, health information systems, too, will affect the work and future of all health professionals.

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Chapter 8

From Prepaid Group Medical Practice to Managed Care

INTRODUCTION[1]

In October 1996, *Consumer Reports* magazine ("Can HMOs Help," 1996) noted: "The public didn't vote for managed care. Nor did its representatives in Congress. Yet health maintenance organizations (HMOs) are swiftly reshaping the way Americans get their health care." At about the same time, Dr. C. Everett Koop (1996), the Surgeon General of the United States under President Ronald Reagan, observed:

> The biggest surprise in the past two years has been the rapid growth of a system known as managed care. Millions of Americans have been shifted into health-maintenance organizations, dramatically restructuring the financing and delivery of health care. The original impetus for managed care came from physicians who wanted the freedom to treat their patients without being worried about whether they could pay for each visit, test, or procedure. In the early HMOs, cost containment was an unexpected benefit, not a primary purpose. ... But now the rapidly proliferating HMOs—most of them investor-owned and for profit—seem to be interested firstly in managing costs and only secondarily in maintaining health. (p. 69)

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[1] The HMO/MCO world is a rapidly changing one. Three valuable Web sites for keeping up with it are those of the Kaiser Family Foundation, www.kff.org (also very valuable for up-to-date information on the health care delivery system in general); Interstudy, www.hmodata.com; and the American Association of Health Plans, www.aahp.org.

Both of these statements are still remarkably current.

Strictly speaking, the term *health maintenance organization* (HMO) refers to just one of the organizational forms that is covered by the terms *managed care* (MC) and *managed care organization* (MCO). Historically, the introduction of the term *HMO* preceded that of the terms *MC* and *MCO* by some time. The first, when used under its strict definition, describes one particular set of health services organizations. The latter two have a broader meaning.

In the common health care system parlance of today, however, it happens that the terms are often used interchangeably, as in the 10-year-old *Consumer Reports* quote. Nevertheless, in this chapter, *HMO* refers to a specific health care delivery organizational form, whereas *MC* and *MCO* are used to refer to the whole group of organizational forms subsumed under the generic term *managed care*, described later. In other quotations in this chapter, the reader may well find the terms used interchangeably, as in the preceding quote.

As the MCO system continues to haphazardly restructure the U.S. health care delivery system, Dr. Koop's last observation frames the central question concerning the managed care revolution. As Dennis Kodner (personal communication, 1996), Dr. H. Jack Geiger (1997), Dr. Thomas Bodenheimer and colleagues (Bodenheimer, Lo, & Casalino, 1999), and the screenwriter Ilene Chaiken (2002) have also put that question (and no one of more recent vintage has put it any better): Is this revolution about managed *cost* (and potential profits), or about managed *care* (and potential improvements in the quality of medical care)?

In 1996 *Consumer Reports* ("Can HMOs Help," 1996) observed further:

> Many HMOs do offer high-quality treatment. But many people who join an HMO give up a lot: the ability to choose where and how they are treated; long-standing relationships with their [present] doctors, who might not be part of the HMO; convenient access to care; and sometimes, care that is essential to their health.

In 2001, Dudley and Luft (2001) noted:

> Patients have had mixed reactions to managed care; they like the low co-payments and reduced paperwork but view some managed care practices as emphasizing cost control over quality. In fact, there is widespread concern among the public, physicians, and legislators about the effect of managed care on the quality of care. (p. 1087)

Also in 2001, a survey done by the Kaiser Family Foundation and the Harvard School of Public Health put it quite succinctly: "Americans' perceptions of the managed care industry have been substantially more negative over the past several years [than they were previously], but there has been little change recently." And apparently those perceptions still are negative. Looking at the situation from a broader perspective raises other issues regarding managed care. MC does not, nor by its very nature can it, solve many of the major problems faced by the health care delivery system: the marked geographic maldistribution of facilities and personnel; the serious imbalances within the medical profession between specialists and generalists and a probable oversupply of physicians in toto with an undersupply of primary care specialists; a growing shortage of registered nurses and other hospital specialized personnel; the severe lack of emphasis on both personal prevention and public health; a medical focus on the uncommon but glamorous as contrasted with the common but mundane; an overemphasis on the use of technology and drugs in diagnosis and treatment as contrasted with the use of interpersonal communication and the enhancement of self-efficacy for health; and significant deficits in health sciences education and biomedical research policy and practice in relation to public health and health care and services needs. It is in this context, then, that we proceed with our examination of managed care, beginning with its first organizational precursor, medical group practice, which by now has a fairly long history.

GROUP MEDICAL PRACTICE

Introduction

Modern managed care may be said to have evolved from prepaid multispecialty group medical practice, a form of physician organization that began in this country about a century ago (Fox, 1996; MacColl, 1966; Mayer & Mayer, 1985). Over time group medical practice has slowly and gradually become the most common organizational form, changing from solo physician practice. Detailed data on physician profiles and socioeconomic characteristics are found in an annual publication of the American Medical Association, *Physician Characteristics and Distribution in the United States*.

Group medical practice has taken various shapes: private fee-for-service, single- or multispecialty group practice; prepaid multispecialty group practice; the health maintenance organization, including the independent practice association; and the newer forms of physician association that have appeared as MC has grown and developed. Other than in the single-specialty variant of private fee-for-service group practice, virtually all groups in the other forms are of the multispecialty variety. At least five elements of medical practice can be shared in one way or another by a group of physicians: space, supporting staff, practice income, practice expenditures, and the medical work. Many of the numerous possible permutations and combinations of these elements appear in various forms throughout the U.S. health care delivery system.

Physicians in Group Practice

The American Medical Association (1996) has defined *group medical practice* as:

> The provision of health care services by three or more physicians who are formally organized as a legal entity in which business and clinical facilities, records, and personnel are shared. Income from medical services provided by the group are treated as receipts of the group and distributed according to some prearranged plan. (p. 1)

The definition that appears in *Managed Health Care Simplified: A Glossary of Terms* (Austrin, 1999, p. 90), is very similar to this one.

Private Group Medical Practice

Private fee-for-service medical groups may be single specialty or multispecialty. Single-specialty groups are common in surgery and the surgical subspecialties (e.g., urology and orthopedics), obstetrics and gynecology, anesthesia, and radiology and are found in increasing numbers in family practice, internal medicine, pediatrics, and the medical subspecialties (e.g., cardiology and neurology) as well. There are some private fee-for-service multispecialty groups, but these are less common.

The major advantages of private group medical practice for physicians are cost sharing for space and supporting staff and services, the ability to engage allied health personnel to an extent usually not feasible for the solo practitioner, the sharing of coverage responsibilities for nights and weekends, the ability to readily take vacations and attend academic meetings without having to make special coverage arrangements each time, and ready access to informal consultations when faced with a difficult diagnostic or therapeutic problem.

Prepaid Group Practice

Prepaid group practice (PGP) first appeared on a very limited basis in the 1890s (MacColl, 1966; Mayer & Mayer, 1985). It took two revolutionary steps forward in how physicians organized for practice. First was the payment to the physicians of a flat fee on a regular basis on behalf of each potential patient to guarantee medical coverage for that person during some specified time period, usually a year. This fee was paid whether or not medical services were used and regardless of how much medical service was used. The practice of paying a flat fee to a physician to provide a stipulated range of services for a patient for a given time period, regardless of how much or how little care the patient needs or uses, came to be known as *capitation* (now one of the two senses in which the term is used, see chapter 6).

Organizationally, linking the payment for medical care in advance of any use, with the provision of the medical care itself contrasted PGP and its system of provider payment with indemnity health insurance. As described in chapter 6, *indemnity health insurance* was the type of insurance traditionally provided by both Blue Cross–Blue Shield and the commercial insurance companies before the advent of managed care (Tufts Health Care Institute, 2006): "Insurance that reimburses an individual for fees paid for medical services after they are performed. Payments may be made to the patient or directly to the providers, on a retrospective, fee-for-service basis."

Indemnity health insurance was commonly used in both fee-for-service private medical practice and item-of-service hospital reimbursement. However, those sources of care are not employed by, contracted to, or owned by the insurer. The insurer simply pays the freight, according to some agreed-to schedule; the financial responsibility (or risk) for the health care provided is born by the insurer.

Under the indemnity system, beneficiaries (in most cases, the beneficiaries' employers) pay sums (usually called premiums) to the insurance companies, which in turn pay the providers for the care used by the beneficiaries (see chapter 6). Under indemnity insurance, payment is made on a fee-for-service or item-of-service basis, after the fact (or *retrospectively*). There are usually some personal payments (*deductibles* and *coinsurance*) that the beneficiaries must make themselves, as well as specified limits in dollars and units/types of service that are covered by the insurance package. This was the traditional type of insurance provided by both Blue Cross–Blue Shield and the commercial insurance companies, before the advent of managed care. It was commonly used in both fee-for-service private medical practice and item-of-service hospital reimbursement.

Some Historical Background

The two principal modern organizational pioneers in this field were the Health Insurance Plan (HIP) in New York City and Kaiser-Permanente on the West Coast (MacColl, 1966; Smits, 2002, pp. 290–292). Both were founded during the Great Depression of the 1930s. They entered periods of significant growth after World War II. As had their much smaller, much poorer predecessors in the early 20th century, they encountered much resistance from "organized medicine," that is, the American Medical Association and the state and county medical societies.

The resistance was based primarily on an antipathy to the ways in which these groups paid their physicians. One method was straight salary. The other was capitation, described earlier. Both methods were antithetical to the fee-for-service, piecework system that they were to replace.

Organized medicine also did not like the idea of providing medical care under contracts negotiated between groups of physicians and groups of patients. Organized medicine always claimed that their opposition to capitation and contracts had nothing to do with money, but with principle. It "distorted incentives," "made the doctor a wage slave," "interfered with medical judgment," "put a corporation between the physician and the patient," and "removed the symbol [the private fee] of the special relationship between doctor and patient." (It would do well to remember the old adage, "When they say 'it's not the money,' it's the money.") As both managed care and capitation spread as the preferred managed care mechanism for paying physicians, in part the outcomes that organized medicine so feared did come to pass. But because the primary engineers of this change were the politically well-connected powers in the insurance industry rather than a small number of politically poorly connected "do-gooders" of an earlier era, the medical profession found itself unable to resist the changes. It was indeed not coincidental that in the 1990s physician incomes began to decline ("The Squeeze," 1996), at least for the time being.

Forms of Prepaid Group Practice

There are two major forms of PGP. In the *staff model*, the physicians work directly for the PGP organization on a salaried basis. HIP provided the classic example of the staff model PGP. In the *group model*, the physicians join together to form their own company. It in turn contracts to provide medical services with the financing and administrative entity that in turn sells the prepaid health care coverage package to beneficiaries or their employers. In this case, the physicians' group company pays its individual members, either on a salary or on a capitation basis. Kaiser-Permanente was the classic example of the group model PGP.

The Advantages of Classic Prepaid Group Practice

As George Silver (1963) and William MacColl (1966) noted back in the 1960s, there are many potential advantages of PGP. For the physicians, they include the opportunity to share knowledge and responsibility, the establishment of a rational division of labor between generalist and specialist, improved quality of care, regularly allotted time for continuing medical education, a regular work schedule, guaranteed (although not necessarily high) income, a fringe benefit package including malpractice insurance, better access to ancillary personnel and services, and freedom from concerns with the business aspects of medical practice.

For the patients, the advantages include no or low charges at time of service, one-stop shopping for 24-hour, 7-day service, continuity of care, and protection against unnecessary hospitalization and surgery. The primary disadvantages for patients center around the possible development of a clinic atmosphere, loss of choice of physician and hospital, delays in receiving service, locational inconvenience, and impersonality.

Typically, the most serious problem with PGP has been that such practices do not often achieve their significant potential for improving medicine. Dr. E. Richard Weinerman, an early advocate of prepaid group practice, reviewed the experience in 1968. He was quite disappointed with what he found. His observations, although made a long time ago, still apply to many current HMOs and other MCOs. Many of the organizational advantages for the physicians have been implemented, but clinical medicine often remains largely a matter for individual, rather than true group, practice. “Group conferences,” Weinerman (1968) said, “medical audits and informal office consultations are, in my experience, more common in the descriptive literature than in daily practice” (p. 1423). He concluded:

> Perhaps most disappointing has been the hesitation on the part of most medical groups to effect changes in the “way of life” of the medical team itself. This would involve acceptance by the group as a whole of collective responsibility for the health of its patients or members … would mean actively reaching out into the community for … early detection … [and] identification and special protection for those at specific risk of disease … [and] would imply particular concern for those patients who do not use the service. … It implies as much concern with rapport as with diagnostic labels, as much with education as prescription. (p. 1429)

In our era, an addition to the Weinerman conception of group practice would be a clear focus on the health of the public it served, as well as on that of each of its individual members (Koplan & Harris, 2000; Levi, 2000).

Just as with Weinerman’s observations in the 1960s, early reflection on the reality of buzz phrases describing the supposed advantages of managed care—“physician–patient partnership,” “putting prevention into practice,” “make use of community resources,” and “work from the epidemiology of the practice”—was that they were likely to be “more common in the descriptive literature than in daily practice.” Today there is still no evidence that, with an occasional exception, much progress has been made along these lines in the intervening years since Weinerman made his somewhat acerbic comments.

HEALTH MAINTENANCE ORGANIZATIONS

From PGP to HMO

The trail from PGP to managed care was blazed in part by the health services entities known as health maintenance organizations (HMOs). (Recall that *HMO* is sometimes used to mean all of the MCO forms. As noted, in this chapter the term *HMO* means HMO as discussed in this section.) The HMO movement was originally sponsored by the first Nixon administration (1969–1973). President Nixon was interested in the idea because it had been shown that PGP could save significant amounts of money, primarily by reducing hospitalization rates (Roemer & Shonick, 1973). Although the organizational form produced the desired outcomes, there happened to be two problems with using the name *prepaid group practice* to describe what the Nixon administration wanted to do.

First was the label itself. It happened that, in attacking the institution of PGP over the years, organized medicine had liberally red-baited it. That was hardly something a president who had first come to national prominence at the height of the post–World War II McCarthyite anti-Communist hysteria would want to be associated with. Second, the developer of the HMO concept, Dr. Paul Ellwood, had in mind not only prepaid group practice but also prepaid individual practice, first known as the "foundation for medical care," later as the independent practice association (IPA; see later discussion).

Although only in the latter stages of development did PGP take on financial and operational responsibility for hospital as well as ambulatory care, the whole inpatient/outpatient package was built into the HMO concept from the beginning, for reasons of cost containment if nothing else. Thus, a new name for the old entity with significant new elements had to be found. The name that Dr. Ellwood himself came up with was *health maintenance organization*.

Definitions

A simple definition of the term *HMO* was provided by Shouldice (1991):

> An HMO is defined as any organization, either for-profit or nonprofit, that accepts responsibility for providing and delivering a predetermined set of comprehensive health maintenance and treatment services to a voluntarily enrolled population for a pre-negotiated and fixed periodic premium payment. [In short], HMOs are organizations that insure groups of individuals against the costs of medical services and also provide those medical services. (pp. 13, 449)

This is similar to the definition of PGP presented earlier, except that group practice per se is not specified. (See also Austrin, 1999, pp. 95–96.) Luft identified the characteristics of HMOs in 1980 as follows:

1. The organization assumes contractual responsibility to provide or arrange for a package of health care services, at a minimum, hospital care and physician services. The HMO assumes a set of legal obligations, set forth

in a written contract that also specifies the premium to be paid for that provision.
2. The organized delivery system serves an enrolled and defined population, with enrollment required for a specified minimum period of time.
3. HMO members are enrolled on a voluntary basis.
4. The HMO receives a fixed, periodic payment, independent of the volume of services provided to each enrollee, from the firm or agency paying for the coverage for that enrollee. This is a capitated (patient-service) payment, as opposed to a capitated (provider) payment.
5. The provider/financing organization assumes financial risk (i.e., of a financial loss should the accumulated capitation payments not cover the cost of providing the contracted for services to all of the enrollees).

Today, the National Center for Health Statistics (NCHS, 2007) defines *HMOs* as follows:

> An HMO is a health care system that assumes or shares both the financial risks and the delivery risks associated with providing comprehensive medical services to a voluntarily enrolled population in a particular geographic area, usually in return for a fixed, prepaid fee. Pure HMO enrollees use only the prepaid capitated health services of the HMO panel of medical care providers. Open-ended HMO enrollees use the prepaid HMO health services but, in addition, may receive medical care from providers who are not part of the HMO panel. There is usually a substantial deductible, copayment, or coinsurance associated with use of nonpanel providers.

Additional complexities arise that must be taken into account (Barton, 1999; Dudley & Luft, 2001). First, in certain locales, there is competition for patients among two or more HMOs. Thus, an HMO does not necessarily serve a defined population in a defined geographic area. Second, the enrollment profile of any one HMO is now constantly changing as employers and, in cases where employees have multiple-choice options, beneficiaries move from one HMO to another. (Medicare beneficiaries electing to use an HMO under Medicare+Choice may change membership each month if they so choose.)

Third, for certain beneficiaries, membership in a given HMO is not necessarily voluntary: Some employers offer only one health service option to their employees or make one HMO more desirable than other plans through financial and other incentives to the employee. In this case, if the employee wants to take advantage of an offered health care benefit, he or she can use only an HMO (rather than a traditional fee-for-service provider), and it must be the HMO that the employer selects. Fourth, unless one adopts a very broad definition of *medical group practice*, many HMOs cannot be characterized as one.

Complicating the picture even further, certain entirely new organizational forms have arisen over the past 20 years. It was the increasing number of permutations and combinations of the various organizational forms that led Professor Kodner to his “when you’ve seen one, you’ve seen one” conclusion. It would seem to be more apt than ever in the middle of the first decade of the 21st century.

Indeed, in the 1990s in addition to the newer definition of the HMO, a newer typology of HMO, and then managed care forms, was developed. The HMO typology, stemming originally from the early 1970s, reflected the adaptation of PGP to the HMO model and the addition to it of the independent practice association form (Austrin, 1999; Barton, 1999, Table 2.1; Shouldice, 1991, pp. 96ff). The following definitions are from the National Center for Health Statistics (2007):

1. *Staff model*. “A type of closed-panel HMO (where patients can receive services only through a limited number of providers) in which physicians are employees of the HMO. The providers see members in the HMO’s own facilities.”
2. *Group model*. “An HMO that contracts with a single multi-specialty medical group to provide care to the HMO’s membership. The group practice may work exclusively with the HMO, or it may provide services to non-HMO patients as well. The HMO pays the medical group a negotiated per capita rate, which the group distributes among its physicians, usually on a salaried basis.”
3. *Independent practice association (IPA)*. “A type of healthcare provider organization composed of a group of independent practicing physicians who maintain their own offices and band together for the purpose of contracting their services to HMOs, Preferred Provider Organizations (PPO), and insurance companies. An IPA may contract with and provide services to both HMO and non-HMO plan participants.” The physicians remain in their offices, which they own and in which they see HMO enrollees. There is no group practice at any level of abstraction and no pooling of either medical or ancillary service resources. The physicians may be paid on either a capitation or fee-for-service basis by the IPA central organization.
4. *Network model*. “An HMO model that contracts with multiple physician groups to provide services to HMO members; may involve large single and multi-specialty groups.”
5. *Mixed*. “An HMO that combines features of more than one HMO model.”

One major difference between group and staff model HMOs, on the one hand, and IPAs, on the other, is that the former have *closed* medical staffs; that is, the HMO or medical group has full control over its members, whereas in most cases any physician who can meet the (usually minimal) membership qualifications can join an IPA, at his or her option. It should be noted that, although for the most part any physician can join any IPA, the IPA medical manager usually has the power to "deselect" any physician who does not abide by the IPA's rules and procedures. Just as there are limitations in using and applying the original definition of an HMO, by the end of the 1990s there were some still newer organizational forms that the earlier HMO typology did not cover (Barton, 1999, Table 2.1). We review some of these forms later, in the section on managed care.

HMOs, Entering the 1990s and Into the 21st Century

Among the developments that were undertaken by HMOs as they prepared to meet the challenges of the 21st century were the following:

- The introduction of point of service plans, allowing members to use non-plan providers by paying an additional fee. The point of service (POS) plan (NCHS, 2007) "allows members to choose to receive services from a participating or non-participating network provider, usually with a financial disincentive for going outside the network. More of a product than an organization, POS plans can be offered by HMOs, Preferred Provider Organizations, or self-insured employers."
- Increasing cooperation between HMOs and major health insurers such as Blue Cross.
- Acceptance of workers' compensation cases.
- Expansion of health promotion/disease prevention, work site safety, and employees' assistance programs. (The original function of Employee Assistance Programs [EAPs] was to serve employees with addictive behavior problems. Some have expanded their work well beyond that arena.)

Also becoming more common is the network model, a hybrid form that usually has at its center an HMO, commonly of the IPA type, then points of service (Hagland, 1996). It allows HMO patients to go outside of plan to providers of their choice. These providers are then paid on an indemnity basis, with the patient bearing a significant deductible/coinsurance burden. The increase in the availability of point of service plans has continued in response to patient demands. Of course, only those persons who can afford the cost of such plans, or who work for employers who can, are able to take advantage of such plans.

MANAGED CARE

Prologue

One view of managed care today is conveyed by a “poem” that was circulating on the Internet in 2002:

> And God populated the earth with broccoli and cauliflower and spinach and green and yellow vegetables of all kinds, so [m]an and [w]oman would live long and healthy lives.
> And Satan created McDonald’s. . . .
> And God created the healthful yogurt, that [w]oman might keep her figure that [m]an found so fair.
> And Satan froze the yogurt, and he brought forth chocolate, nuts and brightly colored sprinkle candy to put on the yogurt. . . .
> And God brought forth running shoes. . . .
> And Satan brought forth cable TV with remote control. . . .
> And God brought forth the potato. . . .
> And Satan peeled off the healthful skin and sliced the starchy center into chips and deep-fat fried them. . . .
> And [m]an clutched his remote control and ate the potato chips. . . .
> And Satan saw and said, “It is good.”
> And [m]an went into cardiac arrest.
> And God sighed and created quadruple bypass surgery.
> And Satan created the HMO.

Definition

The definition of *managed care* is undergoing constant change. Several of the principal definitions that have appeared over time are presented next. Just as MC itself has evolved from the HMO, so have the definitions of MC evolved from the definitions of HMO.

Looking at the situation from the perspective of the primary purchaser of health care cost coverage (most often the employer), rather than from that of either the provider or the patient, an early observer of the MC phenomenon, Peter Fox (1990), wrote:

> “Managed care” . . . broadly defined, encompasses any measure that, from the perspective of the purchaser of health care, favorably affects the price of services, the site at which the services are received, or their utilization. As such, it represents a continuum—from plans that, for example, do no more than require prior authorization of inpatient stays, to the staff model HMO that employs its doctors and assumes risk for delivering a comprehensive benefit package. Ideally managed care should not simply seek to reduce costs; rather, it should strive to maximize value, which includes a concern with quality and access. (p. 1)

Barton (1999) offered a succinct definition of managed care: “In managed care, both patient utilization and provider practices are managed by an entity that has fiduciary interest in the interactions between them” (p. 26). Austrin (1999) went on to offer a normative definition:

> Managed care [is a] system that uses financial incentives and management controls to direct patients to providers who are responsible for giving appropriate, cost-effective care. . . . [M]anaged care systems are intended to control the cost of health care by emphasizing prevention, early intervention and outpatient care. (p. 1118)

The common techniques that MCOs (and, indeed, HMOs before them) use to control expenditures are *precertification* for hospital admission and the use of many diagnostic and therapeutic interventions, and what is called *case management*. Under precertification, the responsible physician obtains from some central office of the MCO the permission to proceed along a certain medical line of investigation and treatment before actually proceeding to do so. Case management is keeping close track of what is happening to hospitalized patients and making sure that their care and discharge planning follow along preset lines as indicated by the admitting diagnosis, unless there are very good medical reasons to deviate from them.

There are a number of different forms of MCOs (Barton, 1999, pp. 31–41). The range can be seen as a continuum, beginning with managed indemnity (adding some elements of cost control, precertification, and case management to indemnity insurance) and ending with the integrated delivery system (see later discussion). The most common of these forms are:

- Health maintenance organization (HMO, as previously covered).
- Preferred provider organization (PPO). “A PPO is a type of medical plan where coverage is provided to participants through a network of selected health care providers (such as hospitals and physicians). The enrollees may go outside the network, but they would pay a greater percentage of the cost of coverage than within the network” (NCHS, 2007). These are groups of independent providers (usually private practitioners or private medical groups) that have contracted with an insurer to provide named services at fixed fees. (Unlike most IPAs, the PPO does not focus on the provision of primary care or comprehensive care, but is used more commonly for physicians providing specialty diagnostic and therapeutic procedures.) The fees are set below the prevailing market rate. The insurer’s beneficiaries are given a list of the preferred providers. Although the patients do not have to choose a provider from the list, they are guaranteed that if they do so, there will be no or low copayments. The advantage to the insurer is cost saving; to the provider, it is a guarantee of work.

- Exclusive provider organization (EPO): similar to the PPO, except that the beneficiary must choose a physician on the insurer's list if he or she is to receive any reimbursement for the costs of care.
- Independent practice association (IPA, previously covered).
- Independent practice organization (IPO): similar to an IPA, but whereas in the IPA the physicians deal with one insurer, in an IPO an organized group of independently practicing physicians accepts patients and payments from more than one insurer.
- Physician hospital organization/combined provider organization (PHO/CPO): a variant of the PPO/EPO/IPA/IPO concept that is organized by a hospital and/or its medical staff. There are many possible combinations of insurance mechanisms, administrative forms, benefit packages, use of copayment, and means of physician and institutional reimbursement. They are usually formed to provide a hospital and its medical staff the opportunity to band together to negotiate favorable rates with payers.
- Point of service plans (POS, previously covered).

More Questions, More Definitional Complications

In addition to the more complex typology, there are other characteristics that must be taken into account in understanding the field of managed care. Welch and his colleagues (1990) set forth several questions that are still to this day relevant, the answers to which help improve understanding of the complexity that is MC.

1. Do the physicians in a given MCO see MCO patients only, or do they have a mixed practice?
2. Is there an organizational "middle tier" that might process payment, carry out case management and utilization review, handle quality assurance, and possibly offer office management services to physicians in an IPA, standing between the MCO that has the contractual obligation to provide the services to its enrollees and the individual and institutional providers of those services?
3. Is there a "withhold" in the payment arrangement with the physicians? Is physician payment withheld until it is clear that certain performance standards, primarily focused on utilization and cost containment, have been met, usually over the course of a year?

Hornbook and Goodman (1991) added two important defining questions, also still quite valid:

1. Is there vertical integration between physicians and institutions and how much (see later discussion, "Integrated Delivery Systems")?

2. Is the ownership for-profit or not-for-profit?

Finally, one can consider these additional questions in characterizing MCOs:

1. What is the size of the risk pool?
2. How many providers belong to the MCO?
3. Do individual providers themselves accept financial risks, and do they routinely buy reinsurance against the possibility that one of their patients might unavoidably require very expensive care for a very serious illness?
4. How does one characterize MCOs serving special needs populations (e.g., the mentally ill, patients with acquired immunodeficiency syndrome, and drug abusers), Medicare populations, and Medicaid populations?
5. Suppose a PPO accepts risk and engages in a contract for total care provision. Is it then an MCO?

Despite the complexity of the MCO definition and typology, however, it appears advisable not to get caught up in their minuscule details, unless one is engaged in MC research or responsible for planning an MCO to be successful in a particular market. After all is said and done, there are still four major groups of MCOs: staff-model HMOs; group-model HMOs; IPAs of various sorts; and an expanding category of "others," such as PPOs, PHOs, and networks.

INTEGRATED DELIVERY SYSTEMS

What is called the *integrated delivery system* (IDS) is becoming a visible and important element of managed care whether it has an insurance function or not. As an outcome of the gradual disappearance of traditional fee-for-service private practice, in some areas the boundaries that previously existed between physicians and hospitals are gradually disappearing, too.

A still valid definition of the IDS was offered by Kongstvedt and Plocher (1996): "IDSs may be described as falling into three broad categories: systems in which only the physicians are integrated, systems in which the physicians are integrated with facilities (hospitals and ancillary sites), and systems that include the insurance functions" (p. 46).

In the past, according to Kodner (personal communication, September–December 1996), "Hospitals had doctors; doctors had patients." Now, increasingly, as the various forms of managed care spread and take over the health care delivery system, it is the payers or the insurance, risk-assuming side of the MCO that has the patients, with both the doctors and the hospitals providing the health care services for the MCO—and its patients. Presenting in part a normative definition, that is, what they would have liked IDSs to be, not necessarily what they all are, Dr. Stephen Shortell and colleagues (1994) defined the

IDS as "[a] network of health care organizations that provides and/or arranges a coordinated continuum of care to a defined population, and is willing to be held clinically and fiscally responsible for the outcomes and health status of that population" [p. 46].

In the view expressed by Shortell and colleagues, the IDS would be an essential element in creating their "ideal health care system" (Shortell et al., 1999, p. 8), having, in summary, the following features:

1. It serves a defined population.
2. It provides a defined set of services/benefits.
3. It integrates services, administratively and clinically, and has an integrated information system covering all of the services offered.
4. For the most part, payments to providers are made on a capitated basis.
5. It will have hospital beds and one or more long-term care services such as a nursing home or a home health agency.
6. It will pool the funds coming in from several sources.
7. It will have a shared mission, philosophy, and vision.
8. It will have centralized and joint planning and management.
9. It will provide an organized continuum of care, through health care teams.

In short, the ideal IDS would provide the type of coordinated, continuous, comprehensive, available, acceptable, and accessible care that was envisioned in the landmark Dawson Report—which was issued in the United Kingdom in 1920 (Sidel & Sidel, 1983, p. 152), which was described in the final report of the U.S. Committee on the Costs of Medical Care in 1932, and which reappeared in the original bills for what became the Regional Medical Program and Comprehensive Health Planning Acts of 1965 (before, that is, they were gutted in response to pressure from the American Medical Association). The question in the United States still is, Can this sort of care be provided in a system that has a primary focus on either physician or corporate incomes/profit accumulation?

MANAGED CARE TODAY

As of 2006, 93% of working Americans not on Medicare who had health insurance were enrolled in an MCO of some type through their employer (Kaiser Family Foundation, 2006, Chart 8). The percentage of employees in an indemnity plan had declined from 73% in 1988 to 3% in 2006. The period of steepest decline was 1988 through 1996, when the indemnity plans declined to 27% of workers. The PPO has become the most frequent type of health insurance plan for insured workers (60% in 2006). Growth in HMO membership plateaued in 1998 and began to decline slightly in 2000 (Draper, Hurley, & Short, 2004).

Although about 98% of large employers (200+ employees) offered health care benefits, only about 48% of very small employers (3–9 workers) and 73% of small employers (10–24 workers) did so (Kaiser Family Foundation, 2006, Exhibit 2.2). It is noteworthy that the overall insured rate dropped from 69% in 2000 to 61% in 2006, because of a decline in the number of the smallest firms to offer health insurance to their employees. Additionally, whereas more than 29% of the "jumbo" firms (5,000+ workers) offered a choice of plans, fewer than 10% of small employers (3–199 workers) did so (Kaiser Family Foundation, 2006, Exhibit 4.1). Also of note is that the percentage of jumbo firms offering only one plan increased from 7% in 2000 to 29% in 2006.

SOME POLICY ISSUES IN MANAGED CARE

Why Managed Care Developed When It Did

There are several explanations for the relatively sudden development of managed care. One is that in the mid-1980s, private corporations figured out how they could appropriate for themselves the monetary surpluses generated by the U.S. health care delivery system that had typically gone to physicians, especially those in procedure-focused specialties. The medium was a cost-containment intervention called utilization review (UR).

UR had been introduced in the early days of Medicare. It was an attempt to get control of the major and continuing cost increases generated by the "usual and customary fee" system for paying physicians that the American Medical Association had extracted from the Johnson administration as its price for peacefully going along with the introduction of Medicare. It happens that medicine has a peculiar market for its services. Unlike most markets, in which the buyer generates the demand, in medicine, utilization of almost any service other than emergency care or a routine office visit is almost always provider-, not patient-, generated.

In this environment, the original open-ended Medicare reimbursement system invited both physician-created "demand," and thus the potential for overuse, and a gradual upward spiral in those "usual and customary fees" set by the physicians themselves. UR looked at and evaluated what physicians were actually doing in terms of the provision of diagnostic and treatment services and hospital utilization for their patients. It was thus one way to try to bring that system and its attendant steadily increasing expenditures under some kind of control.

The way UR was used in Medicare, as an after-the-fact review, was not particularly successful in achieving its announced objectives of utilization and cost containment. Other systems, such as the DRGs (see chapter 6), were eventually put in its place. But in dealing with physicians, private health care corporations learned from this example that if they instituted before-the-fact review, the so-called management of care, and required preuse approval, they could reduce utilization significantly. And that they have been able to do.

Although shortages may develop in the future (see chapter 2), at least in the procedure-oriented specialties, there is presently an apparent oversupply of physicians. This is the product at least in part of the absolute refusal of the U.S. medical establishment to engage in any sort of physician supply planning. Given hospital occupancy rates (see chapter 3), there is certainly a remaining financial burden resulting from the massive overbuilding of hospitals after World War II into the 1980s. (This state of affairs is the product of the very strong resistance of the U.S. hospital industry to any kind of meaningful facilities or services planning.) In this context, for-profit MCOs have been able to institute preauthorization UR on a massive scale, driving down both utilization and prices in the face of facilities and personnel oversupply. At the same time, they have been able to reap handsome profits for themselves and provide handsome incomes for their top executives (Kleinke, 2001, chapter 3).

It was this institution of physician-generated utilization controls that made it possible for the for-profit health services sector to enter the arena of the direct provision of care. For the most part, for-profit health services corporations had been standing outside of the central business of health care, the provision of physician services, until the 1990s. They had been content with pharmaceuticals, hospital supply, nursing homes, and some hospitals. But when presented with the opportunity to take some significant proportion of the excess income that was being generated by the physicians from them and arrogate it to themselves, they took it.

The Future

In the mid-1990s, a longtime observer of the managed care scene laid out a list of what he thought would and should happen under MC over the next 10 years (Kodner, personal communication, 1996):

1. An increase in the practice of population-based care.
2. An increase in the use of physician/nonphysician team care.
3. The development of highly sophisticated medical, health, and management information systems (MIS).
4. The return of physician control.
5. Increased public sector enrollment: Medicare/Medicaid.
6. “Carve-outs” (health services sectors set outside the managed care system), for example, mental health, substance abuse, and high-cost subspecialty care.
7. Increased insurance company ownership of MCOs and decline in insurance company involvement in indemnity insurance.
8. Decline of both group and staff model plans with a concomitant rise in other forms, such as the IDS.

9. Competition among MCOs on the basis of quality.
10. Going from managed cost to managed care.

A similar list was developed by Barton (1999, p. 31), who also added rationalization of resource use, greater accountability, more disease prevention and health maintenance, and improved quality. The list of Shortell and his colleagues (1999) is also similar. However, by the mid-2000s, that "10 years later," it is difficult to score the Kodner list.

Luft (2003) has described the current problem of defining managed care and, therefore, of evaluating MCOs on quality, access, and cost:

> The collection of health plans commonly referred to as "managed care" has come to include an astonishing variety of forms. Although a few are tightly integrated prepaid group practices, a much larger number reflect the complex mixes of associations of clinicians and institutions into provider groups and insurers that face myriad, sometimes conflicting, incentives and employ widely disparate information systems. Managed care plans also differ in the mix of prepaid and fee-for-service patients they enroll and the associated payor sources with which they must interact.
>
> Given this heterogeneity, it is difficult to meaningfully compare the quality of managed care plans as a group to fee-for-service plans or to assess the relative performance among types of managed care plans. (p. 1373)

Therefore, the controversy that has followed the rise of managed care regarding its ability to meet our health care goals continues today and opinion is mostly unfavorable, as exemplified by the "And God Populated" poem that opened this section. For example, we still question the effect of managed care on the doctor–patient relationship. Does managed care harm the relationship between physician and patient? There is evidence brought to bear on both sides of the argument (e.g., Alexander & Lantos, 2006; Light, 2006).

Further research may resolve this issue and others related to the desirability of managed care. However, the continual change of managed care organizations in response to critics—both consumers and providers—poses difficulties in obtaining convincing answers. Managed care has changed dramatically in response to its critics. Thus, for example, Rand Health (2005) put forward two nearly polar opposite explanations for the failure of HMO enrollment to drop in the late 1990s and early 2000s following much reported consumer disfavor with managed care: (1) Many consumers were more satisfied with their HMOs than had been thought; and (2) many HMOs relaxed their cost containment restrictions in order to avoid losing market share.

For-Profit Versus Not-for-Profit

Much of the controversy surrounding managed care concerns profit-making and its compatibility with the provision of quality, efficient, and accessible health care. A prediction of the effects of managed care as it has evolved made by health policy analyst Victor Fuchs (2002) was rather more grim:

> The announcement that most of the nation's biggest insurers—Aetna, CIGNA, Humana, the United Health Group, and WellPoint Health Network—will be introducing a new kind of health plan during the next year or two signals the beginning of a new era in health insurance in the United States. These plans feature a complicated menu of premiums, co-payments, and deductibles that will add impetus to the trend of employers offering a defined [monetary] contribution for health benefits. . . . One of their major effects will be to shift the burden of health care costs from employees who use little care to those who use more. Thus, the new plans will be another nail in the coffin of health insurance as a form of social insurance. (p. 1822)

As Randel and colleagues (2001) put it, in terms that still apply:

> The growth of managed care in the United States has been paralleled by a rising tide of anti–managed care sentiment. The "managed care problem" is understood generally as the need to protect individuals against large companies that care more about their bottom line than about people. (p. 44)

As noted in the quote from Dr. Koop (certainly no radical reformer) at the beginning of this chapter, it is the question of for-profit versus not-for-profit health care, not just managed care. It is the question of whether having the health care delivery system become a major profit center for corporate America (the insurance industry) is healthy (in a variety of senses) for America and Americans. It is the issue at the center of virtually every other health care issue related not only to managed care but to the future of the health care delivery system as a whole.

The question is not a moral one. It is a functional one. Can a profit-making system and the so-called free market solve the myriad problems of the U.S. health care delivery system, as spelled out earlier in this chapter and elsewhere in this book? Because the focus of a for-profit system must be on profits, by definition, and because the solution of so many of the problems not only cannot generate profits but also would cost considerable sums of money, the answer would appear to be no. Therefore, we turn to a consideration of health care reform.

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Chapter 9

Health Care Reform

INTRODUCTION

Never before in human history have we had the ability to extend life as long as we do today. Much of this achievement is due to improvements in medical care made possible by advances in biomedical research. These advances include the development of biomarkers in cardiovascular disease, which in the future will play an important role in the diagnosis, prognostic assessment, and management of patients with acute coronary syndromes. The promise of proteomics to identify novel proteins and bio-signatures is very promising for the diagnosis of cardiovascular disease (Parikh & Delemos, 2006). Genome-wide association analysis will allow the identification of gene–environment interactions for treatment of obesity, depression, and other health problems (Bornstein, Schuppenies, Wong, & Licinio, 2006; Caramori & Adcock, 2006). Bioabsorbable polymers in orthopedics have improved the safety and effectiveness of knee repair (Gramenz, Siparsky, Gall, D'Ambrosia, & Bartz, 2006).

There are major improvements occurring in the treatment of cancer. Genetic profiling of cancer cells allows simultaneous testing of 21 genes linked to disease recurrence to determine if a patient is at low, medium, or high risk for disease recurrence and helps guide physicians to develop individualized treatment plans for patients (Stony Brook University, 2006). Imatinib mesylate (also called Gleevec or STI571)

> is the first (FDA) approved drug to directly turn off the signal of a protein known to cause a cancer. Other molecular-targeting drugs previously approved by the FDA interfere with proteins associated with other cancers, but not with proteins that directly cause the disease. (National Cancer Institute, 2007)

Health care provides ways to improve sexual function, replace joints, control tremors, improve cancer survival through diagnostic tools such as advanced imaging, and manage hypertension and cholesterol. The achievements in medical care made during the 20th century and accelerating in the 21st century are truly astonishing.

Yet by the criteria we use to evaluate the performance of health systems (quality, equity, and efficiency), there are serious problems with the U.S. health care system (see chapter 7). Many of the problems are due to lack of access to medical care because of high uninsurance rates, declining health benefits for employed persons and their families, and the uneven geographic distribution of health care resources. There is a clear efficiency problem as indicated by the fact that the United States spends much more than any other country on health care and does not get the best health outcomes in return.

There is a problem with the quality of health care provided in the United States, and not just for the uninsured. Moreover, the quality problem often stems from the very corporate developers of the technologies and pharmaceuticals that benefit us. Their incentives to emphasize the benefits of their products have had adverse consequences for many and put many more at risk. For example, more than 710,000 stent implants are performed in the United States each year at a cost of $2 billion. Yet many poor health outcomes have resulted because of an incautious use of stents. It was found in 2001 that stents had a high failure rate (15% to 25% within 6 months) because of scar tissue formation (Winslow, 2001). The new coated stents may also have serious breakdown problems (Feder, 2006).

As another example, the blockbuster arthritis drug rofecoxib (Vioxx), with over $2.5 billion in annual sales, was withdrawn from the market in November 2004 for findings that it dramatically increased the risk of coronary artery disease (Public Citizen, 2007). At that time, Vioxx was the ninth prescription drug to be taken off the market in the previous 7 years. On September 17, 2001, the Food and Drug Administration (FDA) made public a Warning Letter it had issued to Merck & Co. about its promotional campaign on behalf of Vioxx. The letter stated (FDA, 2001):

> Specifically, your promotional campaign discounts the fact that in the VIGOR study, patients on Vioxx were observed to have a four to five fold increase in myocardial infarctions (MIs) compared to patients on the comparator nonsteroidal anti-inflammatory drug (NSAID), Naprosyn (naproxen).

In the early 2000s, certain implanted defibrillators were found to be defective and recalled. By 2006, serious problems in the process of approval and the compliance of a manufacturer with ethical standards were reported (Meier, 2006):

> The issues raised by the reports appear to underscore the inadequacy of data about implanted heart devices, one of the fastest-growing medical products. A medical group, the Heart Rhythm Society, is expected to release recommendations

> today calling for changes in how data about heart units are collected and disclosed. That report is also expected to offer suggestions about how doctors should react to product recalls, including guidelines about when, or if, to remove a device.
>
> The guidelines may put added pressure on manufacturers to pull back suspect devices before they are implanted. The review began after disclosures last year that one producer, the Guidant Corporation, failed to alert doctors about significant defibrillator flaws and kept selling those units after an improved version was available.

Another example is that of Mustargen, an old chemotherapy drug manufactured by Merck & Company that was purchased by a young company, which then raised the price dramatically. Alex Berenson told the story in the *New York Times* (Berenson, 2006):

> The medicine, also known as Mustargen, was developed more than 60 years ago and is among the oldest chemotherapy drugs. For decades, it has been blended into an ointment by pharmacists and used as a topical treatment for a cancer called cutaneous T-cell lymphoma, a form of cancer that mainly affects the skin.
>
> Last August, Merck, which makes Mustargen, sold the rights to manufacture and market it and Cosmegen, another cancer drug, to Ovation Pharmaceuticals, a six-year-old company in Deerfield, Ill., that buys slow-selling medicines from big pharmaceutical companies. The two drugs are used by fewer than 5,000 patients a year and had combined sales of about $1 million in 2004.
>
> Now Ovation has raised the wholesale price of Mustargen roughly tenfold and that of Cosmegen even more, according to several pharmacists and patients.
>
> Sean Nolan, vice president of commercial development for Ovation, said that the price increases were needed to invest in manufacturing facilities for the drugs. He said the company was petitioning insurers to obtain coverage for patients.
>
> The increase has stunned doctors, who say it starkly illustrates two trends in the pharmaceutical industry: the soaring price of cancer medicines and the tendency for those prices to have little relation to the cost of developing or making the drugs.

The pharmaceutical industry is clearly part of the for-profit business world and should be monitored and evaluated as such. Although it claims to be a high-risk business, each year drug companies experience higher profits than any other industry. Not surprisingly, the pharmaceutical industry has the largest lobby in Washington and gives profusely to political campaigns (Angell, 2004).

HISTORY OF CHANGE

Problems with the U.S. health care system are not new and have not gone unnoticed. Much of the criticisms of the past are just as applicable today. As far back as 1932, the findings of the first comprehensive study of health care in the United States were summarized in these terms (Committee on the Costs of Medical Care [CCMC], 1932/1970, p. 2):

> The problem of providing satisfactory medical service to all the people of the United States at costs which they can meet is a pressing one. At the present time, many persons do not receive service which is adequate either in quantity or quality, and the costs of service are inequably distributed. The result is a tremendous amount of preventable physical pain and mental anguish, needless deaths, economic inefficiency, and social waste. Furthermore, these conditions are . . . largely unnecessary. The United States has the economic resources, the organizing ability, and the technical experience to solve this problem.

The committee, chaired by Ray Lyman Wilbur, a past president of the American Medical Association, had been created in 1927 to look into the problems of the health care system. Strikingly, some would say tragically, the foregoing statement is entirely applicable today.

In the 1960s and 1970s, observers of the U.S. health care system, of different political persuasions, often spoke of the "crisis" in health care. Indeed, there have been numerous critical reports and studies going back many years. (For a bibliography of such reports, see Appendix I.)

In 1970, the editors of *Fortune* magazine, echoing the Committee's final report, wrote:

> American medicine, the pride of the nation for many years, stands now on the brink of chaos. To be sure, our medical practitioners have their great moments of drama and triumph. But much of the U.S. medical care, particularly the everyday business of preventing and treating routine illnesses, is inferior in quality, wastefully dispensed, and inequitably financed. Medical manpower and facilities are so maldistributed that large segments of the population, especially the urban poor and those in rural areas, get virtually no care at all even though their illnesses are most numerous and, in a medical sense, often easy to cure. (Editors of *Fortune* magazine, 1970, p. 9)

Also echoing the CCMC's final report, and eerily presaging the problems of our own time, none other than President Richard M. Nixon (Nixon, 1994) in 1971 said:

> For a growing number of Americans, the cost of care is becoming prohibitive. Even those who can afford most care may find themselves impoverished by a catastrophic medical expenditure. The quality of medicine varies widely with geography and income. Because we pay so little attention to preventing disease and treating it early, too many people get sick and need intensive treatment. Costs

> have skyrocketed but values have not kept pace. We are investing more of our nation's resources in the health of our people, but we are not getting a full return on our investment. (p. 11)

In 1973, the Committee for Economic Development, with a board composed of representatives of many of the leading American corporations and banks, came to the following conclusions concerning the health care system:

> First, faulty allocation of resources is a major cause of inadequacies and inequalities in U.S. health services that result today in poor or substandard care for large segments of the population. Second, the task of assuring all people the ability to cope financially with the costs of health care has been made realizable by the substantial base of coverage now provided by both private and public insurance plans. Third, unless step-by-step alterations are made in the means of delivering services and paying providers, closing the gaps in financing would overburden an inadequate system and offer little prospect of materially improving the quality and quantity of medical services of the health of the American people. (p. 17)

In 1990, perhaps the most prominent of a spate of reports and program proposals for health care reform issued that year had this to say (U.S. Bipartisan Commission on Comprehensive Health Care, 1990):

> The American health care system is approaching a breaking point. Rapidly rising medical costs are increasing the numbers of people without health coverage and straining the system's capacity to provide care for those who cannot pay. The gap is widening between the majority of Americans, who can take advantage of the best medical services in the world, and the rest, who find it hard to get even basic needed care. As the gap increases, the weight of financing care for those without adequate coverage is undermining the stability of our health care facilities. Even for the majority, the explosive growth in health care costs is steadily eroding the private insurance system—the bulwark they count on as their defense against financial risk in case of illness. (p. 2)

Marking the advent of the 21st century, with many old themes still resonating, the Committee on the Quality of Health Care in America of the prestigious Institute of Medicine of the National Academy of Sciences (Institute of Medicine, 2001) came to the following conclusions:

> The American health care delivery system is in need of fundamental change. Many patients, doctors, nurses, and health care leaders are concerned that the care delivered is not, essentially, the care we should receive. The frustration levels of both patients and clinicians have never been higher. . . . Health care today harms too frequently and routinely fails to deliver its potential benefits.

> Americans should be able to count on receiving care that meets their needs and is based on the best scientific knowledge. Yet there is strong evidence that this is frequently not the case. . . . Between the health care we have and the health care we could have lies a chasm. . . .
>
> At no time in the history of medicine has the growth in knowledge and technologies been so profound. . . . As medical science and technology have advanced at a rapid pace, however, the health care delivery system has floundered in its ability to provide consistently high-quality care to all Americans. . . . The health care system as currently structured does not, as a whole, make the best use of its resources. . . . What is perhaps most disturbing is the absence of real progress toward restructuring health care systems to address both quality and cost concerns, or toward applying advances in information technology to improve administrative and clinical processes. . . . It is not surprising, then, that studies of patient experience document that the health system for some is a "nightmare" to navigate. (pp. 1–4)

The term *national health insurance* (NHI)[1] usually describes a single, countrywide health care financing system run by the government, at one or more jurisdictional levels. With varying prominence over time, proposals to create an NHI system have been on the United States' national political agenda since Teddy Roosevelt made it one of the planks of his Bull Moose Party platform in the presidential election of1912.

It happened that the Reagan–Bush era (1981–1993) was one in which NHI faded almost completely from the health care political agenda. The prospect experienced a revival during the first 2 years of the Clinton administration (1993–1994). But with the defeat in the U.S. Congress of what came to be known as the Clinton health plan (see later discussion), the issue receded again, through the second Clinton term and into the presidency of George W. Bush.

Nevertheless, the central problems of the U.S. health care delivery system that any comprehensive NHI program would address, from its high cost to the maldistribution of personnel and facilities to the lack of financial access for many

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[1] As noted in chapter 1, the term *health insurance* is a misnomer. Generically, *insurance* is a system that provides for the periodic collection of relatively small sums of money from large numbers of people to protect each of them against the financial consequences of a relatively rare negative event. However, over the course of a lifetime, for most people using health services is not a "relatively rare event."

Thus, health insurance is not insurance in the conventional sense. Rather, it is a system for the collective, long-term prepayment for the costs of health services that each member of the group of people covered will, on average, use during the time period for which they are covered. Furthermore, the term is a misnomer in the sense that not much "health insurance" money actually pays for the maintenance and promotion of health. Rather, most of it goes to cover the costs of care during sickness. Nevertheless, the term as it is commonly used will be employed in this chapter.

people, to its lack of attention to health promotion and disease prevention, to its heavy emphasis on the use of expensive pharmaceuticals and medical/surgical procedures, remain. It also remains true that no fragmented, privately operated health care delivery system can by its nature address most of the major problems in the list. That is so because dealing successfully with most of them would require a comprehensive, coordinated, planned, national approach, something that is neither in the self-interest of nor within the competence of any of the private players presently on the field. Thus, NHI is sure to return as a major political issue. The only question is when and in what form.

NATIONAL HEALTH INSURANCE AS SOLUTION

One of the major emphases of health care reformers throughout U.S. history has been to secure universal health coverage. In this section, we detail the history of this effort, beginning with a description of the world historical context in which the U.S. efforts have existed.

World Historical Background

The first NHI program appeared on the world stage in the 1880s. (Some readers may be distressed to learn that both the content and form of the arguments for and against NHI have remained largely fixed since that time [Boas, 1945/1958; Falk, 1973; McKittrick, 1940/1958; Schwartz, 1972]. This has been the case regardless of changed circumstances or new information.) It was introduced by Otto von Bismarck, the "Iron Chancellor" of Prussia and, after 1871, of the unified German state. Shortly after the bourgeois revolution of 1848 in Europe, he had said: "The social insecurity of the worker is the real cause of their being a peril to the state" (Sigerist, 1960, p. 127). In 1881, the German Kaiser Wilhelm I, in a speech written by Bismarck, said "The healing of social evils cannot be sought in the repression of social democratic excesses exclusively but must equally be sought in the positive promotion of the workers' welfare" (Sigerist, 1960, p. 129). In other words, "The workers are revolting; let's do something for them."

From the 1830s onwards, various fragmented accident, workers' compensation, and sickness insurance schemes, both compulsory and voluntary, had come into existence in the several German states. Building on them, in 1883, Bismarck succeeded in ushering through the German Reichstag (Parliament) a Sickness Insurance Act (Sigerist, 1960, pp. 121–131). Bismarck had wanted a uniform, national system, excluding those of the existing "sickness societies" that were for profit, retaining only the not-for-profit ones. Understandably, the former objected to the prospect of being put out of business. (In this regard, they had much in common with the present U.S. health insurance companies. Understandably as well, the insurers protest strongly against any proposed U.S. NHI plan that has no, or a limited, role for them.)

Bismarck settled for a plan that used the then-existing network of sickness societies, both for and not for profit. Nevertheless, it was a national program that certain categories of workers paid for medical care and provided cash support during periods of sickness and accidental injury. Two thirds of the premiums were paid by the employees, one third by the employers. Thus, it came to pass that the world's first national health insurance scheme was created, not by a progressive democratic or socialist government, but by a conservative constitutional monarchy.

By the 1920s, most of the European industrialized countries, as well as Japan, had some kind of national health insurance system. In each it usually began as a partial or voluntary system, generally progressing to a comprehensive and compulsory one (Douglas-Wilson & McLachlan, 1973, pp. 1–123, 211–230; Fry & Farndale, 1972; Glaser, 1978; Roemer, 1985). After World War II, the industrialized countries of the British Commonwealth gradually followed suit (Fry & Farndale, 1972; Lynch & Raphael, 1963; Roemer, 1985, 1991). As the new millennium began, the United States remained the only major industrialized country in the world not to have some sort of NHI system. But it was not for a lack of trying.

History of NHI in the United States

The Early Days[2]

The first campaign for a national health insurance program in the United States was undertaken by the American Association for Labor Legislation (AALL), a middle-class, liberal, reform-minded group founded in 1906 (Anderson, 1968, Part 2; Burrow, 1963, 1977, pp. 138–153; Goldfield, 2000, chapter 3). As noted, proposals for a broad social insurance plan were part of Teddy Roosevelt's Bull Moose (third) Party platform in 1912 (Burrow, 1963, p. 135). In 1916, proposing that the several states each adopt the program independently, the AALL put forward a standard bill for compulsory medical care and sickness benefits insurance. Their program would have covered persons earning below a certain income level and would have used existing insurance carriers. Employers, employees, and the states would have shared the costs (Anderson, 1968, pp. 62–65; Burrow, 1963, p. 136).

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[2] Most of the references used in this section were published some time ago. They provide a great deal of detail about the events described here, some from a quite close-up perspective, and remain valid and useful. For a recently published overview of the sweep of the history of U.S. health care reform efforts from the time of the Wilson presidency (1913–1921) to the present, see Goldfield (2000).

At first, support was widespread, extending to the American Medical Association (AMA) and even the National Association of Manufacturers (Burrow, 1963, pp. 138–145). Beginning in 1917, however, when the U.S. entry into World War I generally deflated the reform movement of the time, opposition began to surface from several quarters. Among the opponents were the American Federation of Labor and the commercial insurance industry (Anderson, 1968, p. 67; Burrow, 1977, pp. 148–153).

A battle ensued over the issue within the AMA (Anderson, 1968; Burrow, 1963, pp. 146–151). As part of an overall shift of power from the academic wing of the medical profession to the practitioner wing that was going on at the time, the latter, conservative, faction won out (Harris, 1966, p. 30).[3] In 1920, the AMA House of Delegates passed the following resolution (Burrow, 1963, p. 150):

> Resolved, that the American Medical Association declares its opposition to the institution of any plan embodying the system of compulsory contributory insurance against illness, or any other plan of compulsory insurance which provides for medical service to be rendered contributors or their dependents, provided, controlled, or regulated by any state or the Federal government.

In toto, that remained the AMA's position until the late 1960s (Harris, 1966). Even in the mid-1970s, by which time the AMA had adopted an NHI proposal of its own that ran counter to the bulk of the 1920 resolution, the noncompulsory principle was retained (Committee on Ways and Means, 1974). It was not until 1990 that the AMA had dropped the noncompulsory principle as well (American Medical Association [AMA], 1990).

During the New Deal and Its Aftermath

Serious consideration was next given to national health insurance during the development of the Social Security Act of 1935. This consideration was stimulated in part by the final report of the Committee on the Costs of Medical Care (1932; see also Anderson, 1968; Stevens, 1971, pp. 183–187). In 1934, President Franklin Roosevelt created the Committee on Economic Security to consider the whole question of social insurance. NHI was on the agenda (Goldfield, 2000, chapter 4). It did not stay there long (Goldfield, 2000, chapter 5).

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[3] Both Burrow's book and the Harris articles contain detailed histories and analyses of the AMA's involvement in legislative battles over NHI. The Burrow (1963) book detailed those battles through the 1950s. The Harris (1966) articles covered the Medicare struggles. An excellent overall historical perspective was provided by I. S. Falk (1977), a man who had been at the center of the reform battles from the time he was staff director of the Committee on the Costs of Medical Care until the push for NHI was dropped at the end of the Truman administration.

The principal opposition again came from the AMA (Burrow, 1963, p. 193). Economic Security Committee Executive Director E. E. Witte wrote (Anderson, 1968, p. 108):

> When in 1934 the Committee on Economic Security announced that it was studying health insurance, it was at once subjected to misrepresentation and vilification. In the original social security bill there was one line to the effect that the Social Security Board should study the problem and make a report thereon to Congress. That little line was responsible for so many telegrams to the members of Congress that the entire social security program seemed endangered until the Ways and Means Committee unanimously struck it out of the bill.

The president wanted to make sure that the basic Social Security Act, conceived as one of the cornerstones of the New Deal, became law. It was eventually passed by Congress with no reference to NHI.

Senator Robert F. Wagner, Sr., of New York State initiated the next major legislative foray on behalf of NHI in the United States.[4] The landmark National Labor Relations Act of 1935 (referred to as the Wagner Act) had established the right to collective bargaining for all nonpublic employees in the United States. In 1939, Wagner introduced a bill (Sigerist, 1960, pp. 189–190)

> to provide for the general welfare by enabling the several states to make more adequate provision for public health, prevention and control of disease, maternal and child health services, construction, and maintenance of needed hospitals and health centers, care of the sick, disability insurance, and training of personnel.

The bill, S. 1620, proposed to subsidize state public health programs (this later became federal policy through a series of separate acts), the construction of hospitals (enacted in 1946 as the Hill-Burton Act), and state programs for medical care for the poor (eventually enacted in part in 1960 as Kerr-Mills Medical Assistance for the Aged, then expanded as the federal/state Medicaid program, in 1965). The bill also proposed to provide cash sickness benefits (a standard feature of the European/Japanese approach to NHI that has never made headway in the United States). Additionally, there was to be a program of federal subsidies to those states enacting comprehensive health insurance programs (Harris, 1966, pp. 31–32; Sigerist, 1960, pp. 190–191). The bill died in committee, after being vigorously attacked by the AMA (Harris, 1966, pp. 38–40).

Senator Wagner tried again in 1943, this time in concert with Senator Murray and Representative John Dingell. Their bill, S. 1161, "advocated a national

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[4] The details of all major NHI proposals made between 1935 and 1957 are summarized in Brewster (1958).

(i.e., Federal) compulsory system of health insurance, financed from payroll taxes and providing comprehensive health and medical benefits through entitlement to specified medical service benefits" (Stevens, 1971, p. 272). This was the first major legislative proposal for a federal rather than a state-based system. Once again, the AMA responded negatively, with vigor (Harris, 1966, pp. 40–42). The bill never got very far, although it was reintroduced in several successive Congresses (Anderson, 1968, pp. 112–113).

In 1947, Senator Robert Taft, Sr., introduced a proposal for federal subsidies to the states to pay for medical care for the poor similar to the one that was in Senator Wagner's 1939 package and would eventually see the light of day as the Medicaid program (Stevens, 1971, p. 273). Though sponsored by a conservative Republican, it also got nowhere.

In 1949 Harry Truman was reelected president with Democratic majorities in both houses of Congress (Goldfield, 2000, chapter 6). He decided to make enactment of NHI a major goal of his administration. He proposed a national, compulsory system, to be paid for by a combination of Social Security and general taxation, similar in many ways to the Wagner-Murray-Dingell bill of 1943. It was in 1945, just after he had succeeded to the presidency following Roosevelt's death in April of that year and the end of World War II shortly thereafter, that Truman had first enunciated the principles on which the proposed system would be based (Truman, 1945/1958):

> Everyone should have ready access to all necessary medical, hospital, and related services.... A system of required prepayment would not only spread the costs of medical care, it would also prevent much serious disease.... Such a system of prepayment should cover medical, hospital, nursing, and laboratory services. It should cover dental care [as far as] resources of the system permit... the nationwide system must be highly decentralized in administration.... Subject to national standards, methods and rates of paying doctors and hospitals should be adjusted locally.... People should remain free to choose their own physicians and hospitals.... Likewise physicians should remain free to accept or reject patients.... Our voluntary hospitals and our city, county, and state general hospitals, in the same way, must be free to participate in the system to whatever extent they wish.... [W]hat I am recommending is not socialized medicine. Socialized medicine means that all doctors work as employees of government.... No such system is proposed. (pp. 629–630)

The AMA mounted a furious attack on the plan, based primarily on the claim that it was indeed "socialized medicine" (Harris, 1966, pp. 40–62). The AMA used a major public relations firm and a war chest of over $2 million, a very substantial sum in those days. With allies from the drug and insurance industries (Stevens, 1971, pp. 273–274), it was once again successful in defeating an NHI plan in Congress. With the election of a Republican government in 1952, the AMA was able to breathe easily (Burrow, 1963, pp. 361, 385).

In the post–World War II climate of domestic and foreign anti-Communism (Freeland, 1975), it was difficult for Truman to win support at home for a program consistently attacked as "communist" or "socialist," but in any case "Red" (Harris, 1966, p. 50). Thus, in 1951, on the recommendation of Oscar Ewing, the federal Social Security administrator, the Truman administration withdrew its support for NHI and began the campaign that eventually led to the passage in 1965 of Medicare (Goldfield, 2000, chapter 8; Harris, 1966, pp. 58–60; Stevens, 1971, p. 274).

Medicare and Medicaid

The campaign for Medicare was long and arduous (Harris, 1966; Stevens, 1971, pp. 432–443). Legislation creating it and its afterthought companion Medicaid (Friedman, 1977) finally was passed by Congress in 1965 (Committee on Finance, 1970; Goldfield, 2000, chapter 8). Both had their historical antecedents, as previously noted. For example, the earliest AALL proposals contained the concept of beginning with partial coverage, aimed at the working poor. (In contrast, Medicaid covers primarily the nonworking poor.) Medicaid-like proposals had appeared in Senator Wagner's prewar bill and Senator Taft's postwar bills. Determination of an eligible population by age as in Medicare was, however, a relatively new twist, going back only to 1950.

However, failing to follow the example of the world's other industrialized countries, since 1965 the progression from some sort of partial coverage to comprehensive coverage, or close to it, just has never taken place in the United States. That has not been because of a lack of trying on behalf of the reform forces, but rather because of the strength of the political and health care system opponents of such change.

National Health Insurance in the 1960s and 1970s

Once Congress had passed Medicare and Medicaid, beginning in the late 1960s many new legislative proposals for NHI were made (Burns, 1971; Eilers, 1971; Falk, 1973, 1977; Goldfield, 2000, chapter 9; Hastings, 1972). In the 1970s, they were summarized by the Ways and Means Committee of the House of Representatives (Committee on Ways and Means, 1974) and the Senate Finance Committee (Committee on Finance, 1979; see also Karen Davis, 1975). In the wide-ranging debate on NHI, the basic arguments of the several sides had changed little over time.

As of 1975, a time when the passage of some sort of NHI seemed imminent to many observers, there were four major proposals before Congress. The constituencies represented were organized labor, the American Hospital Association, the Health Insurance Association of America, and, notably, the AMA itself. Because all of the major actors were on stage, it was believed that surely one of these proposals or some compromise among them would find its way through Congress.

One predicts the passage of national health insurance in the United States at one's peril, however. For example, in 1974, an observer wrote (Jonas, 1974):

> The United States of America is the only major country in the developed, capitalist world without some form of national health insurance programme. The struggle for national health insurance in the U.S., a long and bitter one, has been well described. It now appears as if there will be some form of national health insurance legislation in the U.S. before the Presidential elections of 1976. (p. 143)

There wasn't.

In the 1976 presidential campaign, candidate Jimmy Carter said, in his only speech on health policy ("Insurance plan," 1976):

> We must have a comprehensive program of national health insurance.... The coverage must be universal and mandatory. We must lower the present barriers, in insurance coverage and otherwise, to preventive and primary care and thus reduce the need for hospitalization. We must have strong cost and quality controls, and... rates... should be set in advance.... We must phase in the program as rapidly as revenues permit, helping first those who need help, and achieving a comprehensive program well defined in the end. (p. 7)

Carter's administration never submitted such a proposal to Congress.

National Health Insurance Proposals in the 1980s

In 1979, the Congressional Research Service of the Library of Congress (Cavalier, 1979) stated that the major policy issues to be addressed in designing and NHI program were as follows:

- The rising costs of health care
- The gaps in present health insurance coverage, in terms of both services and populations
- Geographic maldistribution of personnel and facilities
- Access to health care service by ability to pay, social class, age group, and geography
- The impact or lack thereof of NHI on the population's health status

Once again, this list, published more than 20 years ago, has a familiar sound to it. It still describes the major problems facing the nation's health care delivery system.

In 1980, the same major NHI-proposal players were still on the field (Committee on Finance, 1979; Jonas, 1981a, pp. 448–453; Kimble, 1979). But with the election of Ronald Reagan in 1980, the whole movement just ran out of gas.

A measure of the enormous loss of energy suffered by the pro-NHI forces in the 1980s can be found in the contents of the "reform package" offered in 1985 by Senator Ted Kennedy (with Representative Fortney "Pete" Stark, House Ways and Means Committee Health Subcommittee chair). They proposed ("Stark, Kennedy," 1985)

- to reduce the number of persons uninsured for health care costs by requiring employers to make health insurance available to former employees at group rates
- to reduce or eliminate "patient dumping" by hospitals
- to restrain increases in Medicare Part A premium costs
- to hold down Medicare payments to hospitals

This was a far cry from the sweeping changes proposed by Kennedy in several major bills he offered in the 1970s. (That weak cry of 1985 had an echo in 1996 with the eventual passage of a bill sponsored by Senators Kennedy and Nancy Landon Kassebaum providing that certain elements of portability from job to job become required for employer-provided health insurance [Goldfield, 2000, pp. 139–140; Hoppszallern & Arges, 2002; Kuttner, 1997].)

SOME CONTEMPORARY APPROACHES TO NHI

NHI by Contract, or the Personal Health Care System

The proponents of competitive reform did not go away, however. In the early 1980s, a proposal designed to deal with the problem list set out by the Congressional Research Service and many others was published (Jonas, 1981b, 1984). First designated "NHI by contract," it was later called the personal health care system (PHCS). By 2002, it had yet to be put into legislative language per se, although some of its central concepts appeared as essential elements of the Clinton health plan (see later discussion).

The contract mechanism is the classic approach to the achievement of stated goals and objectives. The buyer and seller of a product agree on product or service specifications and costs, written down in a contract. The contract usually contains means of enforcement of its terms. A small-scale, partial prototype of such an approach to the financing, planning, and evaluation of health services (known colloquially as *ghetto medicine*) existed in New York City during the 1970s (Jonas, 1977).

Under NHI by contract, or PHCS, government would raise the funds necessary to pay for health services, from a variety of sources: general and special taxation, employer/employee contributions, and direct payments. It would also be responsible for negotiating a series of contracts with providers. The latter would agree to offer a set of services to the population for a given dollar amount. Most existing providers, whether institutional or individual, would be eligible to become either primary contractors or subcontractors. In this, the PHCS has much in common with the Health Care Corporation concept of the mid-1970s, an American Hospital Association plan dubbed "Ameriplan" (McMahon, 1975).

The composition of the service packages would be determined by health planning mechanisms. There would be free competition among the providers for the contracts, with bidders offering to provide the specified services at different prices. Primary contractors would be paid on a global budget basis. Much as MCOs do now, all contractors would then market their services to consumers.

All persons would be covered by a benefit package that would be determined nationally. Consumers would have free choice of contracting a provider. But once having made a choice, as in present multiple-choice situations, patients would have to stay with the selected provider for some specified period of time.

Advisory boards consisting of patients served by each contractor would be formed. The consumer role would focus on the evaluation of outcomes, that is, the extent to which contractors met their contract specifications. The boards would be party to contract negotiation and enforcement. There would be graded financial penalties for failure to meet contract specifications and rewards for excellent performance. Private ownership of the health services sector, including private medical practice, would be maintained. But the people, through both the government and the advisory boards, would have a strong voice in deciding how their money would be spent.

Government responsibilities would be distributed among the national, state, and local jurisdictions. Technology assessment, carried out at the federal level, would provide important data for health planning and priority setting. Insurance companies could be used as fiscal intermediaries.

The PHCS would provide the opportunity to deal directly with most of the principal problems presently facing the U.S. health care delivery system including cost containment; quality improvement; implementing a comprehensive health promotion and disease prevention program; introducing rationality into the planning, development, distribution, and use of personnel and physical resources; and achieving equity of access. The PHCS would leave behind the present reliance on regulation and prayer to achieve program goals and objectives. It would enable the direct focusing of effort and payment, with a fair degree of fine tuning.

The rationale for the PHCS does not begin with benefit packages and decisions on copayment, as do so many other approaches to NHI. Rather, it starts with the establishment of planning principles. It assumes that benefit packages will be developed and decisions on copayment made after needs are assessed, goals and objectives are set, and the amount of available funds is determined. Then the contract specifications will be written, balancing needs, priorities, and available funds.

The PHCS would provide an integral link between the planning and financing of health services. As Rashi Fein, chair of the Institute of Medicine Committee on Health Planning Goals and Standards, noted some time ago, in his preface to the committee's report, this is essential to problem solving (Institute of Medicine, 1981, vol. 2, p. iii): "The committee believes that the forces at work in the American health care system, including the various reimbursement mechanisms, cannot be countered by a health planning effort that is divorced, among other limiting factors, from the flow of funds."

Using epidemiological methods in health services planning, the PHCS would carry out ongoing needs assessments, set priorities based on them, and, within the limits of available resources, make continual program adjustments to meet identified needs. The approach would allow for the direct application of planning information to health services system operation. Thus, the focus on meeting identified needs could always be maintained without direct government services operation.

An assumption underlying the PHCS approach is that the numerous individual and institutional health care providers are, by the very nature of their separateness and independence from one another, incapable of collectively engaging in rational, comprehensive planning on their own. The U.S. history of "voluntarism" in health planning and what happened in the completely unplanned, privately driven, pell-mell rush to for-profit managed care have shown that this is true. Thus, if comprehensive health planning is to be carried out, and if health care planning is to be linked with health care financing, government will have to take the lead.

The PHCS concept was developed before managed care became a major player in the system. Because it is at its core a sophisticated health care planning system, however, the PHCS could work equally well with the fee-for-service/indemnity insurance that predominated when it was originally conceived, or with managed care. The problems of implementation are political, economic, and financial, not conceptual.

National Health Insurance in the Early 1990s

For a variety of reasons (primarily continually escalating costs, a growing pool of uninsured persons, and declining health for certain portions of the population; see also the health care delivery system problem lists in chapter 1 and earlier in this chapter), in the early 1990s NHI reappeared with prominence on the national political agenda.

Once again, there were a whole series of proposals placed on the table, from such disparate groups as Senator Kennedy's Committee on Labor and Human Resources (1988), the National Association of Manufacturers (1989), the Heritage Foundation (1989), the National Leadership Commission on Health Care (cochaired by former Presidents Richard Nixon, Gerald Ford, and Jimmy Carter) (1989), the Oil, Chemical, and Atomic Workers (1989), the Committee for National Health Insurance (affiliated with the AFL-CIO) (1989), the American Medical Association (AMA, 1990), the American Public Health Association ("Insurance Plan," 1990), the U.S. Bipartisan Commission on Comprehensive Health Care of the U.S. Congress (also known as the Pepper Commission) (1990), and the Physicians for a National Health Program's "Single-Payor" system (Grumbach, et al., 1991; Himmelstein & Woolhandler, 1989).

Single-Payer System

Of all of the foregoing, it is the single-payer system that still deserves some attention because it is still very much on the national agenda. A brief review of the single-payer system reveals the following features (Himmelstein & Woolhandler, 2001, chapter 12; see also Himmelstein & Woolhandler, 2002).

The program is modeled in part on the present Canadian system (Evans et al., 1989; Fuchs & Hahn, 1990; Himmelstein & Woolhandler, 2001, chapter 10; Igelhart, 1986, 1990; Katz et al., 2002; Tuohy, 2002). The program would be federally mandated and ultimately federally funded, but it would be administered primarily at the state and local levels. All U.S. residents would be covered for all medically necessary treatment and preventive medical, mental, and dental services, including acute, long-term, and rehabilitative care, in institutions, ambulatory care settings, and the home, with coverage for prescription drugs and medical supplies.

The program would have a single public system of administration, eliminating the present highly expensive multiple, fragmented, duplicative "system" operated by multiple government agencies and the private insurers now in place. Patient copayments would be limited. Hospitals would be paid on a global budgeting basis, much as public hospitals in both the civilian and military sectors are now and have been since their inception. Physicians and other independent practitioners would have their choice of payment options: fee for service, salary from institutions, or capitation. Capital spending would be planned under a national/regional system that would also supply the money.

The whole operation would be paid for by a combination of present Medicare and Medicaid expenditures, existing state and local expenditures for health services (including public health services), mandated employer contributions, and additional tax revenues equal to the amounts now spent by citizens out of pocket. These monies would be paid into the new national "single-payer" agency, which would then pay the monies out according to the provisions just outlined.

Although the single-payer system is still on the national health care reform agenda, it has not yet made it to the level of legislative consideration in Congress. In 1993, one such proposal did make it, what came to be known as the Clinton health plan (Goldfield, 2000, chapter 10; "Health Security," 1993).

Clinton Health Plan

The Context: Change Was Already Coming

In 1994, the year that the Clinton health plan (CHP) was debated and defeated in the U.S. Congress (Blumenthal, 1995; Goldfield, 2000, chapter 10; Skocpol, 1995), some form of managed care was already the reality for an increasing number of Americans, providers and patients alike (Freudenheim, 1994). Many of the changes that concerned providers the most, including being forced into some form of organized practice and seeing significant declines in their incomes, were happening whether or not the CHP or any of the other proposals then on the table were to be enacted. Many managed care–induced changes affecting patients, such as limiting their choices of plans and providers, were also already a reality. Many changes affecting both patients and providers, such as having insurance/managed care company representatives at the other end of an 800 line making treatment choices, were already a reality, too.

One real choice facing the country as a whole at the time of the debate of the CHP was whether this process would occur in a haphazard, unplanned way or be accomplished in a rational manner. In the latter case, the aim would be to achieve stated goals related to the health and health care of the people, not arising from the narrow interests of the insurance and managed care companies, many of them for-profit, and the provider networks. Another real choice was whether a system heavily dependent on public funds for its operations, such as the health care delivery system, should have a strong public voice in determining its policies and practices. The highly political nature of the debate on the CHP that ensued (Hacker, 1996) ensured that fundamental public policy questions such as these would never get a hearing.

The Clinton Health Plan: An Overview

In 1993, President Bill Clinton introduced his ill-fated Health Security Act. His words eerily sounded like those uttered by President Nixon when he presented his own national health insurance plan in 1971 (Nixon, 1994; see also chapter 1). Ironically, that plan was introduced in the Senate by none other than Senator

Robert Dole, who in 1994 led the fight in Congress to kill the Clinton health plan.

President Clinton ("Health Security," 1993) had this to say when he offered his bill to the Congress:

> Americans are blessed with the world's finest doctors and nurses, the best hospitals, the most advanced medical technology, and the most promising research on the face of the earth. We cherish—and we will never surrender—our right to choose who treats us and how we get our care. But today our health care system is badly broken. Insurance has become a contest of finding only the healthiest people to cover. Millions of Americans are just a pink slip away from losing their health coverage, one serious illness away from losing their savings. Millions more are locked into jobs for fear of losing their benefits. And small business owners throughout our nation want to provide health care for their employees and families but can't get it or can't afford it. Next year we will spend more than one trillion dollars on health care—and still leave 37 million Americans without health insurance, and 25 million more with inadequate coverage.... In short, all the things that are wrong with our health care system threaten everything that's right. (p. iii)

Sound familiar? Perhaps there has been only one speech writer for every speech of this type from the time of the final report of the Committee on the Costs of Medical Care to the present. If there is, surely he or she has a better health care plan than most Americans do.

Clinton's proposed Health Security Act had five primary features: guaranteed private insurance for everyone, choice of physician and health plan, elimination of unfair insurance practices, preservation of Medicare, and health benefits guaranteed through the work site (Goldfield, 2000, chapter 10; "Health Security," 1993). The act was based on six basic principles: security, savings, simplicity, choice, quality, and responsibility ("Health Security," 1993).

One of the CHP's principal public spokespersons, Dr. Irwin Redlener (1993), offered "11 Points" in describing/defending the plan:

1. It provided for a major overhaul based on the assumption of universal coverage.
2. The plan created a federal framework with state adaptability.
3. It offered a standardized national benefits package, to be prepared, reviewed, and modified from time to time by a National Health Board.
4. It would be paid for by employer/employee contributions, special taxes (much as is done today), and internal savings in the system, primarily by a sharp reduction in the administrative costs of the current highly fragmented and markedly redundant revenue-raising/payment mechanisms.
5. The plan would eliminate employer choice of an employee's health care provided for that employee.

6. The plan would provide for health care coverage to be transportable, from job to job, from health to sickness, from illness to illness.
7. The plan would create a new system of regional health plans (networks) for the provision of health services and not just a proliferation of HMOs.
8. It would enable patients to make informed choices from among the plans, with the help of objective information provided by health care alliances (see later discussion).
9. It would improve medical care quality and reduce paperwork.
10. It would make significant changes in the public health system.
11. It would make significant changes in academic medicine.

How the Clinton Health Plan Would Have Worked

A new series of agencies, called health care alliances, would be established by the states. Among other things, as noted by Dr. Redlener (1993), they would collect all of the money used to support health services from all sources. They would then contract with provider networks and groups in their region to provide a package of health care services for all persons enrolled (much like the approach of the PHCS).

The alliances would have oversight for all quality assurance activities. This system would presumably simplify both money flow and paperwork. It would guarantee a choice of plan and a system of quality assurance for the beneficiaries. For the providers, it would reunify authority and responsibility by putting medical decision making back in the hands of provider groups, along with fiscal responsibility for the viability of the plan.

A comprehensive benefit package was laid out, to be subject to fine-tuning and modification over time by the National Health Board ("Health Security," 1993). Its description took up 92 pages in the text of the CHP bill submitted to Congress. It included virtually all inpatient, outpatient, short- and long-term, institutional and home-based, preventive, diagnostic, treatment, rehabilitative, and follow-up services.

Each person would have been able to choose from among three types of coverage ("Health Security," 1993): an HMO with no deductible and a copayment of no more than $10 for each doctor visit; a PPO, with no deductible and a $10 copayment if the patient were to use network providers, deductibles and higher copayments for the use of physicians outside the PPO (which would be permitted); and a fee-for-service system (like the managed care point-of-service option), allowing completely free choice of doctor, with significant deductibles and copayments. (Under the last option, there would be a fee schedule for the physicians, and no balance billing would be allowed.)

For most businesses, large and small, participation would have been mandated (a major bone of contention). Because employers would have no say in plan choice by their employees, change from plan to plan would be only at the individual's option (unless a plan went out of business). Coverage would be portable from job to job and from job to no job.

Finally, the CHP would have linked payment and planning, under public rather than private control, the desideratum so eloquently set forth by Dr. Rashi Fein (see chapter 7). That would have enabled (although not guaranteed) significant health care delivery system reform. This was, perhaps, what the opponents of the CHP were most afraid of.

The Opposition

The Republican ideologue William Kristol, former chief of staff to Vice President Dan Quayle and editor since its founding of *The Weekly Standard*, published by Rupert Murdoch, was an early leader of the opposition to the CHP. In the first of the then soon-to-be-famous "Kristol Memos" (1993), he said:

> The Clinton proposal is a serious political threat to the Republican Party. Republicans must therefore clearly understand the political strategy implicit in the Clinton plan—and then adopt an aggressive and uncompromising counterstrategy designed to delegitimize the proposal and defeat its partisan purpose.

On the provider/money transferor side, most of the medical, hospital, and insurance/managed care industry groups were arrayed against the CHP for a variety of reasons, ranging from an antagonism to "government regulation" to a concern with potential limitations on profit-making ability. On the public side, the "single-payer" forces were also arrayed against it, at least their leadership was (Navarro, 1994). They felt that it did not go far enough, that it left too many players in Big Health Care in place. They assumed that if the CHP went down to defeat, their approach would be next on the health care agenda. Unfortunately, on that point, history seems to have proved them wrong.

Finally, there was "big business." Represented by such groups as the U.S. Chamber of Commerce and the National Association of Manufacturers, it had originally been thought to be a major supporter of the CHP, at least by the Clinton people. They were wrong. Industry groups, by and large, eventually came out in opposition (Hacker, 1996).

Also a factor in the defeat of the CHP was the fact that although it appeared to be well thought out and adapted to the American political and health care delivery system realities, there was no comprehensive marketing plan prepared by the forces supporting it (Hacker, 1996). Thus, under a lengthy and expensive onslaught, the CHP went down to defeat in the summer of 1994 (Goldfield, 2000, chapter 10; Skocpol, 1995).

THE PRESENT SITUATION

Today, then, the problem list for the financing, distribution, and delivery of services has changed little since the time of the publication of the CCMC final report (except that the costs are incredibly higher). Indeed, certain problems considered important by the Committee on the Costs of Medical Care that are still pressing today originated in our country and those of our European forebears well before the CCMC's time, in the 17th, 18th, and 19th centuries (Freymann, 1974, pp. 3–97). This is the case even though the advances in the science and technology of medicine have gone well beyond the wildest dreams of anyone giving thought to possibilities in 1932.

Interestingly enough, the one segment of the health care industry that seemed to be doing very well in 2002 was the for-profit hospitals/HMO sector. For example, a headline in the February 2002 issue of the American Hospital Association's journal *Hospitals and Health Networks* read, "Hospital Stocks Prove Health on Wall Street" (Carpenter, 2002). The popular companies were Tenet Healthcare Corp., Triad Hospitals Inc., and Humana. An article published on the aol.smartmoney.com Web site in April 2002 was headlined "What Health Care Crisis?" It reported that Lehman Brothers had noted that managed care stocks, which earlier were considered in "intensive care," had "popped 76% in the last year and 48% in 2002" (Bradford, 2002). In addition, the pharmaceutical companies have been highly profitable. As reported in the *British Medical Journal* in 2002: "Pharmaceuticals again ranked as the most profitable sector in the United States, topping the annual Fortune 500 ranking of America's top industries, released this month" (Gottlieb, 2002, p. 1054).

These trends have continued through the printing of this book. For example, a story in the *New York Times* about pharmaceutical profits in 2006 states: "Drug makers continued to post strong profit gains yesterday, led by Pfizer, the world's biggest pharmaceutical company, which reported that its third-quarter earnings had more than doubled from a year earlier" (Berenson, 2006). WellCare, a health care provider company, saw earnings double in the fourth quarter of 2006 and membership increase by 1.4 million, while Cynosure, the maker of cosmetic surgery systems, reported a 75% surge in earnings in the same quarter (Investor's Business Daily, 2007). Triad reported that, in the first 9 months of 2006, patient revenue per adjusted admission increased 7.7%, patient revenues increased 9.8%, and revenues increased 9.5%, compared to the same period in 2005 (Business Wire, 2006a). Humana reported that earnings for the third quarter of 2006 were up 64% over the same period in 2005. The company was projecting significant growth for 2007 (Business Wire, 2006b).

Nevertheless, looking at the larger picture, there is a fundamental conundrum facing health policy analysts, political leaders who would like to change things, and, above all, the American people. Unfortunately, this conundrum is rarely addressed. To do so, one might ask the following questions:

- Why is it that the plea of the Institute of Medicine (2001), made after it offered its litany of problems, for "all health care constituencies . . . [to] commit to a national statement of purpose for the health care system as a whole and to a shared agenda for improvement . . . " (p. 5) is likely to go entirely unheeded for the foreseeable future?
- Why is it that the findings and recommendations of a major report on health care issued in 1932 and echoed strongly in many, many similar efforts offered since have never been acted on?
- Why indeed, when it comes to issues such as coverage, distribution, the organization of health services, planning, quality assurance, and prevention, haven't things changed?

Or as Drs. Gordon Schiff and Quentin Young (2001) put it at the end of a friendly critique of the 2001 Institute of Medicine report quoted earlier:

> We indeed have a chasm to cross. With the current emphasis on incrementalism, many reformers believe they can succeed by first attending to quality and then reforming finance and delivery. Unfortunately, you cannot bridge a chasm in two jumps—health system reform must be pursued at the same time as quality reform. And you cannot bridge the gap between black and white or rich and poor health care by creating separate or stratified programs (which both Republicans and Democrats are proposing) based on ability to pay. Instead, we need a universal financing system that includes everyone, spreading the costs and the benefits in a fair and efficient way. (p. 401)

It is fascinating that, for the most part, these problems are not the result of a technical or scientific inability to deal with diseases or other health deficits. Nor are the problems caused by a lack of money, as is the case in so many other countries. In the United States, the principal problems, as determined by major system studies done since the 1930s, are as follows:

- As a nation we spend too much on health care, not too little.
- The rate of increase in health care costs, which moderated somewhat in the late 1990s before gaining momentum again in the early 2000s, has been unaffected by any interventions tried to date.
- The geographic and demographic distribution of health services is highly variable.
- Much that could be done to prevent disease and promote health using available knowledge and techniques is not done.

- Health care is widely misallocated and fragmented.
- Many health care needs are undermet (e.g., not enough home health care for the infirm elderly), whereas others are overmet (e.g., too many hospital beds, too much surgery, too much diagnostic testing).
- Many people have no health care cost coverage of any kind.
- There is an increasing focus on high-tech, increasingly expensive interventions that benefit a relatively small number of people.
- Rationing of access, especially by race, is widespread.
- There are serious problems with the quality of health care.

In short, the problems are not the result of a lack of resources, but rather the misuse and misallocation of resources.

Finding and framing the answers to these riddle in detail is not the function of this book. But perhaps some of the information contained in this volume will enable readers to find the answers for themselves. Those inclined, armed with that understanding, may be able to proceed to do something about the situation.

Looking Ahead

For a somewhat more lighthearted view of what the U.S. health care system looked like as it entered the 21st century, let us turn to the journalist Robert Reno (1999). In “A Health Care System in Disguise,” he said, in part: “Imagine a room full of drunk brain surgeons waving scalpels. This approximates the coherence and precision with which the U.S. health care system has been stood on its head for the past year” (p. F7).

He then went on more seriously to note “a race to bigness” among the private insurers, that “hospitals are swallowing hospitals” in mergers and acquisitions, that “doctors are in revolt” with more and more of them supporting some sort of government-driven reform, a prescription pharmaceutical industry that “is cheerfully gobbling up a larger share of the health pie,” spending “bundles of money” promoting their drugs to the medical professions and, increasingly directly to the public, and costs that are once again rising out of proportion to overall inflation. As if to underline his last point, a story on CBS MarketWatch.com (Coombes, 2002) was headlined “HMO costs seen jumping 17% in 2003: Survey projects a third year of double-digit increases.” (So much for the much-heralded “cost control” feature of “free market” competition and managed care.)

The major problems in the U.S. health care delivery system, as outlined several times in this book, by many different voices, of a variety of political persuasions, speaking over many years, are national ones. They require national solutions. That does not necessarily mean a federally run national health service.

That approach would probably work poorly in this country for many reasons. But, as the single-payer proposal postulates, effective reform designed to deal with the consensus problem list does mean national principles and guidelines, and national programs for change.

"Patient Choice" and the "Free Market"

On the matter of the "free market" as the solution to stem the tide of rising medical and hospital costs, some influential policy groups such as the Heritage Foundation (1989), the Cato Institute (Blevins, 1997), and the AMA (Dickey & McMenamin, 1999) have placed their major emphasis, not on any kind of national plan or system, but rather on the promotion of "competition" in the health care delivery system, to be stimulated by "consumer/patient choice."

Forget for the moment that the so-called market-driven managed care system has failed miserably in controlling costs (among its other failings, as detailed throughout this book). The theory treats the health care market as if it were a conventional one. Setting aside for the moment the understanding that competition is the antithesis of the planning mechanisms that the system is so much in need of, for competition to be effective even in such matters as lowering prices and improving quality, the consumer would have to have some reasonable knowledge of what he or she is buying. Furthermore, he or she would have to make the most of the purchasing decisions.

In health care, however, just the opposite is true. Most health services consumers know little or nothing about what they are buying and couldn't care less, just as long as they get better. Furthermore, it is in any case the health care providers (primarily the physicians), not the consumers, who make the majority of the decisions about what will be purchased on behalf of which consumers at what price.

There is another major element that these "market-based" proposals ignore as well. As Dr. Marcia Angell (1999), a former editor of the *New England Journal of Medicine*, has pointed out:

> [When] health care is treated as a commodity provided by a huge number of competing organizations, the surest way for these organizations to thrive is to shift costs to one another by devising stratagems to avoid the most expensive patients—either those who are chronically ill, if payment is capitated, or those who are not insured for the services they need, if payment is on a fee-for-service basis. Other developed countries provide universal health care, considering it a social service, not a commodity. (p. 48)

Public Health Concerns

In dealing with national health reform, rarely is much attention paid to public health and prevention. So let us stop for a moment and do so. According to the

U.S. Centers for Disease Control and Prevention (CDCP), the "Ten Great Public Health Achievements—United States, 1900–1999" (1999) were vaccination, motor vehicle safety, safer workplaces, control of infectious disease, decline in deaths from coronary heart disease and stroke, safer and healthier foods, healthier mothers and babies, family planning, fluoridation of drinking water, and recognition of tobacco use as a health hazard. One does not need to cite chapter and verse to recognize how important each of these interventions was to improving the health of the U.S. public in the century just past.

Drs. Jeffrey Koplan (a former director of the CDCP) and David Fleming (2000) presented a list of public health challenges for the 21st century. First on the list is to "institute a rational health care system," the implication being that nothing effective can be done to deal with the outstanding public health problems unless that is done first. The implication is also that any such rational system will have to be organized in such a way that it can pay significant attention to the health of the public and to public health services.

Following on the list are "eliminate health disparities, focus on children's emotional and intellectual development, achieve a longer 'healthspan,' integrate physical activity and healthy eating into daily lives, clean up and protect the environment, prepare to respond to emerging infectious diseases, recognize and address the contributions of mental health to overall health and well-being, reduce the toll of violence in society, and use new scientific knowledge and technological advances wisely." Challenges indeed. The last alludes to the 800-pound gorilla in the room of any reform movement and effort—something that is little discussed but must be recognized: the high costs of increasingly high-tech medicine.

The Costs of Scientific and Technological Advance

As health services costs continue to escalate, much attention is paid to the overwhelming complexity of the extremely expensive payment/reimbursement system, the reorganization of which would save very significant sums of money (Woolhandler & Himmelstein, 1991, 1997). But even if the payment/reimbursement system were to be reformed with the utmost efficiency in mind, there is an issue that is being blithely ignored: the totally unplanned, unregulated, poorly evaluated growth of technology and its use in medical care.

Some of the technology development was originally profit-driven, for example, the creation of high-tech hospital equipment that does not produce any better results than less expensive equipment. Some of the technology is driven by researchers who strive to find the "cure" for more and more difficult problems, such as the neonatologists who can now keep 2-pound newborns alive, but give no thought either to initial costs or to long-term consequences. Some high-tech systems are developed for the maintenance of life in a small number of persons with rare conditions, whereas large numbers of people with conditions like obesity and sedentary lifestyle are ignored, conditions that could be handled relatively cheaply with known health promotion and disease prevention methods.

Focusing solely on the issue of "medical progress," not the expensive mechanism we use to transfer the money to pay for health services, the economist Paul Krugman (2002), who writes a regular column for the *New York Times*, observed:

> Why do health care costs keep on rising? It's not because doctors and hospitals are greedy; it's because of medical progress. More and more conditions that once lay beyond doctors' reach can now be treated, adding years to the lives of patients and greatly increasing the quality of those years [only in certain instances, one must add]—but at ever greater expense. (p. A23)

Or listen to Dr. George Lundberg, former editor of the *Journal of the American Medical Association* (Rothman, 2001):

> Perhaps Lundberg's most consistent complaint about US medicine is that it does too much and therefore costs too much. He spreads the blame, indicting, among others, physicians, who have become too intent on making money [he disagrees with Krugman on that one], patients, who follow an "almost irrational chase for impossible cures," and legislators, who curry favor with constituents who are ill. The author is convinced that we must ration medical care to escape this dismal predicament. (p. 2604)

We have not even mentioned the costs of genome science and its potential clinical offspring of unproven benefit or perhaps even ultimately negative consequences.

Where Do We Go From Here?

Dr. David Blumenthal (1999) summarized the situation well. The primary factors that presently push for reform, he notes, are the declining access to care, the increasing costs of care, and the threats to the quality of care. Proposals for problem solutions abound and have been available for decades, as previously noted numerous times. None of them are perfect in anyone's eyes. Nevertheless, some have more potential for solving the major problems than do others. Those with the most potential have one key characteristic in common: proactive, not reactive, planning, linked to financing.

One must bear in mind the question Henrik Blum asked in 1983, however: "Can there be meaningful health planning [in the United States] when so little else is planned?" Well, yes, there could be, and if we are to have meaningful, useful, cost-effective health care delivery system reform in the United States, a rational planning system will have to be a central element of it.

But there is only one way that that can happen, and it is not the wishful thinking expressed by the Institute of Medicine in *Crossing the Quality Chasm* (see chapter 1), that enough "good people" within the system will eventually see the light and just start doing the right thing. If that marked the road to change, though, why has it not happened already? No, it seems perfectly apparent that change will have to be imposed from without. To achieve that change, as Dr. Blumenthal (1995) has said:

> The most important condition necessary for the enactment of federal health care reform legislation is the existence of a political constituency so strong and committed that neither special interests nor the inevitable bumps and detours of the congressional process will be able to block reform legislation. The generation of this constituency will require that middle-class Americans in large numbers become firmly convinced that health care reform, with all its attendant risks and uncertainties, is preferable to maintaining the status quo. (p. 465)

A measure of how far the country was from any serious consideration of the overarching issues and problems that health care delivery faced in 2002 was the fact that the three principal issues that concerned Congress and thus the political process in that year were just how to go abut implementing the complex requirements of the Health Insurance Portability and Accountability Act (HIPAA), whether patients should be able to sue HMOs for alleged medical malpractice in the denial of services, and whether and if so how there should be a prescription drug benefit of some sort under Medicare.

There is within the system one wild card in all of this: the care provider (as opposed to the care reimburser) sector moving for change out of necessity and self-protection. The for-profit insurance/managed care industry is becoming more powerful. Insurers have replaced the two traditionally most powerful groups, physicians and hospitals. In the past, major changes in the system have taken place only when physicians or hospitals wanted or needed those changes. Examples include the reinstitution of medical licensing laws and the reduction in the number of medical schools in the late 19th and early 20th centuries, and the development of hospital-sponsored voluntary hospital insurance during the Great Depression.

Health care reform might finally come when one or both of these groups want it or need it. They then would have to be willing to make the compromises that would be necessary if they were to ally with consumers, as well as organized labor and academic, public health, public interest, and political forces that traditionally have been behind national health reform. Doing so would create a political coalition that might just be able to raise enough power to defeat the mighty for-profit insurance industry, which likes things pretty much just the way they are. An expensive fight indeed.

Private hospitals may want true national health care reform, as the AHA actually proposed in the mid-1970s (McMahon, 1975), as an increasing number of them face bankruptcy in the face of uncontrolled cost increases and declining occupancy rates, as happened in Great Britain just before the enactment of the National Health Service in 1946. Physicians may want it when their numbers become so large that they are no longer able to sell all the product they can collectively produce, as they can now, or their incomes and control of the patient process are further hammered down by the MCOs. It must be recognized, however, that any NHI plan that does not tackle the causes of the health care delivery system problems head on, any plan that just pays in a different way for the system we now have, will, in the long run, make things worse, not better. We must not just pay differently for things; we must pay for different things.

Finally, one can ask, if there is no planning, no system, no national program, what will happen? Some experts predict major catastrophe and crisis. But despite predictions of impending doom going back 40 years and more, no national catastrophe has occurred (although millions of individuals have been affected). The system just keeps barreling along, getting ever more expensive, and showing major defects in both the quality and the quantity of service provided (Kohn, Corrigan, & Donaldson, 2000). Will there indeed be a crisis? Will there be a catastrophe? Will there finally be a rational health system for the United States? Or will we just continue to experience more of the same? Unlike in my younger years (Jonas, 1974), I no longer make predictions for the outcome of this drama. Indeed, it is an outcome that no one can predict.

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Epilogue

As we have discussed, as far back as 1932, the findings of the first comprehensive study of health care in the United States deplored problems with health care quality, equity, and efficiency (Committee on the Costs of Medical Care, 1970, p. 2):

> The problem of providing satisfactory medical service to all the people of the United States at costs which they can meet is a pressing one. At the present time, many persons do not receive service which is adequate either in quantity or quality, and the costs of service are inequably distributed. The result is a tremendous amount of preventable physical pain and mental anguish, needless deaths, economic inefficiency, and social waste. Furthermore, these conditions are... largely unnecessary. The United States has the economic resources, the organizing ability, and the technical experience to solve this problem.

As we have also argued, these problems remain remarkably similar today despite recurring periods of intense dissatisfaction with the health care system, followed by calls for reform. No period of discontent with the U.S. health care system has resulted in major reform, whereby the problems of quality, equity, and efficiency are addressed systematically and in total. As we discussed in chapter 9, major change has always eluded reformers. Rather, the changes that have occurred may be characterized as "tinkering" with the system—varying from minor to major tinkering. "Major tinkering" occurred in the 1960s when the Medicare and Medicaid programs were created by the federal government. However, in most eras of dissatisfaction, "minor tinkering" with the system prevailed. A well-known example is the 1946 Hill-Burton Act to fund hospital construction in underserved areas, which was actually aimed at preventing government from taking a larger role in the provision of medical care for the general population:

> Supported by the medical establishment and guided through the Senate by Senator Robert Taft, (the Hill-Burton Act) deflected President Truman's proposal for a

> comprehensive health plan by limiting the government's role to the subsidy of voluntary nonprofit hospitals. The Hill-Burton Act eventually helped to finance 9,200 new hospitals and other facilities, assisting in financing almost one-third of all hospital projects in the nation. (Lipscomb, 2002, p. 109)

Another example occurred in the 1990s. The Clinton Health Plan failed, as did all other proposals at the time, to overhaul the health care system. However, failure to bring major reform was followed later in the decade by passage of "minor tinkering" legislation. This included the Health Insurance Portability and Accountability Act, which patched the health insurance gap for people changing jobs, and the State Children's Health Insurance Program (SCHIP), which provided health insurance for low-income, uninsured children whose families were not poor enough to qualify for Medicaid.

A NEW ERA OF CHANGE?

As of the writing of this edition of *An Introduction to the U.S. Health Care System*, dissatisfaction with the health care system is rising again, and we may be entering another period of strong demand for change. Public confidence in the system appears to be waning. For example, the 2006 Health Confidence Survey (HCS) found that the public's increasing dissatisfaction with the U.S. health care system seems to be focused on rising costs and the negative effects on their financial well-being. People feel that steps should be taken to slow increases; 38% rate the health care system as fair, 31% as poor. The percentage of individuals rating the system poor has doubled since the inception of the HCS in 1998 (Helman & Fronstin, 2006).

The rising uninsurance rates play a large role in the public's dissatisfaction. The number of uninsured Americans is 47 million, almost one-sixth of the population in 2006. Much of this problem is related to the decrease in employer-based health insurance. The National Academies summarized recent findings of the Kaiser Family Foundation and the U.S. Census Bureau on this subject (Pickoff-White, 2006):

> Fewer employers are providing health insurance for their workers this year, according to the Kaiser Family Foundation and the Health Research and Educational Trust's 2005 Annual Survey of Employer Health Benefits. The main drop came from smaller companies that said they could not offer coverage because of high premiums.
>
> About 60 percent of businesses said they would offer health care plans in 2005, down from 69 percent in 2000. Since 2000, the number of uninsured adults has grown by more than 6 million, based on U.S. Census Bureau statistics for 2004. People who earn less are especially vulnerable because their health insurance is

> more prone to be cut and they are less likely to be able to afford their own coverage.

Further, poor access to health care has been related to the declaration of personal bankruptcies (Himmelstein, Warren, Thorne, & Woolhandler, 2005) because individuals are

> emotionally and financially exhausted, hoping to stop the collection calls, save their homes, and stabilize their economic circumstances. Many of the debtors detailed ongoing problems with access to care. Some expressed fear that their medical care providers would not continue their care . . . several had used credit cards to charge medical bills they had no hope of paying . . . the co-occurrence of medical and job problems was a common theme . . . a second common theme was sounded by parents of premature infants or chronically ill children . . . many of the insured debtors blamed high co-payments and deductibles for their financial ruin. (p. W5-64)

In addition to rising uninsurance rates, national health care spending is again growing at a rapid rate (National Coalition on Health Care, 2004), a concern for patients, providers, payers, and policymakers:

> By several measures, health care spending continues to rise at the fastest rate in our history. In 2004 (the latest year data are available [for this report]), total national health expenditures rose 7.9 percent—over three times the rate of inflation. Total spending was $1.9 TRILLION in 2004, or $6,280 per person. Total health care spending represented 16 percent of the gross domestic product (GDP). . . . U.S. health care spending is expected to increase at similar levels for the next decade reaching $4 TRILLION in 2015, or 20 percent of GDP.

The costs of health care are particularly hard on state budgets. States apportion a tremendous proportion of their budgets to Medicaid. In 2005, the average was 22.9% of total expenditures. The range was 7.7% in Wyoming to 34.3% in Missouri, with most states (31 of the 50 states) over 20% (National Association of State Budget Officers [NASBO], 2006). Although Medicaid spending growth slowed in 2006 and state revenues continued to recover after the economic downturn of the early 2000s (Smith et al., 2006), the amount devoted to Medicaid spending by the states is major:

> Despite dramatic slowing of Medicaid spending and enrollment growth, pressure to control Medicaid spending growth remains strong. Requirements to balance state budgets each year, rising health care costs, increasing numbers of Americans without health insurance and the aging population (contributing to more elderly and more persons with disabilities) all continue to impose demands on Medicaid. States may be facing additional strains around Medicaid financing as formula

> driven changes continue to push down federal match rates and as the Center for Medicare and Medicaid Services (CMS) continues to scrutinize state financing practices regarding what expenditures qualify for federal matching dollars. (Smith et al., 2006, p. 9)

The SCHIP program is a looming problem for states. Authorization for SCHIP is ended in 2007, and the program may not be renewed because of fiscal priorities of the current administration (Broaddus & Park, 2007):

> In fiscal year 2007, the final year of SCHIP's original ten-year authorization, many states are expected to have inadequate SCHIP funds to cover the same number of beneficiaries as in 2006. We estimate, based on states' most recent SCHIP spending projections for fiscal year 2007 and taking into account stop-gap SCHIP legislation enacted in December 2006, that 14 states will face a combined shortfall this year of nearly $745 million—equivalent to the average annual cost of covering 510,000 children through SCHIP in 2007.

Finally, there is increasing discontent among physicians with their profession due to decreasing autonomy and income growth and increasing intrusion of management into the doctor-patient relationship. Many feel that they cannot practice the kind of medicine they believe is appropriate and necessary. As Zuger (2004) writes:

> The profession of medicine has taken its members on a wild ride during the past century: a slow, glorious climb in well-being followed by a steep, stomach-churning fall. In the decades after World War II, sociologists portrayed American doctors as the lucky heirs to a golden age of medicine. They were surrounded by admiring assistants, loyal patients, and respectful colleagues and had full autonomy in their work, job security, and a luxurious income. This era was short-lived. By the 1980s, newspaper headlines proclaimed that many of the nation's "dispirited doctors" were considering bailing out of medicine, and subsequent observers have continued to describe a profession in retreat, plagued by bureaucracy, loss of autonomy, diminished prestige, and deep personal dissatisfaction. (Zuger, 2004, p. 69)

In summary, dissatisfaction with the health care system is growing among many stakeholders including the general public, physicians, and payers, and it seems likely to result in change over the next decade.

WHAT KIND OF CHANGE?

What will be the nature of the response to current problems is a fundamental question for policy makers and stakeholders. For although we may agree on goals, we will often disagree on how to reach them. At the present, for example, there is a fair amount of agreement among health policymakers that we need to reengineer our health care system based on population needs to improve health care quality through utilization management, care management, and evidence-based medicine; to eliminate inequities in the quality of and access to health care; and to increase efficiency so that our health care expenditures are reasonable for the outcomes they produce (e.g., Kindig, 1997; Shortell et al., 2000). How this might be accomplished and by whom are other matters entirely. Given the historical importance of the relationship between the public and private sectors in the United States, the answers to these questions are likely to involve this linkage.

One of the major differences between policy approaches in the United States is the preferred role of the public and private sectors, particularly the for-profit private sector. For this reason, one of the themes in this book is the increasing involvement of for-profit corporations in the delivery of health care. The tension between public and private sectors is a remarkably salient issue in the United States. The U.S. health care system is a "mixed enterprise," one in which there is a strong private sector wielding enormous power as well as a large and influential public sector (Rosenberg, 2006). The "mixed enterprise" has historical roots that transcend health care:

> There is nothing more fundamental in the history of American health care than the mixture of public and private. In this regard, American distinctiveness lies not in some unique devotion to the market and individualism, but in a widespread inattention to a more complex reality. From the canal and railroad land grants in antebellum America to support for the aircraft industry in the twentieth century, from tariff policy to the creation of the corporation in the nineteenth century to today's outsourcing of military functions, the interactive and mutually constitutive mixture of public and private has been so ubiquitous in American history as to be almost invisible; it is as true for medicine as it is and has been for transportation or the military-industrial complex. All have been clothed with a sense of collective responsibility that implies—if not demands—the active role of government. Since the Second World War, the public sector (and especially the federal government) has supported medicine in all of its aspects—basic research and the training of biomedical scientists and clinicians, the provision of care, and the management of medically defined dependency. It is a tradition with roots older than the nation itself. (Rosenberg, 2006, pp. 14–15)

Although a mixed public and private health care system has existed throughout U.S. history, prior to the mid-1960s, government was involved mainly in four areas of health care: providing money to train physicians and other health care workers; funding medical research, primarily through the National Institutes of Health (NIH); funding public health activities such as epidemic control at the federal, state, and local levels, and providing medical services to special populations, principally the military, both active and retired, and the mentally ill. Public involvement did not interfere with the basic nature of medical care delivery for the general population. Prior to the mid-1960s, medical care delivery was primarily a “cottage industry” made up of individual or small groups of providers paid for their services directly by patients, or their employer-based insurance, on a fee-for-service basis.

In the mid-1960s, the Medicare and Medicaid legislation brought about a momentous shift in public sector involvement in the health care system, moving it beyond its traditional purview of medical research, workforce training, public health, and provision of medical care for certain special populations. By funding medical care for the elderly (Medicare) and the poor (Medicaid), these programs brought the public sector into the business of providing medical care for large sections of the general population. Moreover, both programs have grown steadily in size of expenditures, number of people served, and influence on hospitals, physicians, and other providers since their inception.

During this period from the mid-1960s to today, however, the private sector, particularly the profit-making sector, was not stagnant. There has been tremendous growth since the mid-1960s among for-profit health care companies in traditional service areas such as supply of therapeutics including pharmaceuticals, medical supplies, and medical devices; and new service areas such as supply of information technology. In addition, for-profit insurance companies such as Prudential and Aetna entered the health insurance market, changing it from a mainly private, nonprofit arena based on community rating to a profit-making one, based on experience rating[1]. Finally, companies such as United Health Care, Tenet, Triad, and Humana were developed to provide direct medical care through integrated systems of care from ambulatory, hospital, rehabilitation, home health, to nursing home. These profit-making corporations stand in sharp contrast to the “cottage industry” providers of the past. Much as local banks have been replaced by large, national and international banking corporations, United Health Care, Tenet, and others with Wall Street money exemplify the same trend in the direct provision of medical care.

Returning then to the question of what kind of change might result from the present period of discontent, we need to assess the power of each sector—public and private—and their interest in promoting certain directions in reform, and the likelihood that one will be more successful than the other. In a sense, both public and private sectors are now more competitive, rather than

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[1] Community Rating means that the cost of a health insurance premium is the same for everyone regardless of differences in their health status, prior utilization of health care, or other factors that increase the risk of requiring health care in the future. Under Experience Rating, people pay different amounts based on these factors, with people at low risk paying less than people at high risk.

complementary, than they were prior to the advent of Medicare and Medicaid. Will the mixed system prevail, or will one sector become dominant?

A PRIVATE SYSTEM?

The strong, historical incentives to maintain a mixed health care system have prevented the United States from following our peer countries. All of them have primarily public systems, whereby the government ensures health care for all residents through direct provision of services (e.g., United Kingdom), universal health insurance (e.g., Canada), or a mix of these.

However, there are signs that the United States may be on the threshold of developing a non-mixed health care delivery enterprise. Playing to a strong current of anti-government sentiment in the United States, conservative stakeholders since the 1980s have pressed toward privatization of public functions. Although anti-government sentiment among Americans is not uncritical or necessarily a primary motivation (Goldsteen, Goldsteen, Kronenfeld, & Hann, 1997), it has been a useful political device for ideologues to promote a private sector-only agenda. The "framing" of issues in anti-government terms has succeeded in limiting public sector involvement in health care as well as other areas. This "crafted approach" is working to move health care and other public activities away from the mixed enterprise system.

We are in an era in which privatization of public sector functions is widespread. There is "privatization creep" in health care as well as other sectors. For example, private companies have been given long-term leases for public roads in Northern Virginia on the Dulles Greenway, in Indiana on the East-West Toll Road, and on a 157-mile highway running east from Chicago to the Ohio border. The idea has been considered in New Jersey, Illinois, Ohio, Texas, and other locales.

Commodification of water is occurring throughout the world, including the United States. Many municipalities are looking to private corporations for long-term leasing of water supplies. The transnational private water corporations including Suez, Vivendi, and Nestle/Perrier have annual revenues of over a trillion dollars and have privatized many formerly public water sources. As water shortages and conflicts increase, water is more and more being transformed from a public good to a privately owned commodity that is sold and traded for profit. It is an increasingly alluring idea to municipalities faced with expensive infrastructure costs.

Major functions of the military have been privatized in recent years. There are advocates for privatizing military maintenance and other functions traditionally performed by the military itself. Blackwater USA, by its own statement "the most comprehensive professional military, law enforcement, security, peacekeeping, and stability operations company in the world" (Blackwater USA, 2007), has been used heavily in the Iraq War. A review of privatizing military training by Deborah Avant summarizes the current situation:

- Private military companies (PMCs), performing an array of security tasks for a variety of clients, have proliferated.
- In pursuing its war on terrorism, the Pentagon is increasingly relying on the services of PMCs, as overseas training programs expand.
- Although private military companies have long performed covert and unsavory tasks, today's PMCs are seeking to polish their image as legitimate firms. (Avant, 2002, p. 1)

In the realm of health care delivery, a number of pieces of recent legislation have given elements of the Medicare program to the private sector. The development of a means test for Medicare Part B destroys Medicare's universal aspect. The Medicare Modernization Act of 2003 is another example. Part D, the drug program, requires that all Medicare recipients get prescription drug coverage from a private insurance company, which then receives a government subsidy to provide coverage. Dual eligibles, those Medicare recipients who also qualify for Medicaid, have been forced into the Part D program as well. Further, the legislation does not permit the Medicare program to bargain with drug companies for lower prices. Prescription drug coverage for Medicare recipients is now a private enterprise, eroding public-sector involvement in health care delivery in favor of the private sector.

The Medicare Modernization Act of 2003 also authorized the Medicare program to subsidize private HMOs for Medicare recipients, so that these plans would become attractive to more and more people who would then select them over the less costly traditional Medicare. Called the Medicare Advantage plans, the motivation for this legislation was clearly not fiscal restraint, but the desire to move health care delivery to the private, for-profit sector, as evidenced by its excess cost:

> According to the Medicare Payment Advisory Commission, an independent federal body that advises Congress on Medicare issues, Medicare Advantage now costs 11 percent more per beneficiary than traditional Medicare. According to the Commonwealth Fund, which has a similar estimate of the excess cost, the subsidy to private HMOs cost Medicare $5.4 billion in 2005. (Krugman, 2007)

It seems likely that the private sector will continue in traditional service areas such as supply of therapeutics and provide new services such as information technology. There is also little doubt that the public sector will continue supporting medical research, health workforce training, and public health functions such as epidemic control because of their high cost and lack of profitability. At issue is whether the mixed system will prevail in the direct provision of health care—ambulatory, hospital, long-term care, and so forth. The balance between private and public for the delivery of direct services to the general population may be shifting in favor of the private, profit-making sector.

Although we could address the problems of quality, equity, and efficiency by expanding the highly successful Medicare program to all Americans, we may be moving instead toward a totally integrated delivery system owned by a few large companies such as Humana, Triad, and United Healthcare, and a small public sector to serve those deemed "unaffordable" by the private sector companies. Employer-based health insurance, the private health insurance market, and public programs for special groups such as the poor, elderly, and veterans would be eliminated. Thus, health care delivery might be integrated and "single payer," but the provider would be a profit-making corporation rather than a public or nonprofit entity.

A PUBLIC SYSTEM IS PREFERABLE

There is sufficient reason to doubt that a primarily private, profit-making health care system would achieve the goals of most Americans—health care quality, equity, and efficiency—because of fundamental incompatibilities with the nature of health care (e.g., Kaveny, 1999; Pellegrino, 1999). As we have argued throughout this book (see chapters 8 and 9), the large profit-making health care companies have put profits before quality and equity, as might be expected since they must answer to their stockholders first. Therefore, it is of grave concern that the United States may have even more privatization of health care than it does now, even moving to dominance of profit-making enterprises in the direct delivery of health care. As Pellegrino (1999) argues, health care is fundamentally about healing, which is necessarily a public good, not a commodity. Treating health care as a commodity is injurious to the ethics of patient care and we, as a society, have an obligation to protect health care from the "market ethos":

> Understanding health care to be a commodity takes one down one arm of a bifurcating pathway to the ethic of the marketplace and instrumental resolution of injustices. Taking health care as a human good takes us down a divergent pathway to the resolution of injustice through a moral ordering of societal and individual priorities.
>
> One thing is certain: if health care is a commodity, it is for sale, and the physician is, indeed, a money-maker; if it is a human good, it cannot be for sale and the physician is a healer. [There is] only one ethically defensible answer. (p. 262)

If we move to market-driven health care delivery, we would be undoing 4,000 years of history in which profit was not the first priority of the system. This possibility is of the greatest concern, particularly for health care equity. As Martin Luther King said, "Of all the forms of inequality, injustice in health care is the most shocking and inhumane."

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Shortell, S. M., Gillies, R. R., Anderson, D. A., Erickson, K. M., & Mitchell, J. B. (2000). *Remaking health care in America: The evolution of organized delivery systems* (2nd ed). San Francisco: Jossey-Bass.

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Appendix I

List of Critical Reports on the U.S. Health Care Delivery System, 1927–2006

Aday, L. A. (2001). *At risk in America: The health and health care needs of vulnerable populations in the United States*. San Francisco: Jossey-Bass.

American health care: A system in crisis. (1983, October). *Healthline*, p. 7.

Citizen's Board of Inquiry into Health Services for Americans. (1971). *Heal yourself* [Report]. Washington, DC: Author.

The crisis in American medicine. (1960, October). *Harper's Magazine*, p. 123.

Ehrenreich, B., & Ehrenreich, J. (1971). *The American health empire: Power, profits, and politics*. New York: Vintage Books.

Health Task Force of the Urban Coalition. (1969). *Rx for action* [Report]. Washington, DC: Author.

Himmelstein, D., & Woolhandler, S. (2001). *Bleeding the patient: The consequences of corporate health care*. Monroe, ME: Common Courage Press.

Institute of Medicine (IOM). (2000). *To err is human: Building a safer health system*. Washington, DC: National Academies Press.

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

Institute of Medicine (IOM). (2002). *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: National Academies Press.

Institute of Medicine (IOM). (2004). *Patient safety. Achieving a new standard for care.* Washington, DC: National Academies Press.
Jonas, S. (1978). *Medical mystery: The training of doctors in the United States.* New York: W.W. Norton.
Kennedy, E. M. (1972). *In critical condition.* New York: Simon & Schuster.
Kleinke, J. D. (2001). *Oxymorons: The myth of a U.S. health care system.* San Francisco: Jossey-Bass.
Knowles, J. H. (Ed.). (1977). *Doing better and feeling worse.* New York: W.W. Norton.
Moskin, J. R. (1964, November 3). The challenge to our doctors. *Look*, p. 26.
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Ribicoff, A., with Danaceau, P. (1972). *The American medical machine.* New York: Saturday Review Press.
Schorr, D. (1970). *Don't get sick in America.* Nashville, TN: Aurora Publishers.
Silver, G. A. (1976). *A spy in the house of medicine.* Germantown, MD: Aspen.
The $60-billion crisis over medical care. (1990, January 17). [Special reprint]. *Business Week.*
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In a review of the Ehrenreich and Ehrenreich (1971) book, *The American Health Empire: Power, Profits, and Politics*, which appeared in the *International Journal of Health Services* (1972), Dr. Milton Roemer listed a series of other reports going back many more years. He said:

> Every few years, more recently in the last decade, there appears a book analyzing the serious defects of health care in America. In 1927, Harry H. Moore produced *American Medicine and the People's Health*, in the 1930s were the magnificent 27 volumes of the Committee on the Costs of Medical Care, in 1939 there was James Rorty's *American Medicine Mobilizes*, and in 1940 Hugh Cabot's *The Patient Dilemma*. After World War II, Carl Malmberg wrote *140 Million Patients* in 1947, Michael Davis wrote *Medical Care for Tomorrow* in 1955, and Richard Carter wrote *The Doctor Business* in 1958. In 1965 there was Selig Greenberg's excellent *The Troubled Calling: Crisis in the Medical Establishment*. The year after Medicare, 1966, saw two critical outputs: *The American Health Scandal* by Raul Tunley and *The Doctors* by Martin L. Gross. In 1967 there was Fred J. Cook's *Plot Against the Patient* and in 1970 Ed Cray's *In Failing Health*. (p. 119)

It is fascinating that, allowing for changes in magnitude, many of these analyses and the recommendations they make are so similar in many ways. It is also fascinating that three quarters of a century after Dr. Moore's book appeared, such books, referred to and cited in the text (e.g., the Institute of Medicine's

Crossing the Quality Chasm, Himmelstein and Woolhandler's *Bleeding the Patient*, and Kleinke's *Oxymorons*) are still being written. This is the case because not only do many of the problems of cost, distribution, coverage, and quality that past works highlight remain with us, but because of the changes in their magnitude over time—they are only getting worse.

Appendix II

Sources of Data

INTRODUCTION

This appendix is a guide to the principal sources of health and health services data for the United States, as of 2006. It contains descriptions of those sources, indicates how frequently each is published, lists the categories of data and other information they contain, and provides an introductory Web site address, if available.

There are two comprehensive guides to sources of data that are published annually. The first appears in *Health, United States* (see item 7 of the following list), published by the National Center for Health Statistics of the Centers for Disease Control and Prevention (www.cdc.gov/nchs). The most recent edition as of this writing is for 2006, published in November of that year (DHHS Pub. No. 2006-1232). Its Appendix I contains very useful, detailed descriptions of all the major health data sources published by the several branches of the federal government, the United Nations, and private agencies ranging from the American Medical Association to the National League for Nursing, with Web site addresses as available.

The second appears in the *Statistical Abstract of the United States* (see item 1 of the following list), published by the Census Bureau of the U.S. Department of Commerce (www.census.gov/compendia/statab/). The most recent edition as of this writing is for 2006 (published in October 2005). Appendix I contains an extensive listing of sources of health data, with Web site addresses. Appendix III of that publication presents brief descriptions of, and analyses of the limitations of, the major sources of health data listed in Appendix I.

Almost all federal sources of data are available for purchase through the U.S. Government Printing Office (USGPO) (www.gpo.gov).

Also, the *AHA Guide*, published annually by the American Hospital Association (see item 10 of the following list) (www.hospitalconnect.com) in its Section C lists the major national, international, U.S. government, state and local government, and private health organizations, agencies, and providers. Health and health care data can be obtained from many of them.

PRINCIPAL SOURCES OF HEALTH AND HEALTH CARE DATA

1. *Statistical Abstract of the United States.* Published annually by the Bureau of the Census, U.S. Department of Commerce (www.census.gov), the Statistical Abstract contains a vast collection of tables reporting information and data collected by many different government (and in certain cases nongovernmental) agencies. They are accumulated under the following headings: Population; Vital Statistics; Health and Nutrition; Education; Law Enforcement, Courts, and Prisons; Geography and Environment; Elections; State and Local Government Finances and Employment; Federal Government Finances and Employment; National Security and Veterans Affairs; Social Insurance and Human Services; Labor Force, Employment, and Earnings; Income, Expenditures, and Wealth; Prices; Business Enterprise; Science and Technology; Agriculture; Natural Resources; Energy; Construction and Housing; Manufacturing; Domestic Trade; Transportation; Information and Communications; Banking, Finance, and Insurance; Arts, Entertainment and Recreation; Accommodation, Food Services, and Other Services; Foreign Commerce and Aid; Puerto Rico and the Island Areas; and Comparative International Statistics. There are health and health services data of varying kinds reported in many of these categories.

2. *U.S. Census of Population.* As noted previously, the Bureau of the Census is part of the U.S. Department of Commerce. The United States Constitution requires that a census be taken every 10 years, at the beginning of each decade. The original purpose of the census was to apportion seats in the House of Representatives, thus also distributing the seats in the Electoral College, which was to choose the president. In modern times, in addition to the simple counts, a great number of demographic data are collected by the Census Bureau. Many reports on the decennial censuses as well as interim special counts are published by the Census Bureau (see item 3 of this list). But a good place to begin is in Section 1 (Population) of the *Statistical Abstract*. Hardcover compendia of decennial national census data are published periodically. Also available are special analyses for a variety of geographical subdivisions of the country. Census Bureau publications may be ordered from the USGPO, which offers for sale a comprehensive *Census Catalog and Guide*. A number of Census Bureau products are available online (www.census.gov) as well as on compact disc.

3. *Current Population Reports.* In addition to reports from the decennial censuses, the Census Bureau publishes a series of reports on a continuing basis, called *Current Population Reports*. These include estimates, projections, sample counts, and special studies of selected segments of the population. The current series, covering such topics as population characteristics, estimates and projections of consumer income, and special studies, may be accessed through the Web site (www.census.gov). Catalogs and information on the content of each series are available from the Census Bureau, and publications may be ordered through the USGPO.

4. *Advance Date From Vital and Health Statistics. Advance Data* is published by the National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC). The NCHS periodically publishes catalogs of its various publications and electronic data products, available free (see also www.cdc.gov/nchs/). Data are published for the traditional "vital statistics"—births, marriages, divorces, and deaths—and for regularly collected statistics on the health care delivery system from, for example, the "Hospice Care Survey," the "National Hospital Ambulatory Medical Care Survey," and the "National Hospital Discharge Survey." All such reports may be obtained by annual subscription through the USGPO.

5. *Vital Statistics of the United States.* These are the full, highly detailed annual reports on vital statistics from the NCHS, the summary versions of which are published in *Advance Data*.

6. *Vital and Health Statistics.* These publications of the NCHS, distinct from the reports described in items 4 and 5, appear at irregular intervals, with declining frequency. As of 1995, there were 14 series, not numbered consecutively. Most of them report data from ongoing studies and surveys that the NCHS has carried out. The original 14 series of *Vital and Health Statistics* are as follows: Series 1, *Programs and Collection Procedures*; Series 2, *Data Evaluation and Methods Research*; Series 3, *Analytical and Epidemiological Studies*; Series 4, *Documents and Committee Reports*; Series 5, *International Vital and Health Statistics Reports*; Series 6, *Cognition and Survey Measurement*; Series 10, *Data from the Health Interview Survey*; Series 11, *Data from the National Health Examination Survey, the National Health and Nutrition Examination Surveys, and the Hispanic Health and Nutrition Examination Survey*; Series 13, *Data on Health Resources Utilization*; Series 16, *Compilations of Advance Data from Vital and Health Statistics*; Series 20, *Data on Mortality*; Series 21, *Data on Natality, Marriage, and Divorce*; and Series 24, *Compilations of Data on Natality, Mortality, Marriage, Divorce, and Induced Terminations of Pregnancy*.

7. *Health, United States.* This book is published annually by the NCHS and available for purchase from the USGPO (see also the introduction to this appendix). A variety of health and health care delivery system data are

presented, in five principal categories: population; health behaviors and risk factors; mortality, morbidity, and other health status measures; and health care access and use. It also contains useful appendixes, Data Sources, and Definitions and Methods. *Health, United States* is a boon to students and researchers in health care delivery because it provides one-stop shopping for most important health and health care data. Web access is available at www.cdc.gov/nchs/.

8. *Morbidity and Mortality Weekly Report (MMWR).* This is a regular publication of the Centers for Disease Control and Prevention (http://www.cdc.gov/mmwr/). A print version is available on an annual subscription basis through the Web site: (http://www.cdc.gov/mmwr/order.html). A free subscription can be obtained electronically through the Web site: http://www.cdc.gov/mmwr/mmwrsubscribe.html. In the past, *MMWR* has been concerned primarily with communicable disease reporting. As of 2004, the notifiable diseases included acquired immunodeficiency syndrome (AIDS), chlamydia, cryptosporidiosis, *E. coli*, gonorrhea, *H. influenzae*, viral hepatitis, legionellosis, listeriosis, Lyme disease, malaria, measles, meningococcal disease, mumps, pertussis, (animal) rabies, Rocky Mountain spotted fever, rubella, salmonellosis, shigellosis, streptococcal disease, syphilis, tuberculosis, severe acute respiratory syndrome–associated coronavirus (SARS-CoV) disease, and typhoid fever. *MMWR* also reports deaths in 122 U.S. cities on a weekly basis. Each week *MMWR* presents brief reports on special studies on a diverse series of health topics from "Progress Toward Poliomyelitis Eradication—Pakistan and Afghanistan, January 2000–April 2002," to "Nonoxynol-9 Spermicide Contraceptive Use—United States, 1999," to "Occupational Exposures to Air Contaminants at the World Trade Center Disaster Site—New York, September–October, 2001." *MMWR* also periodically publishes "Recommendations and Reports" of various governmental and nongovernmental health agencies and organizations, and the results of "CDC Surveillance Summaries."

9. *Health Care Financing Review.* The *Health Care Financing Review* is a quarterly publication of the Centers for Medicare and Medicaid Services (CMS). It is available on subscription through the USGPO. It annually publishes the official reports "National Health Expenditures" and "Health Care Indicators." It also publishes an extensive series of academic articles, reports, and studies, specifically on Medicare/Medicaid, as well as on a broad range of health care financing and delivery issues. The Web site is: http://www.cms.hhs.gov/HealthCareFinancingReview/.

10. *American Hospital Association (AHA) Guide to the Health Care Field.* This is a two-part publication of the Health Forum LLC of the American Hospital Association in Chicago, IL. It is available for purchase from the AHA. The first part, the *AHA Guide*, is published annually. It contains a listing of almost every hospital in the United States by location and gives basic data on size, type,

ownership, and facilities, as well as multihospital health care systems and information on the AHA itself. The second part, *AHA Hospital Statistics*, is published biennially. It contains a great deal of summary descriptive, utilization, and financial data on U.S. hospitals, presented in many different cross-tabulations. Some of the data are presented historically as well. The two parts together contain the most detailed data available on hospitals in the United States.

Appendix III

Glossary of Terms

access: An individual's ability to obtain medical services on a timely and financially affordable basis. Factors determining ease of access include availability of health care facilities and transportation to them, and reasonable hours of operation.

acute care: Medical care of a limited duration, provided in a hospital or outpatient setting, to treat an injury or short-term illness.

administrative costs: Nonmedical expenditures related to the delivery of health care services, including billing, claims processing, marketing, and other overhead.

Advanced Practice Nurse: Registered nurse such as a Clinical Nurse Specialist, Nurse Practitioner, Nurse Anesthetist, and Nurse-Midwife with a master's or doctoral degree concentrating on a specific area of practice.

average daily census: The average number of patients counted in a health care institution, usually over a 1-year period. Usually taken at midnight.

behavioral risk factor: An element of personal behavior, such as poor nutrition, use of tobacco products, a sedentary lifestyle, or the abuse of alcoholic beverages, that leads to an increased risk of developing one or more diseases or negative health conditions.

beneficiary: Any person, either the subscriber or the subscriber's dependent, eligible for services under a health plan contract.

benefits: Specific services provided, such as outpatient visits and hospitalization, under a health plan.

capitation: Capitation is a fixed prepayment per person to the health care provider for an agreed-on array of services. The payment is the same no matter how many services or what type of services each patient actually gets.

carrier: An insurer; an underwriter of risk that is engaged in providing, paying for, or reimbursing all or part of the cost of health services under group health plan, medical or hospital services agreements, membership or subscription contracts, or similar group arrangements, in exchange for premiums or other periodic charges.

catastrophic coverage: A type of insurance that pays for high-cost health care, usually associated with accidents and chronic illnesses and diseases, such as cancer and AIDS.

census: In the United States, refers to counts of members of the national population and their demographic characteristics undertaken by the Bureau of the Census every 10 years on the 10th year, and in the health care delivery system specifically, the number of patients in a hospital or other health care institution at any one time.

Centers for Medicare and Medicaid Services (CMS): Administers Medicare, Medicaid, and the Child Health Insurance Programs. Formerly called Health Care Financing Administration (HCFA).

chronic care: Treatment or rehabilitative health services provided to individuals on a long-term basis (over 30 days), in both inpatient and ambulatory settings.

Clinical Nurse Practitioner: Nurse with extra training who accepts additional clinical responsibility for medical diagnosis or treatment.

coinsurance: A provision in a member's coverage that limits the amount of coverage by the health plan to a certain percentage, commonly 80%. Any additional costs are paid out-of-pocket by the member.

community hospital: A hospital offering short-term general and other special services, owned by a corporation or agency other than the federal government.

complementary and alternative medicine: Refers to a series of diagnostic and treatment interventions that fall outside of the realm of state-licensed medical practice as it is defined by the privileges to use certain restricted diagnostic regimens, prescribe drugs from a restricted list, and practice surgery. Such disciplines include chiropractic, acupuncture, homeopathy, herbal medicine, naturopathy, and therapeutic touch.

copayment: A specified amount that the insured individual must pay out-of-pocket for a specified service or procedure (e.g., $8 for an office visit).

comprehensive coverage: A health insurance system that pays for a broad range of services.

cost-sharing: Provisions that require individuals to cover some part of their medical expenses (e.g., copayments, coinsurance, deductibles).

cost-shifting: Refers to passing the cost of one group onto another group. For example, if the rate one group of health plan enrollees pays for services is less than the actual cost of those services, the difference can be made up through higher charges to another group.

credentialing: The most common use of the term refers to obtaining and reviewing the documentation of professional providers.

deductible: The amount a patient must pay out-of-pocket, usually annually on a calendar-year basis, before insurance will begin to cover costs.

demographic characteristics: Refers to characteristics of individuals such as age, sex, marital status, ethnicity, geographic location, occupation, and income.

diagnosis-related groups (DRGs): Groups of inpatient discharges with final diagnoses that are similar clinically and in resource consumption; used as a basis of payment by the Medicare program, and as a result, widely accepted by other payers.

discharge planning: A part of the patient management guidelines and the nursing care plan that identifies the expected discharge date and coordinates the various services necessary to achieve the target.

drug: A therapeutic drug is a chemical compound used in treating or managing a disease or negative health condition. A recreational drug is a chemical compound that alters the user's mood by providing diversion, relaxation, heightened sensation or other enjoyment or pleasure.

enrollment: The process by which an individual and family become a subscriber(s) for coverage in a health plan. This may be done either through an actual signing up of the individual or through a collective bargaining agreement on the employer's conditions of employment. A result, therefore, is that the health plan is aware of its entire population of beneficiary eligibles. As a usual practice, individuals must notify the health plan of any changes in family status that affect the enrollment of dependents.

entitlements: Government benefits (e.g., Medicare, Medicaid, Social Security, food stamps) that are provided automatically to all qualified individuals and are therefore part of mandatory spending programs.

experience rating: A method used to determine the cost of health insurance premiums, whereby the cost is based on the previous health care utilization.

fee schedule: A listing of accepted fees or established allowances for specified medical procedures as used in health plans; it usually represents the maximum amounts the program will pay for the specified procedures.

fee-for-service: A billing system in which a health care provider charges a patient a set amount for each service used.

fixed costs: Costs that do not change or vary with fluctuations in enrollment or in utilization of services.

for-profit hospitals: Those owned by private corporations that declare dividends or otherwise distribute profits to individuals. Also called "investor-owned"; many are also community hospitals.

formulary: A listing of drugs, prepared by, for example, a hospital or a managed care company, which a physician may prescribe. The physician is requested or required to use only formulary drugs unless there is a valid medical reason to use a nonformulary drug.

gatekeeper: A health care practitioner who makes decisions regarding the type and volume of services to which a patient may have access, generally used by health maintenance organizations (HMOs) to control unnecessary utilization of services.

generics: A therapeutic drug, originally protected by a patent, the chemical composition of which meets the standards for that drug set by the Food and Drug Administration, made by a company other than the company that originally developed and patented the drug. Generics are usually not manufactured and made available until after the original patent has expired.

governing board: A group of individuals who under state law own an organization, whether or not they can obtain any financial advantage through such ownership.

graduate medical education: The education and training of physicians beyond the 4 years of medical school, in positions that may be termed internship, residency, fellowship, postgraduate and so on. Although one can enter medical school only with an undergraduate degree at the baccalaureate level, in the United States, the 4 years of medical school leading to the MD or DO (Doctor of Osteopathy) degrees are customarily referred to as *undergraduate medical education*.

group model: An HMO that contracts with a medical group for the provision of health care services. The relationship between the HMO and the medical group is generally very close, although there are wide variations in the relative independence of the group from the HMO. A form of closed-panel health plan.

group practice: Three or more physicians who deliver patient care, make joint use of equipment and personnel, and divide income by a prearranged formula.

health care providers: Usually refers to professional health service workers—physicians, dentists, psychologists—who are licensed to practice independently of any other health service worker.

health maintenance organization (HMO): A type of managed care organization that organizes and provides health care for its enrollees for a fixed prepaid premium. In short, HMOs are organizations that insure individuals against the costs of medical services and also provide those medical services

health promotion (personal): Personal health promotion is the science and art of helping people change their lifestyle to move toward a state of optimal health.

hospitalization: The admission of a patient to a hospital.

hospitalization coverage: A type of insurance coverage that covers most inpatient hospital costs (e.g., room and board), diagnostic and therapeutic services, care for emergency illnesses or injuries, laboratory and x-ray services, and certain other specified procedures.

infant mortality: The death of a child who is born alive and dies before he or she reaches 1 year of age.

information technology: Electronic systems for communicating information. Health care organizations want information technology that is accessible—with privacy safeguards—to multiple users within an organization.

integrated delivery system (IDS): A group of health care organizations that collectively provides a full range of health-related services in a coordinated fashion to those using the system and is clinically and fiscally responsible for the health of that population.

integration, horizontal: Affiliations among providers of the same type, such as a hospital forming relationships with other hospitals.

integration, vertical: Affiliations among providers of different types, such as a hospital, clinic, and nursing home forming an affiliation.

international medical school graduate: A U.S. or non-U.S. citizen physician who has graduated from a medical school not located in the United States that is also not accredited by the U.S. medical school accrediting body, the Liaison Committee on Medical Education.

investor-owned hospital: A hospital owned by one or more private parties or a corporation, for the purpose of generating a profitable return on investment.

Joint Commission on Accreditation of Healthcare Organizations (JCAHO): A national organization of representatives of health care providers: American College of Physicians, American College of Surgeons, American Hospital Association, American Medical Association, and consumer representatives. The JCAHO offers inspection and accreditation on quality of operations to hospitals and other health care organizations.

licensure: A system established by a given state recognizing the achievement of a defined level of education, experience, and examination performance as qualifying the person or organization meeting those standards to work or operate in a defined area of practice, prohibited to any person or organization that has not met those standards.

life expectancy: The predicted average number of years of life remaining for a person at a given age.

long-term care: A general term for a range of services provided to chronically ill, physically disabled, and mentally disabled patients in a nursing home or long-term home health care setting.

managed care: A system of health care delivery that influences or controls utilization of services and costs of services by providing both the financing of care and the health services for covered individuals. Managed care uses financial incentives and management controls to spur providers to give appropriate, cost-effective care. Ideally, managed care systems emphasize prevention, early intervention, and outpatient care to contain costs and improve health status among covered individuals.

mandated benefits: Benefits that a health plan are required to provide by law. This is generally used to refer to benefits above and beyond routine insurance-type benefits, and it generally applies at the state level (where there is high variability from state to state). Common examples include in vitro fertilization, defined days of inpatient mental health or substance abuse treatment, and other special condition treatments.

Medicaid: A joint federal/state/local program of health care for individuals whose income and resources are insufficient to pay for their care, governed by Title XIX of the federal Social Security Act and administered by the states. Medicaid is the major source of payment for nursing home care of the elderly.

medical savings account: Accounts similar to individual retirement accounts (IRAs) into which employers and employees can make tax-deferred contributions and from which employees may withdraw funds to pay covered health care expenses.

Medicare: A federal entitlement program of medical and health care coverage for the elderly and disabled, and persons with end-stage renal disease, governed by Title XVIII of the federal Social Security Act and consisting of two parts: Part A—For institutional and home care, and Part B—For medical care.

Medi-Gap: Also known as Medicare Supplement Insurance, a type of private insurance coverage that may be purchased by an individual enrolled in Medicare to cover certain needed services that are not covered by Medicare Parts A and B (i.e., the "gaps").

morbidity: An episode of sickness, as defined by a health professional. A morbidity rate is the number of such episodes occurring in a given population during a given period of time.

mortality: A death. A mortality rate is the number of deaths (either the *crude rate*, which is all deaths, or a *specific rate*, which is by, for example, specific cause, specific location, or specific age group) occurring during a given period of time.

natality: A live birth. The natality rate is the number of live births occurring in a given population during a given period of time.

national health insurance: A system for paying for one or more categories of health care service that is organized on a nationwide basis, established by law, and usually operated by a government agency.

National Health Service: As used in the United States and Great Britain, refers to the comprehensive, government-funded and -operated system such as that found in Great Britain.

network: An arrangement of several delivery points (i.e., medical group practices affiliated with a managed care organization; an arrangement of HMOs, either autonomous and separate legal entities, or subsidiaries of a larger corporation) using one common insuring mechanism such as Blue Cross/Blue Shield; a broker organization (health plan) that arranges with physician group, carriers, payer agencies, consumer groups, and others for services to be provided to enrollees.

nonprofit or not-for-profit plan: A term applied to a prepaid health plan under which no part of the net earnings accrues, or may lawfully accrue, to the benefit of any private shareholder or individual. An organization that has received 501-C-3 or 501-C-4 designation by the Internal Revenue Service.

office visit: A formal, face-to-face contact between the physician and the patient in a health center, office, or hospital outpatient department.

open enrollment period: A requirement that all possible customers for a particular health insurance policy must be accepted at all times for coverage and, once accepted, must not be terminated by the insurer because of claims experience.

per diem payment: Reimbursement rates that are paid to providers for each day of services provided to a patient, based on the patient's illness or condition.

perspective, provider and patient: The two different vantage points from which the same health services event can be counted, over time. For example, visits by patients to physician offices can be counted as the number of patient visits a physician sees in a year (provider perspective) or the number of visits to the physician's office a patient makes in a year (patient perspective).

point of service plan (POS): A managed care health plan that offers enrollees the option of receiving services from participating or nonparticipating providers. The benefits package is designed to encourage the use of participating providers, through higher deductibles or partial reimbursement for services provided by nonparticipating providers.

preexisting condition: A physical and/or mental condition of an insured that first manifests itself prior to issuance of a policy or that exists prior to issuance and for which treatment was received.

preferred provider organization (PPO): A limited grouping (panel) of providers (doctors and/or hospitals) who agree to provide health care to subscribers for a negotiated and usually discounted fee and who agree to utilization review. The enrollees may go outside the network of providers in the PPO, but they would pay a greater percentage of the cost of coverage than within the network.

premium: A periodic payment made to keep an insurance policy in force.

prepayment: A method of providing, in advance, for the cost of predetermined benefits for a population group through regular periodic payments in the form of premiums, dues, or contributions, including those contributions that are made to a health and welfare fund by employers on behalf of their employees, and payments to HMOs made by federal agencies for Medicare eligibles.

prescription: An order, usually made in writing, from a licensed physician or his or her authorized designee, to a pharmacy, directing the latter to dispense a given drug, with written orders for its use.

prevalence: The total number of events, disease cases, or conditions existing in a defined population, counted during a defined period of time, or at a given point in time (known as *point prevalence*).

primary care: The general health care that people receive on a routine basis, which may be provided by a physician, nurse practitioner, or physician's assistant. Categories of primary care physicians usually include those who practice family medicine, pediatrics, and internal medicine; other physicians sometimes included in this definition are obstetricians and gynecologists, as well as practitioners of preventive and emergency medicine.

primary care practitioners: Doctors in family practice, general internal medicine, or pediatrics; nurse practitioners and midwives; may also include psychiatrists and emergency care physicians.

privileges: Rights granted annually to physicians and affiliate staff members to perform specified kinds of care in the hospital.

public hospital: A hospital operated by a government agency. In the United States, the most common are the federal government's Department of Veterans Affairs; state governments' mental hospitals; and local governments' general hospitals for the care of the poor and otherwise uninsured.

public psychiatric hospital: A hospital devoted to the treatment and management of mental illness and disorders, owned and operated by a government agency (in the United States, most commonly at the state level).

quality assurance: A formal set of activities to measure the quality of services provided; these may also include corrective measures.

quality of care: Referring to the measurement of the quality of health care provided to individuals or groups of patients, against a previously defined standard.

registered nurse: A nurse who is a graduate of an approved education program leading to diploma, an associate degree, or a bachelor's degree, who has also met the requirements of experience and exam passage to be licensed in a given state.

resource-based relative value scale (RBRVS): As of January 1, 1992, Medicare payments are based on a resource-based relative value scale, replacing the customary and prevailing charge mechanism for fee-for-service providers participating in the Medicare program. The objective is that physician fees should reflect the relative value of work performed, their practice expense, and malpractice insurance costs.

risk contract: A contract to provide services to beneficiaries under which the health plan receives a fixed monthly payment for enrolled members, and then must provide all services on an at-risk basis.

self-insurance: A program for providing group insurance with benefits financed entirely through the internal means of the policyholder, in place of purchasing coverage from commercial carriers. By self-insuring, firms avoid paying state taxes on premiums and are largely exempt from state-imposed mandates.

socialized health service: Usually an epithet used by opponents of any type of national government involvement in either the financing or operation of a health care delivery system on a nationwide basis, to describe any such system, regardless of whether such a government could itself be defined as "socialist" or not.

solo practice: Individual practice of medicine by a physician who does not practice in a group or does not share personnel, facilities, or equipment with three or more physicians.

staff model: An HMO that employs providers directly, and those provider see members in the HMO's own facilities. A form of closed-panel HMO.

stakeholders: Persons with an interest in the performance of an organization. Examples of hospital stakeholders are physicians and nurses, payers, managers, patients, and government.

strategic planning: A process reviewing the mission, environmental surveillance, and previous planning decisions used to establish major goals and nonrecurring resource allocation decisions.

teaching hospital: A hospital in which undergraduate and/or graduate medical education takes place.

uninsured: In the United States, a person who is not the beneficiary of any third-party source of payment for health care services.

universal health insurance: Usually refers to a national health insurance system that provides for comprehensive coverage for all permanent residents of a country.

utilization review: A system for evaluating the medical care provided to patients to determine if it is appropriate, medically necessary, and of high quality. Evidence-based medicine and resulting practice guidelines are increasingly used in utilization review.

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