

**CHAPTER**  
**3**

# Hospitals: Origin, Organization, and Performance

This chapter's overview of the genesis of U.S. hospitals provides a basis for understanding their characteristics and organization. The major private and governmental insurance initiatives that contributed to the growth and centrality of hospitals in the health care system are defined. The chapter also discusses the diverse functions of hospitals, the staff who perform in them, and the management structures in which they work. Important aspects of the relationship between staff and patients are reviewed, with particular emphasis on the rights and responsibilities of patients in that often intimidating hospital environment. The chapter concludes with a discussion of the quality of care provided in hospitals and an explanation of the forces of health care system reform that made managed care an ubiquitous influence on hospital economics, service patterns, and provider relationships.

Of all the familiar institutions in U.S. society, the hospital is, at the same time, the most appreciated, most maligned, and least understood. Besides serving as a place for the treatment of the sick and injured, it may function as a research laboratory, an educational institution, and a major employer within the community.

Being a hospital patient is usually at best an unpleasant personal trial and at worst a serious, perhaps life-threatening event. Where else in the free world, outside of a prison, does an individual voluntarily submit to

being confined to a room in scanty institutional garb and to being poked, prodded, jabbed with needles, questioned, fed, toileted, and alternately ignored and attended, seemingly at the whim of a legion of strangers?

## Historical Perspective

The often strained relationship between patients and hospital personnel such as doctors, nurses, aides, technicians, and therapists dates back to the earliest history of health care in the United States. The indifference to patients' needs for information, comfort, and humane contact that is today a common complaint about hospital care is rooted not only in the overall history of medical care but also—and especially—in the history of hospitals.

Hospitals in early America served quite different purposes from those of today. They were founded to shelter older adults, the dying, orphans, and vagrants and to protect the inhabitants of a community from the contagiously sick and the dangerously insane.

During the 18th century, Boston was the largest city in the new democracy, with about 7,000 citizens. Philadelphia and New York each had about 4,000 people. Whatever passed for medical care in those days was provided in the home. It was necessary, however, in these and other seaport towns to provide refuge for sailors and other shipboard victims of contagious diseases who often were unceremoniously left ashore when the ships departed. The town responded by organizing pest houses, quarantine stations, or isolation hospitals to segregate the sick from the town inhabitants and to prevent the spread of disease. Because these facilities were not intended to be used by the local citizenry, they were usually located well outside the city limits.

As populations grew, mental illness became an additional problem. Individuals whose behavior offended or frightened the townspeople came to the attention of the town board. It was common in those days for the town board to order relatives or friends to build a small stronghouse, or cell, on their property to contain a person with mental illness. If the individual had no relatives or friends, the town might lease him or her at an auction to the lowest bidder, who would take responsibility for confining that individual for 1 year, usually in exchange for his or her labor.

The existence of pest houses, or isolation hospitals, also provided the towns with what seemed an ideal solution for dealing with other individ-

uals whose presence posed a risk to or offended its inhabitants. Over time, people with mental illness or those in poor health, the homeless, and the petty criminal joined the contagious ill that occupied those facilities.

Bellevue Hospital was originally the Poor House of New York City, established in 1736 to house the “poor, aged, insane, and disreputable.” In 1789 the Public Hospital of Baltimore was established for low-income populations, people with mental or physical illness, and the seafaring of Maryland. One hundred years later, in 1889, it became the now prestigious Johns Hopkins Hospital.

Eventually, almost every city of any size in early America had a pest house to isolate patients during epidemics. Most cities also had an almshouse for low-income populations, sometimes with an added infirmary. Many of today’s county or municipal hospitals were originally combinations of almshouses and infirmaries.

The largest county institution, Eloise Hospital in Wayne County, Michigan, was started in 1835 to serve the “old, young, deaf, dumb, blind, insane, and destitute.” It grew to 6,000 beds to care for acute and chronic illness and mental diseases and to provide domiciliary services to low-income populations. The Kings County Hospital in Brooklyn, Philadelphia General Hospital, and Cleveland City Hospital are similar examples.

Most hospitals in the United States in the 19th century were disgraceful, the antithesis of what their patients needed. They were dirty, unventilated, and contaminated with infections. They were overcrowded and offered little or no medical care. The only nurses available were former inmates or women who could get no other work. As a result, they only accelerated the spread of disease. The public, however, knew little of these conditions. Because visiting was restricted, patients were effectively cut off from the outside world. Persons with family or the means to obtain home medical or nursing care shunned hospitals.

Certain religious orders, however, saw the hospitals’ clients as so helpless, so miserable with incurable disease, or so maimed by accident that they presented an opportunity for spiritual outlet for those seeking salvation through good works. Thus began the close relationships of the Protestant and Catholic religions with hospitals and hospital nursing. Religious nursing groups played a major role in the evolution of hospital care. Catholic religious orders were the first groups responsible for kindly and humane nursing performed by fairly well-educated, sincere, and devoted disciples. The American branch of St. Vincent de Paul Sisters of Charity,

founded by Mother Elizabeth Seton in 1809, established hospitals that still stand in major cities across the United States.

The Protestant nursing movement began in Germany and was brought to Pennsylvania in 1850. It was based on the formal training of nurses in religion, nursing, and nursing education. The nurse teachers were called deaconesses. The Protestant church hospital, or deaconess movement, had an important influence on nursing.

Ironically, it was the Civil War of the 1860s that brought about public appreciation of the work of women in nursing. When sick or wounded soldiers were returned to their hometowns attended by obviously dedicated and capable nurses, it was the first time that relatives of those soldiers encountered women as nurses outside of their own homes. Nursing gained a much more positive image and came to be viewed as a respectable career option for women.

All of this early hospital care was focused on only the most unfortunate of the population with physical and mental illness. Although provided in the most deplorable conditions, hospital care reflected the early American concept of charity and public responsibility, which required that provision be made for low-income populations, people with physical or mental illness, vagrants, and criminals. Institutions originally classified as almshouses provided refuge for all of them. Later, physicians realized the efficacy of separating the sick population from the rest of the needy and putting them in facilities more properly called hospitals. The Pennsylvania Hospital in Philadelphia, the New York Hospital in New York City, and the Massachusetts General Hospital in Boston were founded by physicians who obtained citizen funding for charitable hospitals. Their motives, however, were not altogether in the interests of the patients. They wanted a place to practice surgery and obstetrics, to obtain patients to serve for the instruction of medical students, and to protect the well population from people with physical or mental illness.

## Sources That Shaped the Hospital Industry

### *Health Insurance*

The transformation of hospitals from simple, charitable institutions to complex, technical organizations was accompanied by a parallel growth of

private hospital insurance. The percentage of the U.S. population with hospital insurance grew from 9% in 1940 to over 74% in 1986.<sup>1</sup>

By the 1960s, billions of dollars were flowing into hospitals from insurance companies, such as Blue Cross/Blue Shield, medical society plans, and other plans sponsored by unions, industry, physicians, and cooperatives. The availability of hospital insurance removed an important cost constraint from hospital charges. The ability of insurers to cope with ever-rising hospital costs by distributing relatively small premium increases over large numbers of subscribers opened the floodgates to hospital admissions. Expanding hospital services and relatively unrestrained reimbursement rates created an inflationary spiral that was to persist for decades.

In addition, medical advances and medical specialization encouraged hospitalization, and the hospital industry expanded to meet the demand. After World War II, the American Hospital Association (AHA) convinced Senators Lister Hill and Harold Burton to sponsor legislation that provided federal monies to the states to survey hospitals and other health care facilities and to plan and assist construction of additional facilities. The Hill-Burton Hospital Construction Act was signed as Public Law 79-75 in 1946 and became a major influence in the expansion of the hospital industry.<sup>2</sup> Over 4,600 projects to expand existing facilities or construct new ones were initiated within 20 years after its passage. Federal support of hospital construction was critically important to the location of hospitals in underserved rural areas.

### *Medicare and Medicaid*

In 1966, the hospital industry was the recipient of another major legislative contribution to its fiscal well-being by the passage of Medicare, Title XVIII of the Social Security Act. The legislation provided the growing population of Americans over age 65 years with significant hospital and medical benefits. In one decisive legislative action, the large population of older Americans, the group most likely to need hospitalization, was assured of hospital care, and the hospitals were assured that they would be reimbursed on the basis of “reasonable costs.”

The companion program, Medicaid, Title XIX of the Social Security Act, was established at the same time to support medical and hospital care for persons classified as medically indigent. Unlike Medicare, Medicaid required the states to establish joint federal–state programs that covered

persons receiving public assistance and, if they wished, others of low income. Because the states had broad discretion over eligibility, benefits, and reimbursement rates, the programs that developed differed widely among the 50 states.

Medicare, and to a lesser extent Medicaid, had enormous impact on hospitalization rates in the United States. In a little over 10 years after the implementation of Medicare, persons over 65 years old were spending well over twice as many days in the hospital as those 45 to 64 years old.<sup>3</sup> Because the rising Medicare rates became the standards for establishing hospital reimbursement rates in general, Medicare probably did more to fuel the rising costs of hospital care than any other factor.

The Medicare and Medicaid programs also had another effect. Because these programs provided government funding for the hospital care of low-income population and older adults, they altered the long-standing nature or mission of hospitals by diminishing the traditional charitable or social role of those voluntary institutions. It was not long after the implementation of those programs that hospitals became increasingly focused on profit, maximizing the more lucrative activities, and closing or reducing services that operated at a loss. In the 1980s, hospitals, along with most of U.S. industry, became market oriented and aggressively enterprising. The monetary incentives built into the Medicare system favored entrepreneurial, short-term financial interests.

Rosemary Stevens, author of *In Sickness and in Wealth: American Hospitals in the Twentieth Century*, wrote this: "One effect was to bring hospitals into prominence as enterprises motivated by organizational self-interest, by the excitement of the game, by greed."<sup>4</sup> She concluded with this:<sup>5</sup>

Medicare and Medicaid, supposedly designed to promote egalitarianism, fostered sharp inequities in the health-care system while disarming criticism from low-paid American workers and the poverty population. The stage was set for today's struggles to rethink, once again, the American health-care system—and to redefine the relative roles of voluntarism, government, and business for the last few years of the twentieth century.

## Growth and Decline in Numbers of Hospitals

The number of hospitals in the United States increased from 178 in 1873 to 4,300 in 1909. In 1946, at the close of World War II, there were 6,000

American hospitals, with 3.2 beds available for every 1,000 persons. That year, Congress passed the Hill-Burton Hospital Construction Act to fund expansion of the hospital system to achieve the goal of 4.5 beds per 1,000 persons.<sup>6</sup> The system grew thereafter to reach a high of approximately 7,200 acute-care hospitals.

During the 1980s, however, medical advances and cost-containment measures caused many procedures that once required inpatient hospitalization to be performed on an outpatient basis. Outpatient hospital visits increased by 40% with a resultant decrease in hospital admissions. Fewer admissions and shortened lengths of stay for patients resulted in a significant reduction in the number of hospitals and hospital beds. Health care reform efforts and the acceptance of managed care as the major medical practice style of U.S. health care resulted in enough hospital closings and mergers to reduce the number of governmental and community-based hospitals in the United States to approximately 5,700.

## Types of Hospitals

Acute-care hospitals are distinguished from long-term care facilities such as nursing homes, rehabilitation centers, and psychiatric hospitals by the fact that the average stay of their patients is less than 30 days. Such hospitals have one of three basic sponsorships:

1. They may be operated as voluntary not-for-profit entities.
2. They may be owned and managed by profit-making corporations.
3. They may be public facilities, supported and managed by governmental jurisdictions.

Hospitals may also be divided into teaching and nonteaching hospitals. Teaching hospitals are affiliated with medical schools and provide clinical education for medical students and medical and dental residents. They, and many hospitals not affiliated with medical schools, also provide clinical education for nurses, allied health personnel, and a wide variety of technical specialists.

Only about one-fifth of hospitals are teaching facilities affiliated with one or more of the allopathic and osteopathic medical schools in the United States. Most teaching hospitals are voluntary not-for-profit institutions or government-sponsored public hospitals. The last survey of this country's hospitals conducted by the AHA concluded that there were

2,958 voluntary not-for-profit hospitals sponsored by religious groups or other community-based organizations. They constitute over 80% of the 5,756 registered hospitals in the United States.<sup>7</sup>

They include large numbers of small community general hospitals and smaller numbers of large tertiary-care facilities. These large tertiary-care facilities are usually affiliated with medical schools. The presence of medical school faculty with strong research interests and the availability of medical residents to assist in the collection of clinical data put teaching hospitals in the forefront of clinical research on medical conditions and treatments.

The federal government, through the U.S. Department of Veterans Affairs (VA), or the U.S. Public Health Service, operates 226 public hospitals. In addition, state and local governments maintain over 1,100 public hospitals. These public hospitals are usually large and well staffed with full-time attending physicians and residents. Such hospitals are usually teaching hospitals, with a heavy preponderance of economically disadvantaged patients.

Public hospitals in many localities deliver the fiscally problematic, but essential, community services that other hospitals are reluctant to provide. These high-cost, low-return services include sophisticated trauma centers, psychiatric emergency services, alcohol detoxification services, other substance abuse treatment, and burn treatment. In addition, there are 456 nonfederal psychiatric hospitals.

Investor-owned for-profit hospitals grew from a few physician-owned facilities before the 1965 Medicare and Medicaid legislation to 868 in 2005.<sup>7</sup> Most for-profit hospitals belong to one of the large hospital management companies that dominate the for-profit hospital network. An increasing number, however, are physician-owned specialty hospitals. Such hospitals usually limit their services to treatments in one of three major specialty categories: orthopedics, surgery, or cardiology.

Although these new specialty hospitals are typically upscale facilities with many patient luxuries, they usually operate with greater efficiency and provide excellent care in their few targeted services. Nevertheless, they have raised a series of concerns about their performance and their effect on community hospitals.

First, it is clear that specialty hospitals treat the less complex, more profitable cases, leaving the more difficult, less profitable, or uninsured patients to be served by community hospitals. Second, because physician-

owners of specialty hospitals profit directly by the value of services provided by their hospitals, there are concerns that clinical decisions may be influenced by financial incentives.<sup>8</sup>

Supporters of physician-owned specialty hospitals point out that the physician-owners take great pride in the quality of care provided in their hospitals, that they also work in community hospitals, and that their facilities enhance their communities by paying taxes as for-profit agencies.<sup>9</sup>

The number of beds in not-for-profit, state and local government, and federal hospitals decreased in the last decade, whereas the much smaller number of beds in for-profit facilities increased slightly. The last annual survey of the AHA counted about 947,000 staffed beds among all U.S. registered hospitals in the United States.<sup>10</sup>

## Financial Condition of Hospitals

The fierce competition among hospitals to survive potentially catastrophic economic challenges caused many to rethink their attitudes toward their patients. Hospitals now face the almost impossible task of making their facilities and services more user friendly while implementing organizational changes and staffing reductions designed to keep them economically viable in a highly aggressive marketplace.

At least one third of U.S. hospitals are failing financially, and another third are in precarious condition. Caught between rising costs and falling revenues, hospitals have been desperately seeking ways to cope with deteriorating market conditions.

Beginning in the mid-1990s, thousands of hospitals were involved in mergers, acquisitions, and other multihospital deals in an effort to capture and solidify market shares and gain economies of scale. In 1996 alone, 235 deals involved 768 hospitals.<sup>11</sup> Although the service and financial outcomes of the mergers and other deals vary from location to location, there is little evidence that the multihospital strategies are meeting expectations. In fact, some of the mergers that combined facilities with differing administrative and clinical cultures have only added to their economic problems.

Those economic problems result from a combination of factors over which the hospitals have little control. The Balanced Budget Act of 1997, which reduced payments for Medicare patients below the costs of treating

them, wrecked havoc on U.S. hospitals. At the same time, hospital changes were held in check by hard-bargaining managed-care organizations.

In contrast to the restraints on revenues, costs were rising at an unprecedented pace. Costly new technology, pharmaceuticals, and services, as well as significant inflationary increases, combined with declining occupancy to significantly reduce operating margins.

The federal government, realizing that the Balanced Budget Act cuts to hospital revenues were too deep, passed a Balanced Budget Relief Act to restore a small portion of those cuts. The financial damage, however, was significant, and additional cuts in Medicare payments to providers proposed in the Medicare budgets of succeeding years have kept many hospitals teetering on the edge of insolvency and bankruptcy.

The more recent development of private specialty hospitals and diagnostic centers owned by physicians introduced competition with community hospitals for their most profitable services. The continuing losses to the community hospitals that also provide those services are significant.

## Academic Health Centers, Medical Education, and Specialization

Medical, dental, nursing, pharmacy, and allied health schools and their teaching hospitals are the principal sources of education and training for most health care providers. Major universities with several or all of those different schools join them in organizational entities called academic medical centers or academic health centers. Much of the basic and clinical research in medicine and other health care disciplines are conducted in these health centers and their related hospitals. The teaching hospitals usually provide the most technologically advanced care in their communities and also offer inpatient and ambulatory care for economically disadvantaged populations. Thus, the three objectives of academic health centers—education, research, and service—are fulfilled most adequately by teaching hospitals.

The influence of these medical centers on health care during the last few decades has been extraordinary. The advances that occurred in the medical sciences and technology that resulted in the introduction of life-

saving drugs, anesthetics, surgical procedures, and other therapies and the development and use of sophisticated computerized diagnostic techniques increased both the use and the costs of hospital services. Physicians could intervene more successfully in the course of an ever-increasing array of conditions of disease and injury, and they enthusiastically exercised those capabilities. This increased intervention resulted in increases in both the life expectancy of most Americans and the proportion of the gross national product devoted to health care; however, these advances also significantly expanded the knowledge base and performance skills required of physicians to practice up-to-date clinical medicine.

Medical education and training, led by the academic medical centers, responded by increasing the number of physicians with in-depth expertise in increasingly narrow fields of clinical practice. Specialization and subspecialization grew, subdivided, and grew more. More and more physicians limited their activities to narrower and narrower fields of practice. In doing so, they greatly increased the overall technological sophistication of hospital practice along with the number of costly consultations that take place among specialist hospital physicians; the amount of expensive equipment, supplies, and space maintained by hospitals to serve specialist needs; and, in general, the complexity of patient care. The contributions of highly specialized clinical practice to the quality of hospital care have been both extraordinarily beneficial and regrettably negative. Although the superspecialists of U.S. medicine have given the profession its justified reputation for heroic medical and surgical achievements, specialization also has fragmented and depersonalized patient care and produced a plethora of often questionable tests, procedures, and clinical interventions.

Although academic medical centers have contributed admirably to the advancement of medicine, and especially hospital-delivered medical and surgical care, they have not brought their impressive expertise to bear effectively on solving the delivery system problems that have plagued their industry. Rather, the commitments of academic medicine to high-technology research and patient care and its adherence to traditional organizational structures and professional roles have prevented it from taking the lead in correcting health care system problems. As a result, medical education and medical organizations in general are reacting to, rather than guiding, the changes taking place.

## The Hospital System of the Department of Veterans Affairs

The tax-supported, centrally directed Veterans Health Administration of the VA is the country's largest health care system and a significant component of America's medical education system. In 2006, the VA owned and operated 156 hospitals, most of which are affiliated with medical schools. The VA also operates 136 nursing homes, 43 residential rehabilitation facilities, and over 800 outpatient clinics. With its large number of hospitals and other facilities, over 12,000 full-time salaried physicians, over 900 dentists, and 33,000 nurses, the medical care program of the VA would be expected to be a prime target for the congressional cost cutters of large and expensive federal programs. With the current conflicts in Iraq and Afghanistan, however, the VA has regularly escaped the competitive pressures of the rest of the system. Instead, with broad bipartisan political support, the VA has received an annual congressional appropriation consistently higher each year than requested in the president's budget. Apparently, the strong political advocacy for veterans in the United States restrains any congressional initiative to give up VA hospitals in favor of subsidizing the care of veterans in the private sector.<sup>12</sup>

Like the rest of the hospital industry, the VA is reorganizing its facilities to lower costs, improve the quality of its care, and better integrate its patients throughout the system. Its major change has been the creation of 22 networks called Veterans Integrated Service Networks, each of which functions as a vertically integrated delivery system.<sup>13</sup>

An important part of the VA's organizational transition is its Health Services Research and Development Service. It works to improve the quality of health care for veterans by examining the impact of the organization, financing, and management of health services on their quality, cost, access, and outcomes. Health Services Research and Development Service programs span the continuum of health care research and delivery—from clinical research to dissemination of research results to the application of the findings to clinical, managerial, and policy decisions. The latter activities are especially important because the VA is facing rising costs and an aging and sicker patient population.

For over 8 years, the VA has operated a Quality Enhancement Research Initiative, which incorporated the findings of evidence-based research into improvements in patient care. The developed and tested interven-

tions resulted in significant improvements in the quality of care received by veterans.<sup>14</sup>

In April 2007, however, the previously well-earned reputation for excellent care provided by the VA system was undone by public exposure of the dreadful circumstances of care at Walter Reed Army Medical Center in Washington, DC. An independent panel, headed by two former secretaries of the Army, issued a sweeping indictment of the leadership, training, staffing, and physical facilities. The conditions they reported included filthy physical facilities and a bureaucratic maze that left severely injured soldiers in limbo for months.<sup>15</sup>

Apparently, the hospital was unprepared, understaffed, and overwhelmed by the numbers, severity, and patterns of blast-related injuries to the military in Iraq. Such individuals require extremely complex and lengthy rehabilitation services to assure maximum functional and psychosocial outcomes.<sup>16</sup> Neither the staff nor the physical facilities of the hospital were judged adequate to meet the challenge.

## Structure and Organization of Hospitals

The organizational structure of today's hospital is a complex maze of committees, departments, personnel, and services. In addition to being a caring, people-oriented institution, it is at the same time a many-faceted, high-tech business. It operates just like any other large business, with a hierarchy of personnel, channels of authority and responsibility, and constant concern about its bottom line. Likewise, the people who work in hospitals exhibit the same range of human characteristics as their counterparts in other businesses. Patients and their families trying to obtain the best possible results from the services of a hospital, therefore, should base their approach on the same principles that they use in dealing with other service entities. They need to determine who is in charge, what services to expect from whom and when, with what results, and at what cost to them.

The following general description of hospital structure and organization uses the voluntary not-for-profit community hospital as the example because this type of institution has historically provided the model for hospital organization. The direction, control, and governance of the hospital are divided among three influential entities: the medical staff, the administration, and the board of directors or trustees. The major operating

divisions of a hospital represent areas of the hospital's functions. Although they may use different names, the usual units are medical, nursing, patient therapy, diagnosis, fiscal, human resources, hotel services, and community relations.

### *Medical Division*

The medical staff is a formally organized unit within the larger hospital organization. The president or chief of staff is the liaison between the hospital administration and members of the medical staff. Typically, the medical staff consists primarily of medical physicians, but it also may include other doctoral-level professionals, such as dentists and psychologists.

A major role of the medical staff organization is to recommend to the hospital board of directors the appointment of physicians to the medical staff. The board of directors approves and grants various levels of hospital privileges to physicians. Such privileges commonly include the right to admit patients to the hospital, to perform surgery, and to provide consultation to other physicians on the hospital staff. Another medical staff function is to provide oversight and peer review of the quality of medical care in the hospital. It performs this function through a number of medical staff committees, which coordinate their efforts closely with the hospital's administration and committees of the hospital's board of directors.

Members of the medical staff who have completed their training and are in practice are referred to as attending physicians. In addition, the hospital usually has a house staff of physicians who are engaged in postmedical school training programs under the supervision of attending staff members. These members of the house staff are referred to as residents. They rotate shifts to provide 24-hour coverage for the attending medical staff's patients in the specialty departments to which they are assigned.

There is no universal rule as to how a hospital's medical departments or divisions are organized. Most often, the types of practice of the hospital's medical staff determine the specialty components within the medical division. Medicine, surgery, obstetrics and gynecology, and pediatrics are usually major departments. In larger hospitals and in most teaching hospitals, the subspecialty areas of medical practice are represented by departments as well. In the internal medicine specialty, subspecialty departments might include cardiology or cardiac care, ophthalmology, urology, oncology, gastroenterology, pulmonary medicine, endocrinol-

ogy, otolaryngology, and a variety of others. In the surgical area, subspecialties might include orthopaedics, thoracic, neurosurgery, cardiac surgery, and plastic and reconstructive surgery. Each medical department or division in a hospital is headed by a physician department head or chairman, who is charged with overseeing the practice and quality of medical services delivered in the department. In a teaching hospital, either the department head or another designated attending physician is responsible for coordinating the required educational experiences of medical students and residents.

### *Nursing Division*

The nursing division usually comprises the single largest component of the hospital's organization. It is subdivided by the type of patient care delivered in the various medical specialties. These nursing units are composed of a number of patient beds grouped within a certain area to allow centralization of the special facilities, supplies, equipment, and personnel pertinent to the needs of patients with particular conditions. For example, the kinds of equipment and skills and the level of patient care needs vary considerably between an orthopedic unit and a medical intensive care unit.

A head nurse, often carrying the title of "nurse manager," has overall responsibility for all nursing care in his or her unit. Such care includes carrying out the attending physician's and house staff physician's orders for medications, diet, and various types of therapy. In addition, the nurse manager supervises the unit's staff, which may include nurses' aides and orderlies. The nurse manager is also responsible for coordinating all aspects of patient care, which may include services provided by other hospital units, such as the dietary department, physical therapy department, pharmacy, and laboratories. The nurse manager also has the responsibility for coordinating the services of departments such as social work, discharge planning, and pastoral care for the patients in the unit.

Because nursing services are required in the hospital at all times, staff is usually employed in three 8-hour shifts. Normally, the nurse manager of a unit will work during the day shift, and two other members of the nursing staff will assume what is referred to as charge duty on the other two shifts of the day. Charge nurses report to the nurse manager.

A nursing supervisor may have management responsibility for a number of nursing units. These nursing supervisors in turn report to a member

of the hospital's administration, who is usually a vice-president for nursing or an assistant administrator.

It is also common to find an individual with the title of ward clerk or unit secretary on each nursing unit. The ward clerk assists the head nurse with paperwork and helps to coordinate the other hospital services related to patient care.

### *Allied Health Professionals*

Not as well known as the physicians and nurses who are central to the care and treatment of patients in hospitals is the wide array of personnel who provide other hospital services that support the work of the physicians and nurses and the others who operate behind the scenes to make the facility run smoothly.

Staff members in an increasingly diverse array of health care disciplines are now classified as allied health personnel, and their roles in the complex health care system are often not recognized or well understood by the public. Allied health personnel support, complement, or supplement the functions of physicians, dentists, nurses, and other professionals in delivering health care to patients. They contribute to environmental management, health promotion, and disease prevention.

There are now over 200 allied health occupations and specialties, and advancing medical technology is likely to create the need for even more personnel with highly specialized training and relatively unique skills. Those who are responsible for highly specialized or technical services that have a significant impact on health care are prepared for practice through a wide variety of educational programs offered at colleges and universities.

The range of allied health professions may be best understood by classifying them by the functions they serve in the delivery of health care. Some disciplines may serve more than one of these functions:

1. *Laboratory technologists and technicians* play a major role in the diagnosis of disease, the monitoring of physiologic function, and the effectiveness of medical interventions. Medical technologists, nuclear medical technologists, radiologic technologists, and cytotechnologists are but a few of the specialists on whom hospitals depend.
2. *Allied health practitioners of the therapeutic sciences* are essential to the treatment and rehabilitation of patients with a wide variety of

- injuries and medical conditions. Examples include physical, occupational, and speech therapists and physician assistants.
3. *Behavioral scientists* are crucial to the social, psychological, and patient education activities related to health maintenance, disease prevention, and accommodation to disability. Professionals in this category include social workers, health educators, and rehabilitation counselors in mental health, alcoholism, and drug abuse.
  4. *Specialist support service personnel* include those who perform administrative and management functions and others with special expertise that often work closely with the actual providers of patient care. Health information administrators, formerly called medical record administrators, food service administrators, dietitians, and nutritionists are examples of personnel in this category.

The following descriptions of some of the key hospital services reflect the close functional relationships among the various kinds of highly specialized individuals required to staff hospital services.

### ***Diagnostic Services***

Every hospital either maintains or contracts with laboratories to perform a wide array of tests to help physicians diagnose illness or injury and monitor the progress of treatment. One such laboratory is the pathology laboratory, which examines and analyzes specimens of body tissues, fluids, and excretions to aid in diagnosis and treatment. These laboratories are usually supervised by the hospital's pathologist, who is a physician specialist.

The radiology department, directed by a physician specialist called a radiologist, provides radiographs for a variety of diagnostic purposes and may also provide radiation therapy for the treatment of certain disorders. Grouped under the rubric "diagnostic imaging services," a wide array of more sophisticated imaging equipment has been developed that incorporates computer technology. This includes computed tomography (CT), magnetic resonance imaging (MRI), and positron emission tomography (PET). Unlike radiograph technology, which is limited to providing images of the body's anatomical structures, these imaging advances have unique abilities to visualize structures in several planes, and with PET, even quantify complex physiologic processes occurring in the human body. Thus, they add immeasurably to the understanding and treatment

of major ailments, including heart disease, stroke, cancer, epilepsy, and Alzheimer's disease.

A variety of other diagnostic services also may be available through specific medical specialty or subspecialty departments, such as cardiology and neurology. For example, a noninvasive cardiac laboratory administers cardiac stress testing to assess a patient's heart function during exercise. Obstetricians commonly use an imaging capability called ultrasonography to visualize the unborn fetus.

### ***Rehabilitation Services***

Rehabilitation or patient support departments provide specialized care to assist patients in achieving optimal physical, mental, and social functioning after resolution of an illness or injury. One such department is physical medicine, where diagnosis and treatment of patients with physical injuries or disabilities are conducted. This department is headed by a specialist physician called a physiatrist, who usually works with a team of physical therapists, occupational therapists, and speech therapists. Other health-related specialists, such as social workers, may provide additional services to support the rehabilitation of patients with complex problems.

### ***Other Patient Support Services***

The hospital pharmacy purchases and dispenses all drugs used to treat hospitalized patients. The department is headed by a licensed pharmacist, who is also responsible for pharmacy technicians and others who work under his or her supervision.

Among other functions, the social services department helps patients about to be discharged to arrange financial support and coordinate needed community-based services. Generally, the social services department assists patients and their families achieve the best possible social and domestic environment for the patients' care and recovery. Such services are available to all hospital patients and their families.

Discharge planning services (discussed in more detail later in this chapter) may or may not be a part of the social services department. Frequently, staffing includes both nurses and social workers who are responsible for planning posthospital patient care in conjunction with the patients and their families. The discharge planning department becomes

involved when the patient requires referral for one or more community services or placement in a special care facility after discharge.

### ***Nutritional Services***

The nutritional services department includes food preparation facilities and personnel for the provision of inpatient meals, food storage, and purchasing and catering for hospital events. It may also operate a cafeteria for employees and, in larger hospitals, may sponsor educational programs for student dietitians. An important function of this department's staff is educating patients on dietary needs and restrictions. This department usually is headed by a chief dietitian who has a degree in nutritional science, and it may be staffed by any number of other dietitians and clinical nutrition specialists with specific expertise in dietary assessment and food preparation.

### ***Administrative Departments***

Hospitals contain other professional units that provide a wide variety of nonmedical services essential to the management of the hospital's physical plant and business services. Patients are certainly aware of two of them: the admissions department, through which a hospital stay is initiated, and the business office, through which a hospital stay is terminated. These units are two of the many components of the hospital's complex management structure.

The general administrative services of the hospital are headed by a chief executive officer or president who has the day-to-day responsibility for managing all hospital business. He or she is the highest ranking administrative officer and oversees an array of administrative departments concerned with financial operations, public relations, and personnel. Most larger hospitals have a chief operating officer, who oversees the operation of specific departments, and a chief financial officer, who directs the many and varied fiscal activities of the hospital. Those key administrative officers are commonly positioned as corporate vice presidents. The large number of employees and the wide array of individual skills required to staff a hospital competently call for a personnel or human resources department with highly specialized labor expertise. That department is also usually headed by a vice president for human resources. Because nursing is such a large component of the hospital's service operations, the

larger facilities also maintain a chief nursing executive at the vice-president level.

During the past 20 years, as the information needs of hospitals have increased in volume and complexity, new departments, often referred to as management information systems, have evolved. These departments are usually directed by computer science professionals and are responsible for managing hospitals' extensive computer systems. Those systems extend from office word processing to medical record transcription to transmittal of clinical laboratory findings to financial data processing. Increasingly, hospitals' management information systems departments are engaged in the computer management of patient care data necessary to evaluate the quality and cost-effectiveness of hospital services.

### ***Hotel Services***

Hotel services are generally associated with the hospitality functions common to hotels. They include building maintenance, security, laundry, television, and telephone services.

## **Complexity of the System**

Unlike the nonhospital health services, over half of which employ fewer than five persons, almost two-thirds of hospital employees work in facilities with more than 1,000 workers.<sup>17</sup> Major hospital systems may have thousands of employees, significant turnover of personnel requiring training and indoctrination of new employees to the complicated procedures of the organization, and a maze of information transmission requirements with high potential for miscommunication. The newer diagnostic and therapeutic methods that are increasingly effective are also increasingly complex.

Thus, even this very limited description of the hospital's complex structure and organization should make it clear that with so many different kinds of employees and so many interrelated systems and functions, it is a small wonder that hospitals work at all, much less as well as they do. With the multitude of tasks that are performed every day by the hundreds of employees in a busy hospital, misunderstandings and information breakdowns in patient care are inevitable. In acknowledgment of the fact that their organizations are too complex and their employees too com-

partmentalized in their responsibilities to solve system problems, the majority of this country's hospitals have patient representatives, sometimes called patient advocates, to serve as ombudsmen for the patients. They are prepared to intervene on behalf of the patients in a wide variety of situations. The phone numbers of those patient representatives are usually provided to patients in the material given them during the admission process or left conspicuously in their rooms.

## Types and Roles of Patients

Nowhere in the early development of hospitals was the patient considered as anything other than an unavoidable burden to society. In its mercy, society provided the hospital as a refuge—and incidentally, a workplace for the physician and his disciple, the medical student. Patients receiving this charity were expected to be grateful for the shelter and nursing care and even for the opportunity to lend their bodies and illnesses for medical practice. On the other hand, patients who could afford to pay for their medical and nursing care continued to receive it in the comfort and dignity of their homes.

By 1900, proper training in nursing, effective anesthetic agents, modern methods of antisepsis and sterilization, and other medical advances had revolutionized hospital practices. Hospitals changed from merely supplying food, shelter, and meager medical care to the unfortunate needy and contagious to providing skilled medical, surgical, and nursing care to everyone; however, the belief persisted that patients in the hospital, removed from their usual social environment, were in a dependent relationship with charitable authorities. Remnants of the idea that these professionals have the knowledge and authority to decide what is best for grateful and uncomplaining patients persist to this day, regardless of the expense to the patient or the merit of the services.

Unfortunately, the behavior of many patients and their families has been conditioned to reinforce this philosophy. In the hospital, otherwise assertive, independent individuals tend to assume a passive and dependent "sick role." Numerous sociological studies of patient behavior have concluded that the patients who behave in the traditional submissive sick role help to preserve the authoritarian attitude of health care providers that most consumers now consider patronizing and inappropriate.<sup>18</sup>

## Rights and Responsibilities of Hospitalized Patients

Patients in hospitals have individual rights, many of which are protected by state statutes and regulations. The constitution of the United States and, in particular, its Bill of Rights are not suspended when a citizen enters a hospital. In fact, since 1972, the AHA has published a "Statement on a Patient's Bill of Rights" that is displayed prominently in every hospital in the country. In addition, hospitals are required by their accrediting body to make this information known to every patient admitted. Very importantly, the statement recognizes that the hospital, in addition to the physician, has a responsibility for the patient's welfare. In fact, the ultimate responsibility for everything that happens within the hospital, including the medical care provided, lies with the hospital institution and its board of directors.

Many hospitals, other institutions, and government agencies have modified the language of the original AHA Statement on a Patient's Bill of Rights to represent more accurately their individual interpretations of their responsibilities or to communicate better with special populations. In addition to posting these statements on the walls of the facility, hospitals also distribute their modified versions under their own organization title with the admission documents provided to patients.

The following description of major patients' rights is a synthesis of the statements posted by several hospitals. Patients have the right to:

1. Receive respectful and considerate treatment, including respect for their personal privacy, during examinations, tests, and all forms of interaction with their physicians, staff members, and others involved in their care.
2. Know the names and titles of all individuals providing their care and the name of the physician responsible.
3. Complete and understandable explanations of their diagnosis, treatment, and prognosis. They also have the right to designate another individual to receive such explanations on their behalf.
4. Receive from the physician all of the information necessary to give informed consent before any procedure or treatment. Such information should include a description of the procedure or treatment, the estimated period of convalescence, the risks involved, the risk

- of not accepting the treatment or procedure, and any alternative options.
5. Request and receive consultation on their diagnosis and treatment or obtain a second opinion.
  6. Set limits on the scope of treatment that they will permit or refuse treatment and be informed of the consequences of such refusal.
  7. Leave the hospital, unless unlawful, even against the advice of their physicians and receive an explanation of their responsibilities in exercising that right.
  8. Request and receive information and assistance in discharging financial obligations to the hospital, and review a complete bill, regardless of the source of payment.
  9. Since April 2004, the federal HIPAA law requires hospitals as well as physicians and clinics to provide patients with access to their own records on demand, as well as someone capable of explaining anything that is confusing or difficult to understand.
  10. Receive assistance in planning and obtaining necessary support services after their discharge.

Those endowed with individual rights are always expected to assume certain reciprocal individual responsibilities. Patients are obligated to act responsibly toward physicians and hospitals by cooperating with all reasonable requests for personal and family information. It is to their own benefit that patients inform medical or hospital personnel if they do not understand or do not wish to follow instructions. If a patient would like a family member or other advocate to be involved in treatment decisions, that individual should be identified to the physician, and the hospital and contact information should be provided.

It is also incumbent on patients to recognize that hospitals are highly stressful institutional settings and that other patients, as well as the hospital personnel, deserve consideration and respect. Courtesy to others in the close confines of hospital quarters is most appreciated.

In no other institutional setting are individual rights at greater risk of being compromised than in a hospital; however, the risks do not arise from a purposeful disregard for patients by physicians or the hospital staff or from their individual or collective determination to subject patients to treatment against their will. The personal integrity of patients may be unintentionally violated as a result of certain institutional circumstances

and factors unique to the hospital setting. These institutional circumstances arise from the fact that the hospital, like most large complex organizations, has a life of its own, which pulses with an infinite array of daily scheduled events that pervade every aspect of its functioning. There are schedules for changing beds, bathing patients, serving meals, administering medications, obtaining specimens, providing therapy, checking vital signs, performing surgery, housekeeping, admitting, discharging, doing rounds, receiving visitors, performing examinations, and finally, preparing patients for the night.

The vast number of tasks that evolve from the care needs of up to several hundred people who are ill each day requires the planning and scheduling of every activity if they are all to be accomplished within a 24-hour period. The pressure of the daily schedule often makes it difficult for hospital personnel to pay attention to the special needs of individual patients. Even though a patient's particular schedule of tests, procedures, treatments, and examinations is uniquely related to his or her condition and the physician's orders, it also is influenced by the needs of fellow patients and the schedules of the physicians, technicians, technologists, nurses, nurses' aides, therapists, students, and numerous others involved directly or indirectly in the patient's care.

A patient's treatment may also be modified by the schedule of those daily institutional events, which although unrelated to his or her treatment can have an impact on what happens or does not happen on any given day. Such institutional events include inspections, grand rounds, nursing in-services, unplanned staffing shortages, and an array of technical problems with any of the hundreds of the pieces of medical equipment used to perform the daily functions of a sophisticated hospital.

As it becomes clearer that the schedule, rather than the patients' needs, drives the caregivers, the second major reason why patient rights may be in jeopardy in the hospital setting emerges. Physicians may not be aware of the many aspects of daily care in the hospital that determine whether patients will be comfortable and reasonably satisfied during their hospital stay. Physicians are likely to spend only a few minutes a day with each patient. That means that patients nearly always depend on the nursing staff and other support personnel for the medical and personal care they should receive. Very importantly, nurses are supposed to be continuously monitoring each patient's condition and alerting the physician to any change in a patient's status; however, the number of patients for whom a

nurse is responsible and the number of tasks that the nurse is required to perform during the course of a single work shift make it extremely difficult, or sometimes impossible, to fulfill that obligation. In addition, the increasing number of caregivers involved with each patient provides additional opportunities for failures of communication and subsequent mistakes in the treatment programs for individual patients. Although hospitals do their best to develop fail-safe systems to protect patients against the possibility of human error in the delivery of their care, mistakes can happen. One patient can receive a medication intended for another. The report of a laboratory test can get lost and require the repeat of an uncomfortable procedure. A physician's instructions can be overlooked, and the patient may be deprived of something that he or she was supposed to receive. The patient may continue receiving something that was supposed to be stopped. A nurse's note alerting the physician to a change in the patient's condition may be missed, and the patient may fail to receive something that he or she requires.

Progressive hospital systems encourage patients to recognize their vulnerability during hospitalization and urge them or their family members to function as active participants in, rather than passive recipients or observers of, hospital care. In addition, state health departments, which certify hospitals to operate, ensure the right of patients to press complaints about hospital care and services. Hospitals are required by law to investigate patient complaints and respond to them. In fact, a hospital must provide a written response if a patient so requests.

## Important Decisions, Informed Consent, and Second Opinions

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No description of the structure and processes of hospitals would be complete without mention of the very important personal decisions regarding medical care that patients are asked to make, often, unfortunately, under circumstances that are stressful if not intimidating. A cornerstone of the personal rights of hospitalized patients is the right to know:

- What is being done to them and why
- What the procedure entails
- How the procedure can be expected to benefit them

- What risks or consequences are associated with a procedure
- What the probability of risks and consequences is

In short, in almost all cases, the doctrine of informed consent ensures that patients have ultimate control over their own bodies. This doctrine, first recognized legally in 1914, has been reaffirmed repeatedly over the years and is now generally recognized to encompass not only all of the previously mentioned elements, but also the right to receive information about alternative forms of treatment to the one being recommended.

A physician has no legal right to substitute his or her judgment for the patient's in matters of consent. This principle means that even though a physician may believe a certain intervention is in the patient's best interest, the patient has the absolute right to reject that recommendation. The right of patients to refuse a certain procedure or treatment until they are satisfied that it is in their best interest allows them to stay in control of their health care.

That is why it is considered appropriate for patients to obtain second opinions to satisfy concerns about the necessity for various tests and other procedures. Because there is evidence that seeking the opinion of a second physician regarding the need for surgical and other invasive procedures often results in a decision to reject the original advice, many insurers now require a confirming second opinion before agreeing to pay for surgical procedures.

In many medical situations, the wisest course of action is uncertain or debatable. The need for certain surgical procedures is one good example. Few people realize that the medical needs for some common operations have never been clearly defined by scientific studies. When such studies have been performed, many procedures, even those that surgeons once favored, have turned out to offer no real benefit or improvement over alternative treatments. Unlike the introduction of new drugs, which must be extensively tested to document safety and benefits before they can be marketed, new operations have been introduced and become popular based on clinical impressions, rather than the systematically collected information necessary to determine in what circumstances the benefits justify the risks. Because the best estimates are that only 20% of the more than 20 million operations performed in the United States each year involve critical, life-threatening emergencies in which the physician must operate immediately, patients usually have time to deliberate carefully over the need for surgery and its potential risks and benefits.

## Diagnosis-Related Group Hospital Reimbursement System

Until 1983, a patient stayed in the hospital until the physician decided that he or she was well enough to leave. If the patient was going to a nursing home or some other institution, sometimes that patient had to remain in the hospital until a bed became available in the other institution. In most cases, however, physicians had a considerable amount of leeway in making decisions about the length of a patient's stay in the hospital, and they usually tried to balance the best interests of the patients with those of the hospital.

For this and other reasons, the length of time patients stayed in the hospital varied, even among those being treated for the same condition. In fact, the patterns of medical care varied considerably from one geographic location to another. For many years, physicians on the West Coast of the United States have discharged patients from hospitals 2 or more days earlier than their counterparts in the Northeast for patients with the same conditions. Apparently, differing regional medical practice patterns guide physician behaviors.

In any case, each hospital monitored its own situation. Each had a utilization review committee made up of physicians and administrators who were required to review the lengths of stay of hospitalized patients and to ensure that neither the quality of care nor the efficiency of the hospital was being compromised by physicians' decisions.

During the 1970s and early 1980s, however, the cost of hospital care rose so fast that health insurance companies and big corporations that paid huge insurance premiums to cover the hospitalization costs of their workers dramatically increased the pressure on federal agencies to find a way to stem the rising tide of hospital expenses.

Two factors made change imperative. Hospitals were paid a set amount for each day that a patient stayed in the facility. That amount was determined retrospectively by determining what it cost per day per bed to operate the hospital the year before. Under that arrangement, the hospital had no incentive to keep costs down. In fact, if it did, it would receive a smaller daily reimbursement rate the next year than if it spent freely. Furthermore, it became clear to the government and the insurance companies that they were paying not only for uncontrolled costs per hospital day, but also for hospital days that were not necessary. On a national

scale, hundreds of thousands of hospital days that did not benefit the patients, at a cost of several hundred dollars per day, amounted to a huge and valueless financial burden. Hospital costs were forcing the federal Medicare program, which served older Americans, to exceed all financial projections.

There was another worry as well. Not only are unnecessarily long hospital stays expensive, but they also can be dangerous to the patients' health. Older patients are especially vulnerable. Patients are exposed to infections and diseases in hospitals that they would not face at home. In addition, many older patients lose the ability to do some of the basic activities of daily living, such as dress, feed, or toilet themselves during a long stay in a hospital. Those patients come out of the hospital less able to function than when they went in. Shortened stays in hospitals, especially for older patients, can often be beneficial as well as less expensive.

In 1983, the federal government radically changed the way hospitals would be reimbursed for the costs of treating Medicare patients. The new payment system is referred to as diagnosis-related groups (DRGs) and is designed to provide hospitals with a financial incentive to discharge patients as soon as possible. It is a prospective payment system, which means that the patient's diagnosis determines how much the hospital will be paid, and the hospital knows that amount in advance. The payment is a set amount based on the average cost of treating that particular illness or condition. If the patient requires less care or fewer days in the hospital than the DRG average, the hospital is paid the average cost regardless, and the hospital makes money. If the patient requires a longer stay or more care than the DRG average, the hospital loses money.

This carrot-and-stick system was adopted quickly by almost all states and hospital insurance companies and now affects all hospital patients, not just Medicare patients. It quickly changed hospital behavior. The built-in system of financial rewards and punishments caused hospitals to discharge patients more quickly and sometimes before they were completely recovered, a practice that has increased the need for home-delivered health care services. In addition, medical staff is much more conservative about ordering tests and procedures that are of marginal value in diagnosis and treatment. Now hospitals do everything they can to ensure that their average cost in a particular DRG category stays within the reimbursement limit. In most cases, the incentive to discharge patients as soon as possible does not cause problems. In some cases, however, it does, and

patients have to be readmitted for further treatment. A more detailed discussion of the impact of this reimbursement method on the financial viability of hospitals is provided in Chapter 7, which deals with the financing of health care.

## Discharge Planning

The hospital is responsible for employing discharge planners to help patients arrange for safe and appropriate accommodations after a hospital stay. Using information provided by the patient or the patient's family, a discharge planner must see to it that the patient who needs follow-up services, such as home care, will obtain them. The planner must then help make the specific arrangements that are necessary. If the patient requires a transfer to another level of institutional care, such as a nursing home, it is the responsibility of the discharge planner to arrange that transfer before the patient can be discharged from the hospital.

The hospital's financial incentive to discharge patients as soon as possible should never cause patients to be discharged before they are medically ready to leave and before arrangements have been made to ensure that they will receive the necessary posthospital care. Patients who feel that either of these two conditions will not have been met by their anticipated discharge date have the right to appeal that date. If they cannot persuade their physician or discharge planner to reconsider the discharge decision, they can ask the hospital for a written notice of discharge. For those receiving Medicare, the written notice will allow 2 free Medicare-covered days in the hospital, whether or not they decide to appeal.

The hospital's discharge notice must include instructions on how the patient can have the hospital's decision reviewed by the peer review organization (PRO). The PRO is an organization under contract with the federal government to ensure that hospitals and physicians follow Medicare rules. Every geographic area in the United States is covered by a federally designated PRO. Patients have 3 calendar days after receiving written notice to ask the hospital to refer their case to the PRO. The PRO then has 3 working days to return its decision.

The PRO will reverse the decision to discharge and require Medicare to cover the costs of the additional days if it is convinced that the patient is in need of continuing hospital care. If the PRO does not reverse the

decision, the hospital can bill the patient directly for any stay after 2 days following its written notice to the patient. There is also a mechanism to appeal the PRO's decision and a further process for a Medicare appeal.

## Subacute Care

It was inevitable under recent economic pressures that hospitals would find ways to increase utilization, fill empty beds, and increase revenues. Subacute care, a level of care that falls between inpatient hospitalization and long-term or nursing home care, provided one such opportunity.

Subacute care is a mix of rehabilitation and convalescent services that requires 10 to 100 days of care. It is a level and duration of care inappropriate to either acute-care hospitals or most skilled nursing facilities. Nevertheless, both hospitals and nursing homes have created special units within their facilities to provide for subacute care. Because that care level falls between well-established reimbursement formulas, setting up acute-care facilities has allowed hospitals and nursing homes to find different ways to capture the highest reimbursement rates.

Some hospitals have licensed their subacute-care facilities separately from the rest of the hospital to exempt them from the prospective payment system. Others have converted a hospital-based skilled nursing facility to subacute care. Still others have transformed an entire acute-care facility to a long-term care facility. Unlike acute-care facilities, these long-term care hospitals receive higher cost-based reimbursement from Medicare.<sup>19</sup>

In any case, subacute care, viewed as a new financial opportunity for health care institutions, has become one of the fastest growing developments in the hospital and nursing home industries. Managed care providers welcome the opportunity to direct patients to subacute-care facilities that can treat them effectively for a fraction of the cost of traditional hospital care.

The rapid development of subacute care and the accompanying switch from prospective payment to cost-based reimbursement, however, has prompted the federal government's Health Care Financing Administration and agencies in several states to take steps to halt the spread of subacute-care units within both hospitals and nursing homes until the value of subacute care can be determined. Questions about whether hospitals or nursing

homes are more suitable to administer subacute care have been raised. In addition, because the focus of subacute care is more on new forms of reimbursement than on a new type of service, studies are under way to determine the cost-effectiveness and usefulness to patients of this type of care. Clearly, it is a high-stakes development in the hospital industry.

## Market-Driven Reforms Affecting Hospitals

Although the American public and Congress resisted the health care system reforms proposed by President Clinton in the failed Health Security Act of 1993, market forces continued to alter the health care environment with remarkable rapidity. With consumers, employers, government, and commercial payers intensifying their demands for lower costs, higher quality, better access, and more information about outcomes, most hospitals undertook a series of competitive efforts to retain and, if possible, improve their market positions. Many engaged in mergers and consolidations intended to effect economies of scale and place them in a better position to negotiate with managed care organizations and other payers. Others, in communities with excess hospital capacity, either closed or converted to other uses, such as ambulatory or long-term care facilities.

Since 1980, approximately 2,000 hospitals closed in the United States, and hospital inpatient days declined by one third. Furthermore, with an increasing number of medical services occurring in ambulatory settings, hospitals are facing the need to reduce inpatient capacity and refocus their service efforts on intensive care and other inpatient essentials.<sup>20</sup>

## New Insurer Pressures

The almost total penetration of managed health care in communities across the United States continues to have a profound impact on the hospital industry. Managed care organizations, striving to provide cost-effective care to increasingly large populations of enrollees, exert significant influence over both the use and the cost of hospital services. Additionally, managed care organizations obtain and pay serious attention to measures of performance among hospitals so that they can

ensure that their enrollees have timely access to high-quality care. Negotiating with managed care organizations and competing with other hospitals in an open market on the basis of documented performance and cost-effectiveness continue as formidable challenges to most hospitals.

Controlling costs without decreasing the quality of the product, the essential principle of successful commercial ventures, presents a dilemma to many hospitals. In many instances, voluntary hospitals remained financially viable for reasons unrelated to the efficiency and quality of their performance. Now, with health care purchasers increasingly relying on revealing measures of service cost and quality, their continued viability will depend on accountability for every aspect of performance with zero tolerance for waste of effort and resources. Those hospitals that cannot compete successfully for major patient populations under the oversight of managed care organizations are unlikely to survive the reformation of the hospital industry.

## Patient-Focused Care

One of the consequences of high-technology hospital care was the industrialization of patient care activities. The corporate thinking that swept the hospital industry in the 1970s and 1980s brought production-line concepts to what formerly had been very personal, high-touch, rather than high-tech, relationships between patients and caregivers, primarily nurses.

Rather than being patient oriented, the care became task oriented, with every chore identified and delegated to the person at the lowest skill level who was capable of carrying it out. Thus, a nurse might be assigned the task of going from patient to patient just taking vital signs, temperatures, blood pressures, and pulses. Another individual, not necessarily a nurse, might be only bathing those same patients, another drawing blood, another handing out medications, and so forth. The end result for patients was a succession of relatively anonymous caregivers, none of whom had a knowledgeable relationship with the patients they served. Responsibility and accountability for the total care of patients became increasingly diffuse. Opportunities for patients to fall into the cracks between the many caregivers increased, and more midlevel managers were necessary to oversee operations. Any questionable gains in efficiency were achieved at the costs of patient satisfaction, communication, and personal care.

Patient satisfaction studies reflected an increase in patient complaints about the loss of identity, dignity, and respect for them as individuals that characterized their hospital stay. Particularly frustrating to many hospital patients and their families was the difficulty that they experienced in obtaining information or even identifying someone capable of answering questions. For most, the lack of communication between hospital staff, including physicians, and the patients and their families was the most irritating aspect of the hospital experience.

After an extensive survey of over 6,000 hospital patients and 2,000 individuals who accompanied patients during their hospital stays, as well as research drawn from field visits and focus groups, the Picker/Commonwealth Program for Patient-Centered Care, established in 1987, was able to identify a series of patient care failings common among hospitals. Unquestionably, the diffusion of clinical responsibility that complicates communication among caregivers and the flow of information between caregivers and patients affect the quality of clinical care. In addition to making patient experiences unpleasant and stressful, communication and coordination breakdowns make for needless duplications of effort and the delay or omission of important procedures and tasks. One devastating finding was that as many as 20% of patients concluded that no one was in charge of their hospital care.

It is significant in the Picker/Commonwealth findings that the most technologically sophisticated teaching hospitals with the most specialized medical staffs also are viewed as the least sensitive to the personal and cultural values, concerns, and perceptions of their patient populations. Conversely, the cultural homogeneity of staff and patients and the relative simplicity of small community hospitals are viewed as more conducive to patient-sensitive care. Clearly, the advances in medical care and the industrialization of many, if not most, hospitals has caused the medical system to lose touch with its essential constituency—its patients—and its essential mission to serve their needs.<sup>21</sup>

Of course, some very large and sophisticated hospitals did not follow the crowd, and they stand out as highly mission oriented, innovative, and sensitive to patient needs and wants. They reshaped their patient care systems on the strengths of their highly skilled nursing personnel to be extremely responsive to patient concerns and to measure precisely how patients experience the process and outcomes of the care they receive.

Beth Israel Hospital in Boston and Cedars-Sinai Medical Center in Los Angeles are two excellent examples of patient-focused hospital care. The quality of nursing care is deemed as important to the safety and well-being of patients in those hospitals as it is to the progress of their medical care. Excellent hospitals give nurses a meaningful role in the care and treatment of patients, and Beth Israel Hospital has been cited many times as the model for other hospitals. Its primary care nursing program, developed in 1974, has one of the most successful histories of patient-centered care. Each patient is assigned a registered nurse (RN) who is responsible for designing a coordinated individual plan of care. The primary care nurse assumes 24-hour responsibility for maintaining continuity of care from admission to discharge and coordinates all other caregivers in the process.<sup>22</sup>

Similarly, Cedars-Sinai Medical Center pioneered the concept of patient-focused care with organizational redesigns, clinical practice guidelines, and firm accountability for the quality of patient care. The dedication and effectiveness of the nursing staff are reflected in its reputation as one of the world's most diversified and sophisticated medical centers and its repeated 95% patient satisfaction ratings.<sup>22</sup>

Clearly, the trend is moving away from the industrial model of hospital care that eroded public trust and confidence in hospital care and toward small team responsibility for the quality of patient services. To lure patients who now have more options, hospitals are focusing on friendlier staff, better food, and more amenities. Many hospitals have done away with visiting hours and invite patients' family members to stay as long as they like. Hospitals will even accommodate visitors who stay the night with reclining chairs and delivered breakfasts.<sup>23</sup>

## Integrated Health Systems

The forces of cost containment, the rise of purchaser influence, declining trends in inpatient utilization, and demands of managed care organizations for higher levels of service organization and accountability converged in the 1980s to compel hospitals to rethink their strategic market positioning. In contrast to the 2 previous decades, which were marked by service expansion and diversification, the business environment now suggested that future viability would depend on removing excess capacity through consolidation and improved coordination of services.

The demands of managed care organizations for efficiency, cost controls, coordination of services, and accountability for service outcomes necessitated radical shifts in hospital strategic planning. McManus et al.<sup>24</sup> characterizes the impacts of these changes: “Providers will not just treat episodes of illness or injury, but will focus on wellness, prevention and primary care, and truly manage the total health and well-being of patients. Success will no longer be measured by census, admissions and profits, but by the health and well being of communities served.”

As major players in the health care delivery system, hospitals were forced to respond to the new imperatives of managed care by leading efforts at reorganizing and reconfiguring service delivery components within their communities. Both horizontal and vertical system integration strategies began to emerge as hospitals sought to make their organizations attractive to the managed care industry.

### *Horizontal Integration*

Under the general business definition, horizontally integrated organizations are aggregations that produce the same goods or services. They may be separately or jointly owned and governed, operated as subsidiary corporations of a parent organization, or exist in a variety of other legal or quasilegal relationships. According to Roger Kropf:<sup>25</sup>

In the hospital industry, horizontal integration was viewed as potentially advantageous because a chain of hospitals might be able to purchase supplies and services at a volume discount, would be able to hire specialized staff at the corporate level to increase expertise, would be able to raise capital less expensively on the securities markets, and would be able to market hospital services under a single brand name in a number of communities.

Both for-profit and not-for-profit hospitals engaged in horizontal integration in an effort to meet the economic imperatives of the changing industry climate. The horizontal integration strategy spawned large numbers of hospital mergers and acquisitions and significant growth in the number of multihospital systems during the 1980s. As the trend in inpatient utilization and lengths of stay continued their declines throughout the 1980s, managed care organizations and other large purchasers of health care were increasing demands for the availability of comprehensive, continuous care housed within discrete, accountable systems. For this and other reasons, horizontal integration as a primary strategic initiative declined in favor.

Mergers and acquisitions have continued to the present, but often for reasons different from the advantages initially identified. Now, in communities across the United States, with managed care saturating markets more than penetrating them, consolidation of facilities, staff, and other resources of previously separate organizations has become critical to the survival of a rational health care delivery system.

### *Vertical Integration*

Vertically integrated organizations are ones that operate a variety of business entities, each of which is related to the other. In health care, a vertically integrated system includes several service components, each of which addresses some dimension of a population's health care needs. The system may be fully comprehensive, with a complete continuum of services ranging from prenatal to terminal care. Other systems may contain some, but not all, of the services required by a population. A fully comprehensive vertically integrated system in its ideal form would include all facilities, personnel, and technologic resources to render the complete continuum of care, which comprises (1) all outpatient primary care and specialty diagnostic and therapeutic services, (2) inpatient medical and surgical services, (3) short- and long-term rehabilitative services, (4) long-term chronic institutional and in-home care, and (5) terminal care. Such a system also would include all required support services such as social work and health education. In theory, vertically integrated systems offer attractive benefits to their sponsoring organizations, patients, physicians, and other providers, as well as payers.

Sponsors of vertically integrated organizations gain the advantage of an increased market share across a mixture of high-profit, loss-generating, and break-even revenue sources. They benefit from an increased likelihood of retaining patients for many or all of their service needs. In addition, they are advantageously positioned to negotiate with managed care organizations by ensuring the availability of comprehensive, continuous care for an insured population at competitive prices. For patients, the most obvious benefit is continuity of care throughout the various system components and improved case management. Physicians and other providers benefit both from greater certainty about the flow of patients to their practices and improved ease of referrals. Managed care organizations and other large purchasers view integrated organiza-

tions favorably because of the relative ease of negotiating pricing with one organization instead of several. In addition, quality monitoring, patient case management, and physician and other provider activity can be managed and monitored more efficiently when they are all part of the same organization.

### *The Quality of Hospital Care*

It has always been easier to evaluate the quality of the medical care provided in hospitals than that provided in medical offices or other delivery sites because of the availability of comprehensive medical records and other sources of clinical information, systematically collected and stored for later recovery. The definition of quality, however, derives from both various operational factors and the measures or indicators of quality selected and the value judgments attached to them. For many years, quality was defined as “the degree of conformity with preset standards” and encompassed all of the elements, procedures, and consequences of individual patient–provider encounters. Most often, however, the standards against which care was judged were implicit rather than explicit and existed only in the minds of peer evaluators.

The peer-review technique had both benefits and failings. A common peer-review quality-assurance process used in hospitals until the 1970s was the chart audit. Periodically, an audit committee made up of several providers appointed by the hospital medical staff would review a small sample of patient records and make judgments as to the quality of care provided.

Such audits were ineffective for several reasons. First, the evaluators used internalized or implicit standards to make qualitative judgments. Second, there was no rational basis for chart selection that would permit the evaluators to extrapolate the sample findings to the broader patient population. Third, even if deficiencies were identified, the auditors were reluctant to take corrective action because their deficient colleagues might be on the next audit committee reviewing their patient care.

Avedis Donabedian of the University of Michigan made an important contribution to quality-of-care studies by defining the three basic components of medical care—structure, process, and outcome. Structural components are the qualifications of the providers, the physical facility, equipment, and other resources and the characteristics of

the organization and its financing.<sup>26</sup> Until the 1960s, the contribution of structure to quality was the primary, if not the only, quality-assurance mechanism in health care. Traditionally, the health care system relied on credentialing mechanisms, such as licensure, registration, and certification by professional societies and specialty boards, to ensure the quality of clinical care.

Hospital reviews for accreditation by the then Joint Commission on Accreditation of Hospitals were also based almost exclusively on structural criteria. Judgments were made about physical facilities, the equipment, the ratios of professional staff to patients, and the qualifications of the various personnel. The underlying assumption of structural quality reviews was that the better the facilities and the qualifications of the providers, the better the quality of the care rendered.

The past focus on structural criteria assumed quite erroneously that enough was known about the relationship of the structural aspects of care to its processes and outcomes to identify the critical or appropriate structural indicators. It was much later that hospital accreditation involved process criteria and more recently outcomes.

The process components are what occur during the encounters between patients and providers. Process judgments include what was done, how appropriate it was, and how well performed, as well as what was omitted that should have been done. The assumption underlying the use of process criteria is that the quality of the actions taken during patient encounters determines or influences the outcomes.

The outcomes of care are all of the things that do or do not happen as a result of the medical intervention. Only recently has quality assurance in the hospital field focused on the relationships among structure, process, and outcomes. In the past, it had always been argued by providers that so many different variables influence the outcomes of medical care that it is inappropriate and unfair to providers to attribute patient outcomes solely to medical interventions. That argument was dismissed, however, with the introduction of computerized information systems and sophisticated analytical techniques that permit the collection and analysis of data on most or all of the potential intervening influences and allow the findings to be adjusted for patient differences. Now, quality-of-care data are routinely standardized to account for age, gender, severity of illness, accompanying conditions, and other variables that might influence outcomes.

### *Landmark Studies of Quality of Hospital Care*

In the early 1960s, the Columbia University School of Public Health and Administrative Medicine, with M. A. Morehead as director, conducted a study of the quality of hospital care provided to members of the Teamsters Union in New York City. The union was investing heavily in hospital services for their members and families and wanted to determine whether the quality of those services justified that large expenditure. Teams of medical experts in a variety of specialties were asked to review large samples of patient records and decide whether the care was justified, appropriate, and acceptably provided. The standards of care on which the decisions were based were not explicit and agreed on beforehand but left to personal judgments of the medical experts reviewing the records.<sup>27</sup>

As might be expected from academically based, board-certified specialists using internalized standards for judging the quality of care, they found that medical care provided by physicians, most like themselves, those who were fellows of specialty boards, was more likely to be optimal. They also concluded, after assembling the findings for all of the individual medical and surgical specialties, that the care provided in hospitals closely affiliated with medical schools was better than that provided in other hospitals.

In spite of the bias introduced into the study by the use of implicit standards that reflected the evaluators' personal values, beliefs, and practice styles, the report, for the first time, documented unquestionably the proportion of hospital admissions that were deemed unnecessary or questionable; the amount of care that was considered inappropriate, poor, or questionable; and a finding, which the public has yet to fully appreciate, that there are significant differences among hospitals and medical staffs in the quality of care they provide.

A host of parallel studies followed that was more rigorously designed and that used consensually derived, explicit performance criteria that reached essentially the same conclusions. Quality-of-care research repeatedly finds that the quality of hospital care is highly variable and is related to the influence of medical school affiliations and to the specialty training of the medical staff.

### *Variations in Medical Care*

In 1973, two researchers, John Wennberg and Alan Gittlesohn, published what would be the first of a series of papers documenting the variations in

the amounts and types of medical care provided to patients with the same diagnoses living in different geographic areas.<sup>28</sup>

Those publications emphasized that the amount and cost of hospital treatment in a community had more to do with the number, specialties, and individual preferences of the physicians than the medical conditions of the patients.

At the same time, concerns about the variability of hospital care and the conclusions from studies on its quality prompted federal action. The Social Security Act was amended to create a national network of local professional standards review organizations, which were charged with ensuring that health care services purchased in whole or in part by the Medicare, Medicaid, or maternal and child health programs conform to appropriate professional standards and are delivered effectively and efficiently.

With persistent concerns about improving the quality of hospital care and containing soaring costs, various groups have formed to survey and report on the quality of hospital care. Chief among them has been the Leapfrog Group. It was founded in November 2000 by the Business Roundtable with support from The Robert Wood Johnson Foundation. Members include more than 160 Fortune 500 corporations and other large private and public sector health benefits purchasers that represent more than 36 million enrollees. The Leapfrog Group fields the Leapfrog Hospital Quality and Safety Survey, a voluntary online survey that tracks hospitals' progress toward implementing all 30 of the safety practices endorsed by the National Quality Forum. The Leapfrog website, [www.leapfroggroup.org](http://www.leapfroggroup.org), displays each hospital's results and is updated each month with data from additional hospitals; anyone can review the results at no charge. Leapfrog has compiled the first free online database of programs across the country that offer financial or nonfinancial rewards and incentives for improved performance. The Leapfrog Incentive and Reward Compendium is also available at [www.leapfroggroup.org](http://www.leapfroggroup.org).<sup>29</sup>

## Hazards of Hospitalization

Medical errors have been a serious problem in hospitals for years, but improving patient safety did not become a serious national concern until recently. Although those in the health professions and more knowledgeable members of the public have long been aware of the error-prone nature of

hospital care, it was not until the November 1999 release of a report prepared by the prestigious National Academy of Science's Institute of Medicine (IOM) on medical mistakes that the magnitude of the risks to patients receiving hospital care became common public knowledge.

By extrapolating the findings of several well-conducted studies of adverse events occurring in hospitals to the 33.5 million hospital admissions in the United States during 1997, the IOM report concluded that as few as 44,000 and as many as 98,000 deaths occur annually because of medical errors.<sup>30</sup> The report put the magnitude of the problem in the context of other comparable concerns by noting that more people die from medical errors in a year than motor vehicle accidents or breast cancer and that medication errors alone kill more people than workplace injuries.

Errors are defined as "the failure to complete a planned action as intended or the use of a wrong to achieve an aim."<sup>29</sup> Those errors may be attributed to failures in diagnostic, treatment, or surgical procedures, selection or doses of medication, delays in diagnosis or treatment, and a host of other procedural lapses, including communication or equipment failures.

There is general agreement that system deficiencies are the most important factor in the problem and not incompetent or negligent physicians and other caregivers. Modern medicine with its highly effective but extremely complex diagnostic and therapeutic methods can be formidably risky. Extensive surgical procedures are error prone, as are increasingly powerful therapeutic drugs. Miscommunication among overstressed employees is common in busy hospitals. With so many steps and so many people involved in the care of hospital patients, the potential for error grows with every patient day, and small lapses develop into large tragedies.<sup>31</sup>

The IOM report presents a series of recommendations to improve the quality of care during the next 10 years. The report lays out a comprehensive strategy for reducing medical errors through a combination of technologic, policy, regulatory, and financial strategies intended to make health care safer. Better use of information technology such as bedside computers, avoidance of similar-sounding and look-alike names and packages of medications, and standardization of treatment policies and protocols would help to avoid confusion and reliance on memory and handwritten communications. The most controversial of the recommendations, however, is the call for a nationwide mandatory reporting system that would require states to report all "adverse events that result in death or serious harm."<sup>32</sup>

The health care system and its practicing physicians will have to make radical changes in cultural attitudes and individual prerogatives, however, before the necessary system changes and reporting requirements can be institutionalized. The IOM report, which moved awareness of the magnitude of medical errors from the anonymity of the hospitals to the nation's media and subsequently to the halls of Congress, has already produced vociferous debate over issues of mandatory or voluntary reporting. Questions of liability, confidentiality, and avoidance of punishment must be settled before any reporting legislation can be passed. In the meantime, other recommendations for more focus on patient safety by professional groups, medical societies, health care licensing organizations, and hospital administrations could be followed with more immediate benefits.

## Shortage of Nurses Creating Staffing Crisis

Three factors have combined to drive a hospital nursing shortage to crisis proportions. First, increasing dissatisfaction with staffing reductions, overwork, and too little time to maintain the quality of patient care is driving nurses out of hospitals into early retirement or into home or ambulatory care. Second, with the heavy work responsibilities of nursing as a career and many other more attractive options, fewer young people were entering that clinical field. Last, aging of the current nurse workforce will accelerate staffing losses. With one third of the currently employed nurses over 50 years of age, only an increasing pool of new nurses entering the pipeline will rescue hospital nursing from its critical shortage.<sup>33</sup>

The consequences are serious. There is increasing evidence that nurse staffing is related to patient outcomes in both medical and surgical cases. Studies indicate a direct link between the number of RNs and the time they spend with patients and the number of serious complications and patient deaths. Low nurse staffing increases the likelihood that some patients will suffer pneumonia, shock and cardiac arrest, and gastrointestinal bleeding, and some patients will die as a result.<sup>34</sup>

Although the nursing shortage is far from over, the situation has improved. In the last few years, pay increases, relatively high national unemployment rates, and private initiatives aimed at encouraging men

and women to become nurses have resulted in employment growth among RNs. The influx of foreign-born RNs and the return to nursing of older women accounted for a large share of the increase in nurse employment. Unfortunately, faculty shortages in schools of nursing have limited class size even when applications have increased. Thus, the nurse shortage will continue for some time.<sup>35</sup>

## Current Research Efforts in Quality Improvement

After the Joint Commission for the Accreditation of Hospitals recognized the development of multi-institutional hospital networks and changed its name to the Joint Commission on the Accreditation of Healthcare Organizations, it produced a new and quantitatively measurable definition of quality with a results focus. The new definition characterizes the quality of a provider's care as the degree to which the care delivered increases the likelihood of desired patient outcomes and reduces the likelihood of undesired outcomes, given the current state of medical knowledge.

This objective and quantitative definition of quality contrasted sharply with the previous subjective and qualitative definition that required estimates of adherence to somewhat nebulous performance standards. It also left room for nonclinical outcomes, such as accessibility (the ease with which patients can avail themselves of services) and acceptability (the degree to which health care satisfies patients).

Hospitals now conduct regular patient satisfaction studies to obtain patients' views about the services they receive. Such studies encompass several aspects of care, including access, convenience, information received, financial coverage, and perceived quality. It is particularly important for hospital executives to monitor how well their patients' comfort and communication needs were met. Patient satisfaction studies add a new dimension to the definition of quality. "Quality" becomes what the patient receives as judged by the patient, rather than what the facility provides as judged by the providers.

During the decade of the 1980s, when the focus on health care costs caused insurance companies, businesses, and government regulators to become more interested in what was going on in health care, the

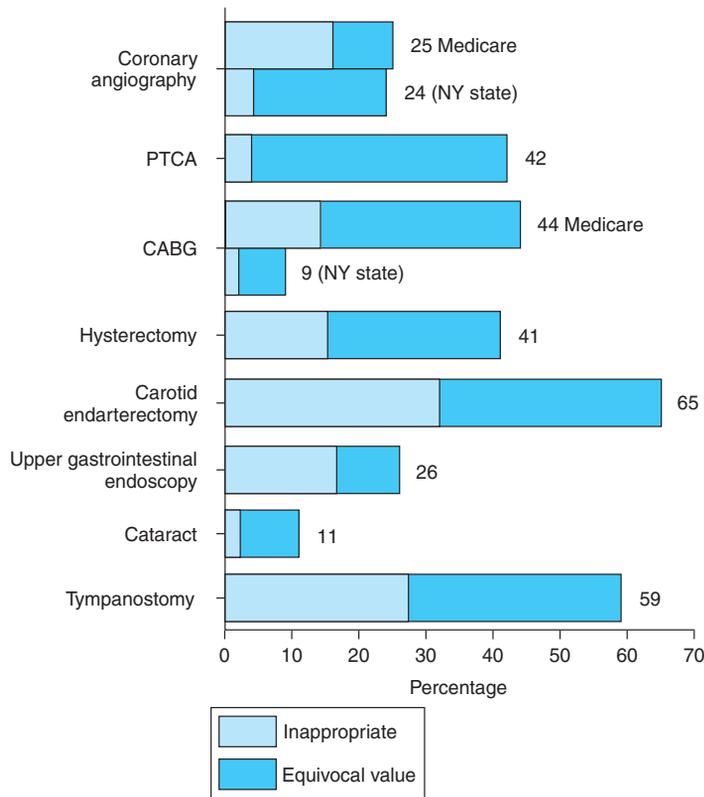
appropriateness of care became an increasingly important issue. Closely related to the cost and quality dilemma associated with high technology was the problem that some patients received too many procedures, tests, and/or medications that were inappropriate, useless, or even harmful. Although some of the tests and procedures were probably performed to protect the physician or hospital from potential malpractice litigation, some reflected unexplainable regional variations in medical practice, and some were clearly driven by the reimbursement system at the time that rewarded physicians for doing more, not less.

A large number of studies have examined the appropriateness of the use of various medical tests and procedures. Using similar methods, researchers compared medical records against well-established criteria for performing specific medical procedures. Those procedures were then rated as performed for “appropriate,” “inappropriate,” or “equivocal” reasons. The RAND Corporation summarized the findings of a number of RAND-supported research studies, as shown in Figure 3-1.<sup>36</sup>

Overall, it appears that a significant proportion of hospital procedures is performed for inappropriate reasons. The proportion of all procedures judged to be questionable or equivocal also shows wide-ranging variation. “On average, it appears that one-third or more of all procedures performed in the United States are of questionable benefit.”<sup>36</sup>

## Hospitals That Join Newest Quality Initiative Save Lives

For several years after the IOM’s shocking report about the number of deaths caused by hospital errors, Dr. Donald Berwick, a Harvard professor and president of the nonprofit Institute for Healthcare Improvement, challenged hospitals to improve their quality of care and save lives. By June 2006, over 3,100 hospitals had signed on to his “100,000 Lives Campaign.” They agreed to implement six types of changes designed to prevent lethal mistakes. The changes were aimed at preventing medication errors, preventing hospital-acquired infections, deploying rapid-response teams to cope with emergency situations, and the like. Although all participating hospitals did not initiate all six changes, after 18 months, Dr. Berwick estimated that about 122,300 patient lives were saved.<sup>37</sup>



Notes: PTCA, percutaneous transluminal coronary angioplasty; CABG, coronary artery bypass grafting.

**FIGURE 3-1** Proportion of Procedures Judged Either “Clinically Inappropriate” or “Of Equivocal Value”: Summary of Selected Studies. *Source:* Reprinted with permission from: Rand Health Research Highlights, “Assessing the Appropriateness of Care: How Much is Too Much?” RB-4522, © RAND.

## Responsibility of Governing Boards for Quality of Care

Although the medical staffs and other professional providers of patient care in hospitals make the decisions and carry out the procedures that lead to the patient care outcomes, it is the governing boards of hospitals that are ultimately responsible for the quality of the care provided. The board is

responsible for the hospital's quality-assurance and risk-management programs, all of the quality-improvement programs, and the oversight of the medical staff. The latter responsibility is discharged primarily through its oversight of and final decisions regarding appointments and privilege delineations of medical staff members. Otherwise, oversight of the medical staff is delegated to the various committees of the medical staff organization.

The board oversees the hospital's quality assurance programs and related functions by monitoring specific information regarding program effectiveness in the identification and resolution of patient care problems and of the medical staff in quality assurance. Some of the indicators that hospital boards regularly review are as follows:

- Mortality rates by department or service
- Hospital-acquired infections
- Patient complaints
- Patient falls
- Adverse drug reactions
- Unplanned returns to surgery
- Hospital-incurred traumas

Needless to say, only the most diligent and dedicated lay board members are capable of interpreting these data and then formulating clear and understandable explanations for their occurrence. Health care reforms are intended to address these problems specifically.

## Hospitalists: A Rapidly Growing Innovation

As discussed in more detail in Chapter 5, physicians, called "hospitalists," are rapidly taking over the care of inpatients in U.S. hospitals. Hospitalists, usually internists by training, assume responsibility for the care of inpatients from admission to discharge. They substitute for the patient's primary physician for the period of the hospital stay and provide and/or coordinate all patient care by staff and specialists. Because hospitalists are based in the hospitals, they are able to provide more responsive and continuous care than patients' primary physicians, whose hospital visits are brief and less frequent.

Because it is generally accepted that the presence of hospitalists shortens lengths of stay, improves the continuity and quality of hospital care, and has economic advantages to hospitals, hospitalist medicine is rapidly becoming the preferred model of inpatient care.<sup>38</sup>

## Forces of Reform: Cost, Quality, and Access

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The performance benchmarks of cost, quality, and access that, with few exceptions, hospitals addressed for decades with moderate enthusiasm and little, if any, effect have now become the survival criteria for the future. Because the scientific breakthroughs and technology advancements that made hospitals the complex institutions they have become, hospital care has been both admired for its diagnostic and therapeutic accomplishments and criticized for its costly inefficiencies, duplications, and its inequities in access and quality. Ironically, the same high technology that contributed so much to hospitals' medical achievements also has been used to reveal their performance shortcomings in uncompromising detail. The sophisticated computerized clinical information systems that supported the research that focused on the cost-effectiveness or outcomes of expensive medical interventions have increasingly documented and given public recognition of system deficiencies. Studies similar to that of the IOM,<sup>39</sup> which took 2 years of reviewing scientific articles, conducting hearings, and making site visits at health care institutions, came to the conclusion that the poor quality of health care is a major problem in the United States. Citing widespread overuse of expensive technologies, underuse of inexpensive "caring" services, and error-prone application of health care services, these studies concluded that the system deficiencies not only wasted money, but also actually harmed patients.<sup>40</sup>

The continuing public debate over the escalating costs of health care and the increasing number of major employer/employee disputes over sharing the costs of insurance premiums have raised the level of health cost awareness of most Americans. In addition, the disruptions in long-standing relationships between specialist physicians and patients in managed care arrangements and the position promulgated by managed care organizations that some medical care is wasteful and unproductive have

focused patients' attention on the possibility that in some cases there may be inverse relationships between costs and quality.

Clearly, there is an increasing interest in major changes in the health care system, and hospitals, as a major component of the system would be seriously affected. Unfortunately, no consensus has emerged as to how to change it. Whether reform is to be incremental or comprehensive, whether it should focus on the economic problems or the organizational and delivery problems, or both are still open questions.<sup>41</sup>

Whatever the final form of U.S. health care after the industry-wide reformation takes place, there is general agreement that hospitals will no longer be the axis on which the rest of the system turns. Reduced in both capacity and importance, hospitals will simply be essential components of community-based and integrated systems of primary, tertiary, long-term, and home health care with significant public health and disease prevention functions.

Stephen Shortell of Northwestern University has encapsulated in seven steps the changes that hospitals will have to make to reposition themselves to function effectively in the future. Those steps are as follows:<sup>42</sup>

1. Becoming part of an integrated health system
2. Developing new management structures
3. Building capacity for population-based needs assessment
4. Forging new relationships with physicians
5. Re-engineering clinical processes
6. Implementing total quality management
7. Focusing on outcomes

There will be great variation in the capability of America's thousands of hospitals to adjust to what they will interpret as radical reversals of form and function. In the new hospital market economy, however, it appears likely that the Darwinian law of nature, survival of the fittest, will determine which hospitals will remain to serve the American public in the 21st century.

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