

# An Overview of the US Health System

A basic question that a healthcare manager should ask is: What is the nature of the system that I am being asked to manage? For most people who are not professionally engaged in organizing or delivering care, the health system means utilization—in other words, an occasional visit to a physician, dentist, nurse or nurse practitioner, pharmacist, or an institution such as a clinic or health maintenance organization (HMO). To a manager, however, the health system should initially be analyzed in a variety of ways: in terms of expenditures, facilities, manpower, and patients, or perhaps in terms of the more marketing-oriented nomenclature of clients and consumers.

## HEALTH EXPENDITURES

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In the calendar year 2008, the total estimated national expenditure for health for the more than 302 million people living in the United States was almost \$2.4 trillion, which is a more than \$7000 per capita expenditure. This enormous amount of money now being spent on health care represents close to 16% of the gross domestic product.<sup>1</sup> How was this \$2.4 trillion spent? By whom? For what? With what controls?

Most of the dollars (approximately 87% for the past decade) have been spent on personal health services. The bulk of these personal health dollars pay for hospital services, while other significant percentages are for

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<sup>1</sup>US Census Bureau, Statistical Abstract of the United States, 2009, Table 124, p. 95.

physician services, nursing home care, drugs, and dental services. The nonpersonal health service expenditures are categorized as those associated with government public health activities, with prepayment and administration, and with research and medical facilities construction.

Hospitals consume by far the lion's share of the health dollars, but this has not always been the case. Prior to 1939, physician services were the largest single area of healthcare expenditures, followed closely by hospital services. Subsequent to World War II and up to the present time, hospital expenses have exceeded all other items by a significant degree. From 1928–1929, hospital care represented 18% of the total health expenditures. By 1939–1940, these expenditures represented 25%; by the pre-Medicare/Medicaid period of 1964–1965, this percentage had grown to almost 34%; and, by 1980, the total had reached almost 47%. But, by 1990, as a result of pressure from the Medicare payment systems as well as innovations in therapy and ambulatory care, the hospitals' share of the national health expenditure pie had dropped to 37%, and by 2006 it was slightly under 34%.<sup>2</sup> During this same period, expenditures for physician services rose from 28% in 1928–1929 to 25% in 1939–1940 and to 34% in 1964–1965; by 1980, in the post-Medicare/Medicare world, physician and clinical services were slightly less than 21% of total personal health expenditures. By 1990, the figure was up to 23%, and in 2006 it continued to hover around 23%.<sup>3</sup>

What had occurred? Why have health expenditures escalated so dramatically, and why have the shifts in expenditure patterns been so great? Several explanations have been offered, including population growth, inflation, the cost of technology, and financing patterns.

Some of the dramatic increases in health expenditures simply are explained by the fact that there are considerably more Americans today than there were 10, 20, or 30 years ago. There are 100 million more people living in the United States today than there were in 1970. In conceptual terms this means that between 1970 and 2008, the United States annexed the equivalent of the entire populations of England, Scotland, Wales, Northern Ireland, Denmark, Norway, and Sweden. Or, on a more local level, the United States added the equivalent of the entire populations of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey,

<sup>2</sup>US Census Bureau, *Statistical Abstract of the United States*, 2002, Table 114, p. 92.

<sup>3</sup>*Ibid.*

Pennsylvania, Maryland, Virginia, West Virginia, and North Carolina. More people means more demand, more services, and more expenditures.

Not only is the example of a 100-million-person growth in the population since 1970 an important explanatory variable in understanding why health expenditures continue to increase, but the changing shape of the population is also a critically important variable. Most significantly, we have seen a dramatic growth in the senior population. For example, in 1980 we had a total of 25 million Americans over the age of 65, which represented 11.2% of the population. In 2000, we had 34.8 million people over 65, which represented 12.6% of the population. A mere 7 years later in 2007, there were 3 million more people over the age of 65, bringing the senior population number up to 37.8 million people. Within the senior population, the numbers are even more dramatic. We have seen a doubling of the 75- to 84-year-old group since 1970, from 6.1 million people to 12.3 million, and close to a tripling of the over-85-year-old group, from 1.5 million to 5.3 million in 2006.<sup>4</sup> The year 2011 will certainly be significant for society and the health system alike. In that year the generation of baby boomers will start to turn 65 and two decades after that we can expect over 70 million people over the age of 65, representing about 20% of the population. For the health system, more seniors translates into a greater demand for services such as doctor's visits and hospital days. For example, in 2006, 22.1% of people between the ages of 65 and 74 visited their physicians more than 10 times and 27.6% of those over 75 visited a physician more than 10 times in the year. This compares with only 11% of the population between 18 and 44 who visited their doctors that often.<sup>5</sup> The trend lines are clear: The older we get as a society, the greater demands we make on virtually all components of the health system.

Another related dimension of costs is the increasing cost of managing complex diseases. Human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) are examples of diseases that did not have any impact on healthcare expenditures until the late 1970s and early 1980s. Similarly, severe acute respiratory syndrome (SARS) was an unknown disease until 2003, and its impact is still to be determined. We do know that in 2003 this one newly emerging disease wreaked havoc on

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<sup>4</sup>US Census Bureau, Statistical Abstract of the United States 2009, Table 7, p.10.

<sup>5</sup>Ibid., Table 158, p. 110.

the health system in Toronto, Canada, with cost implications that are still being calculated.

On a personal level, I can share that my late wife was a victim of ovarian cancer. Fortunately we had excellent health insurance and found superb physicians. She was able to obtain regular care at three outstanding medical centers: Brigham and Women's Hospital, Massachusetts General Hospital, and Baystate Medical Center. Additionally, she received useful consultations at Fox Chase Cancer Center and experimental care at the University of Texas Health Science Center in San Antonio. All told, between 1989 and 1995, my wife had more than 50 hospital admissions during more than 5 years of care before she succumbed. The cost of this extraordinary care was in excess of \$500,000.

One example of how technology has affected cost comes in the form of the drug filgrastim (Neupogen; Amgen Manufacturing, Thousand Oaks, CA), which is a product of high-tech DNA synthesis. Its value to cancer sufferers comes from its ability to stimulate the growth of white blood cells, and thus, reduce susceptibility to infection after chemotherapy. While filgrastim is an effective adjunct to chemotherapy, it is also quite expensive. When my wife first used the drug, she had a 10-dose cycle, later reduced to a 5-dose cycle. Each dose cost almost \$1000. Our copayment was \$10 per dose, the rest being paid by our health insurance. Today the cost is considerably lower, although still expensive at approximately \$250 per dose, depending on the dosage size.

During the long years of my wife's treatment, I spent considerable effort searching out treatment options throughout the world. In one meeting with a senior official in Britain, I learned that the ovarian cancer protocols in that country were almost identical to those in the United States. Indeed, a good deal of their research had National Cancer Institute funding. Patients in the United Kingdom, however, did not have access to filgrastim. "Why?" I inquired. "Cost" was the straightforward answer. This official went on to say that it is simply cheaper to have patients isolate themselves during their days of highest vulnerability to infection than to give them an expensive drug.

Inflation—the increase in prices and cost with no particular change in value—is a second major factor in the trend toward increased expenditures. How much of the increase can be explained by inflation is debatable, but it is clear that a 1950 dollar is not the equivalent of a present dollar and that most bills must be paid in present-value currency. In one

historical examination of the reasons for the increase in health expenditures, it was found that inflation accounted for 44% of the increase in health expenditures between 1950 and 1965 and 43% of the increased expenditures between 1971 and 1974.<sup>6</sup> A different report from that same period found that “52% of the \$38.4 billion increase from fiscal year 1965 to fiscal year 1972 reflected a rise in prices.” In explaining the remaining rise, the authors noted that “10% (\$3.8 billion) was the result of population growth, and the remaining 38% (\$14.7 billion) was attributable to greater utilization of services and the introduction of new medical techniques.”<sup>7</sup> The inflation statistics on medical care pretty well tell the story: Using 1982–1984 as the base period—that is, assuming an average price of medical care in that period of 100—by 1990 we are up to 162.8 and by 2000 we are up to 266.

Perhaps a more user-friendly way of considering inflation is thinking about the cost of gasoline today versus 20 years ago. The gallon is still a gallon and the gas is essentially the same, although more expensive (and to think it was about a quarter per gallon when I first started driving). Indeed, the fluctuating price of gasoline also reminds us of how sensitive our economic system is to world events. Since the single largest component of any healthcare manager’s budget is personnel, it is important to realize that higher wages and salaries are important variables in explaining the growth of national health expenditures. Not only do we have more people working in health care, but also the cost of employing them is greater. While few healthcare workers receive the minimum wage, that number does represent a base figure for calculating all wages. In 1967, the federal minimum wage was \$1.40/hr; in 1975, it increased to \$2.10/hr; by 1980, it was up to \$3.10/hr; in 1990, it was \$3.80/hr; and in 1997, with a few changes in between, it hit \$5.15/hr. As of July 2009, the federal minimum wage was \$7.75/hr while several states maintained even higher minimum wages; Washington at \$8.55/hr, Oregon at \$8.40/hr, Vermont at \$8.06/hr, and Massachusetts, Connecticut, and Illinois at \$8.00/hr.

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<sup>6</sup>R.M. Gibson and M.S. Mueller. National Health Expenditures, Fiscal Year 1976, *Social Security Bulletin*, 40(4) (April 1977), 14.

<sup>7</sup>B.S. Cooper and N.L. Worthington. National Health Expenditures, 1929–1972, *Social Security Bulletin*, 36(1) (January 1973), 13.

In a summary of analyses looking at the increasing costs for health care, Thorpe, Woodruff, and Ginsburg suggest that, since 1998, the following factors explain the increases: “Growth in pharmaceutical expenses, expensive new technologies, aging of the population, increase in consumer demand, broader managed care networks, provider consolidation, health care labor pressure.”<sup>8</sup> They go on to suggest that from 2002 through 2010 there will be additional increases in healthcare expenditure as follows: “Hospital care (21%); physician services (19%); outpatient prescription and over-the-counter drugs (21%); and nursing home and home health care (10%).”<sup>9</sup>

Not only has the use of the healthcare dollar changed, but the source of the revenue also has shifted. This shift has had and will continue to have a profound effect on management of healthcare organizations. The two most important shifts are related to the payer and the source of the revenue. In terms of the payer, direct patient payments have decreased, from 88.5% prior to 1929 to 27% in the fiscal 1980 period to 17.2% in 2000.

Using 2006 data, the picture we see with expenditures by type is as follows. Of the \$2.1 trillion spent in 2006, \$1.1 trillion was for what is defined as private expenditures such as health services and supplies (\$1.05 trillion), insurance premiums (\$723 billion), and out-of-pocket payments (\$256 billion). Additionally, there was \$970 billion of public expenditures with Medicare costing \$401 billion, Medicaid costing \$323 billion, and a range of other programs contributing to the public expenditures such as the Department of Defense hospital and medical programs (\$28.8 billion); Veterans Administration health care (\$31.4 billion); publicly funded medical research (\$37.8 billion); and workers’ compensation (\$33 billion).<sup>10</sup>

Along with these increased payments from the government has come an increased control of the expenditures. For example, virtually every major health bill that has passed through Congress since the late 1960s has been supported on the basis that it would contain or reduce healthcare costs. Some initiatives, such as changing the system of paying hospitals for Medicare recipients from a cost-based retrospective payment system to the present case-based prospective system, have saved money nationwide. Other programs, such as healthcare fraud and abuse prevention, have saved the system money, but their actual implementation is so localized that there

<sup>8</sup>Data retrieved (5/12/2002) from <http://www.ahcpr.gov/news/ulp/ulpcosts1.htm>.

<sup>9</sup>Ibid.

<sup>10</sup>US Census Bureau, Statistical Abstract of the United States 2009, Table 125, p. 96.

are clear cost savings differences from region to region. Illustrative of this is an analysis of the work of the US attorney's office in Boston, which indicated that the aggressiveness of Boston lawyers as well as their colleagues in Philadelphia and Florida have made these offices the trendsetters in litigating fraud and abuse cases.<sup>11</sup> On the other hand, the United States is a large country, and one must wonder what is going on elsewhere that healthcare fraud and abuse cases are not being aggressively pursued.

Despite these massive expenditures, there is clearly a lack of equity in terms of access, cost, and quality in the US health system. Many observers argue that this is inevitable, since our society is fundamentally inequitable; the health system simply reflects that. It should be recognized, however, that even some government programs institutionalize this inequity. For example, every state has considerable latitude in setting the level of eligibility for Medicaid, as well as the quantity and, to some extent, the quality of services that will be available. What this means in practice is easily seen in the long-term care industry. Average Medicaid per diem reimbursement rates for similar facilities ranged in 2008 from \$116 in West Virginia to \$207 in Delaware. For the individual institution, such differences in reimbursement rates translate into different staffing ratios and other services that result in a differing quantity and quality of care for residents.

A frequently mentioned aspect of the access equation is that of financial access to the system; that is, the ability to get through the front door because of having health insurance. Current estimates are that approximately 46 million people are uninsured, although as many as 90 million people are uninsured at some time during the year.<sup>12</sup> What is perhaps most interesting is that the typical uninsured person is not necessarily unemployed but rather is employed at a job that pays low wages and does not provide health insurance as a benefit. The fiscal crisis that beset states in 2003 is a cautionary tale about the interplay between the needs of society and money. A report from the National Conference of State Legislatures Health Policy Tracking Services underscored the equity issues in our society by pointing out that 19 states were contemplating significant cuts to their Medicaid recipients, including, in the case of Colorado, eliminating an entire group from eligibility (legal immigrants) and, in

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<sup>11</sup> *The Boston Globe*, May 13, 2003, 263(133), pp. A1, A5.

<sup>12</sup> Data retrieved (January 28, 2009) from <http://www.nchc.org/facts/coverage.shtml>.

other states, cutting back on a range of services such as vision care, podiatry, and dental care.<sup>13</sup>

Perhaps the most interesting issue to contemplate is that even when the finances are in place through such programs as Medicare, which is the federal program primarily serving the elderly, equal access still does not exist. In a 2003 report by Gornick analyzing Medicare data, we learn that “in comparison with White beneficiaries, Black beneficiaries used fewer preventive and health promotion services . . . and underwent more of the types of procedures associated with poor management of chronic disease, such as partial or complete lower limb amputation.”<sup>14</sup> Wennberg, the distinguished academic researcher from Dartmouth University who single-handedly called the nation’s attention to the significant variations in medical care between regions,<sup>15</sup> also found that Medicare, the program designed to provide equal access and control costs, had major variations in spending and services.<sup>16</sup> Nationwide data also tell us that there are many variations in how categories of people use the health system, such as the poor and nonpoor,<sup>17</sup> or how people of different ages,<sup>18</sup> ethnicities,<sup>19</sup> or from different parts of the country use health services.<sup>20</sup> Although some of these differences are related to the behavior of the population itself, there is another explanatory variable: the availability of resources. In the next section we shall examine some of the key resources of the US health system.

## HOSPITALS

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Since hospitals are so central to any understanding of the health system, and hospitals are also the largest employer in health care, it is worthwhile to briefly review their origins. The word hospital is derived from medieval

<sup>13</sup>National Conference of State Legislatures, State Health Policy Brief 4, April 2003, p. 1.

<sup>14</sup>M.E. Gornick. A Decade of Research in Medicare Utilization: Lessons for the Health and Health Care of Vulnerable Men, *American Journal of Public Health*, 93(5) (May 2003), 754.

<sup>15</sup>J.E. Wennberg and M.M. Cooper, eds. *The Dartmouth Atlas of Health Care 1998* (Chicago: American Health Association Press, 1998).

<sup>16</sup>J.E. Wennberg, E.S. Fisher, and J.S. Skinner. Data retrieved (February 13, 2002) from [http://www.healthaffairs.org/WebExclusives/Wennberg\\_Web\\_Excl\\_021302.htm](http://www.healthaffairs.org/WebExclusives/Wennberg_Web_Excl_021302.htm).

<sup>17</sup>Health, United States, 2002, Table 72, p. 218.

<sup>18</sup>*Ibid.*, p. 217.

<sup>19</sup>*Ibid.*

<sup>20</sup>*Ibid.*, p. 219.



Latin and meant “hospice” or “guesthouse” typically for weary pilgrims. The 1989 edition of the Oxford English Dictionary notes that the word finds its first usage in 1300 CE in reference to St. Thomas’s in London: “Ther is nouth an hospital arerd of seint Thomas.”<sup>21</sup>

The concept of a hospital dates from earlier times, indeed, hundreds of years before the beginning of the Common Era. For example, the Sinhalese claim that King Pandukabhaya established hospitals in Sri Lanka in the 4th century BCE.<sup>22</sup> Perhaps the most interesting account traces the idea of hospital chains to the time of the great Indian ruler King Asoka (273–232 BCE).

Legend has it that Asoka killed all rival claimants to the throne of the Indian empire, most notably his 99 brothers. After his ascendancy he converted to Buddhism and became distinguished for promoting goodness and virtue throughout his kingdom, including the establishment of networks of medical facilities.<sup>23</sup> In what is probably the best and most comprehensive current history of hospitals, Risse describes the Greeks developing a temple culture in the 9th century BCE that included amongst their attributes health and healing.<sup>24</sup>

In biblical times we learn of hospitality from the great patriarch Abraham who, despite recovering from his own circumcision, invites three strangers into his tent only to learn that the strangers are angels of God. Perhaps the single city that is most responsible for the growth of facilities to house and treat the weary and ill is Jerusalem, an important city for pilgrims. Hospices were vital to the city’s landscape. In his discussion of Jerusalem, Risse notes, “Before the first century, the city already had a tradition of sponsoring Jewish hospices, and that tradition was taken on by Christians to house and serve their own pilgrims who began flocking to Jerusalem.”<sup>25</sup> The Christian focus on Jerusalem began with its recognition by the Church and saw its height during the many years of the Crusades, when a visit to Jerusalem represented a step toward salvation.

<sup>21</sup>J.A. Simpson and E.S.C. Weiner, eds. *The Oxford English Dictionary*, 2nd Edition, vol. VII (Oxford: Clarendon Press, 1999), p. 414.

<sup>22</sup>Data retrieved (n.d.) from <http://www.lankalibrary.com/geo/medicine.htm>.

<sup>23</sup>J. Keay. *India: A history* (New York: Grove Press, 2000), pp. 90, 96, 99.

<sup>24</sup>G. Risse. *Mending bodies, Saving souls* (Oxford: Oxford University Press, 1999), p. 24.

<sup>25</sup>*Ibid.*, p. 138.

The next thousand years or so coincided with the establishment of those Christian orders that took responsibility for the hospices. For example, there were the Hospitallers of St. John, founded in the 11th century, the German Order of Hospital Knights founded in 1199, and specialized orders such as the Knights of St. Lazar who focused their energy on the care of lepers.<sup>26</sup> Although one hospital in Paris, Hotel Dieu, dates to 600 CE, it is not until the 13th and 14th centuries that we see the rapid development of institutions in western Europe, particularly Italy and France, that more resemble our present-day institutions.

### *American Hospitals (The Colonial Period to World War II)*

As the American nation developed, so did its inventory of hospitals and related institutions. Each institution represented a specific response to the growth of the population, the needs of a specific community, the availability of philanthropy, and often the philosophy of an individual or religious group. The Pennsylvania Hospital, founded by Dr. Thomas Bond and Benjamin Franklin in 1751, is considered to be the oldest voluntary (that is, nonprofit) hospital in the United States. Like most of its successors, it was founded to take care of the sick poor; the more affluent were treated at home. When the hospital opened in 1756 it was utilized in the following way: “The ground floor of the east wing contained the cells for insane patients. The second floor was the men’s ward. The third floor was the women’s ward, and the space above was used as lodging for Hospital employees and patients who needed isolation.”<sup>27</sup>

Other hospitals, such as Candler in Savannah, Georgia, also were developing in the same time period as the Pennsylvania Hospital.<sup>28</sup> Each of these institutions represented the growth of America. In its earliest days as a nation of seaport cities, growth came in the coastal towns and, as the nation expanded, so did its network of hospitals. For example, it was not until 1907 that Lawton, Oklahoma, saw its first hospital, the Turner and Lewis Private Hospital and Training School for Nursing. Today that small private hospital is a modern medical center, the Lawton Southwestern Medical Center.<sup>29</sup>

<sup>26</sup>Ibid., pp. 138–156.

<sup>27</sup>Data retrieved (n.d.) from <http://www.uphs.upetm.edu/paharcltour2.Jrhtml>.

<sup>28</sup>Data retrieved (n.d.) from <http://www.sjchs.org/body.cfm?id=33>.

<sup>29</sup>Data retrieved (n.d.) from <http://www.swmconline.com>.

During the early 1900s, medical schools, teaching hospitals, and a range of specialty hospitals for women, eyes, ears, nose, and throat developed. The nation also witnessed the growth of military and public health service hospitals, religious-oriented institutions, and thousands of community hospitals. A casual perusal of the Internet demonstrates the history and the pride in the history of many of these institutions.

### *World War II to the Present*

Perhaps no event has had a greater impact on hospitals in the United States and elsewhere than World War II. For example, many observers link the establishment of the British National Health System to the devastating consequences of the war on the United Kingdom. In a different part of the world, the health system of Japan was essentially destroyed and subsequently rebuilt by the Allies.<sup>30</sup>

In the United States there was a long period during the war when wages and salaries were frozen. In order to get around this freeze, many employers looked to enhance their packages of fringe benefits, the most significant of which was hospital insurance. The development of hospital insurance and the subsequent rise of Blue Cross and Blue Shield to provide both hospital and medical care insurance put the pieces in place for the growth of the healthcare industry after the war.

An interesting footnote is that for many years, until the federal government started scrutinizing the antitrust issues, Blue Cross and the American Hospital Association viewed themselves in partnership. This partnership even extended to sharing a building at 840 North Lake Shore Drive on Chicago's Gold Coast.

Post-World War II, the Hill-Burton Act passed in 1948, providing the funds and an impetus for the growth of hospitals and the building of scores of rural hospitals throughout the country. Many of these institutions remain today as the primary provider of both medical care and employment in their communities.

Comparing and contrasting hospitals of the World War II era and today is almost like comparing Lindberg's Spirit of St. Louis with a new Boeing 787 Dreamliner. They both fly and have wings, tails, and pilots, but that

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<sup>30</sup>S.B. Goldsmith. *Theory Z hospital management: Lessons from Japan* (Rockville, MD: Aspen Publishers, 1984).

pretty much is where the similarity ends. Lindberg flew a 46-foot plane with a takeoff weight of 5135 pounds from New York to Paris in 33 hours and 30 minutes. The 787 is five times longer, carries at least 250 times more people, can fly twice as far nonstop, has a takeoff weight 100 times that of the Spirit of St. Louis, and the 787 and virtually any jetliner today covers the distance from New York to Paris in almost one-fifth the time of Lindberg. Similarly, the typical hospital of the postwar era, probably up to the late 1960s, was essentially a hospital without medical office buildings, ambulatory care facilities, nursing homes, or satellite operations. The hospital of the 1960s did not have one single computer or word processor. It did not have a computed tomography (CT) scanner, magnetic resonance imaging (MRI), or ultrasound equipment. It may have had an operating suite for open heart surgery, equipment in the laboratories for multichannel blood testing, and its staff certainly had several peer committees for managing the quality of care. No one talked about marketing. (Indeed, in 1974, when the associate director of a hospital I had worked in attended a lecture on hospital marketing that I presented at Columbia University, he promptly and strongly castigated me for thinking of hospital services in marketing terms.)

From 1962–1963, I worked in a 300-bed teaching hospital where half of the beds were in 8- to 10-person wards. In that hospital, not one single patient was covered under Medicare or Medicaid (the programs did not begin until 1965). Many procedures that today routinely occur both inside and outside of hospitals, such as ultrasonography or virtual colonoscopy, did not exist in 1962.

As noted previously, hospitals take the lion's share of virtually every pie in the health system. Hospitals are usually categorized by ownership (governmental, nongovernmental, or proprietary/for-profit), type of services offered (general medical and surgical, specialty, such as ear, nose, throat), or category of patient (children's hospital). From the early 1960s through the mid-1970s, the number of hospitals in the United States was fairly constant, although from 1953 through 1963 there had been an increase of over 1000 institutions. But by the mid-1970s, the decline in facilities started. In 1975, there were 7156 hospitals; 3 years later that number declined to 7015; by 1990, the supply had fallen to 6291 hospitals; and in 2007, the nation was down to 5708. Not only has the number of facilities declined, but the number of beds available for patients has also

diminished, from 1.4 million in 1975 to 945,199 in 2007<sup>31</sup> all during a time when we have 100 million more people in this country. Of the 5810 hospitals in the United States, 213 belong to agencies of the federal government, primarily the Departments of Veterans Affairs and Defense, and 444 hospitals are for patients with psychiatric problems. The largest single grouping of hospitals are the 2913 nongovernmental, nonprofit facilities (your standard community hospital), and the second-largest grouping are those 1111 acute-care hospitals owned by state and local governments. Finally in 2007, there were 873 investor-owned (that is, for-profit) hospitals. The investor-owned sector is the only part of the hospital system that is growing; in 2000, there were 749 hospitals and by 2007, this sector had grown by 16% to 873 facilities. Included in these numbers are three large publicly owned for-profit chain operations that account for 39% of the private sector of the industry. The largest is the Nashville, Tennessee-based Hospital Corporation of America (HCA), which owns 158 hospitals, 107 freestanding surgery centers, and employs approximately 180,000 people. Community Health Systems (formerly Triad) is the second largest chain with its 130 hospitals and 90,000 employees. What is perhaps most interesting is that Community Health Systems states in 65% of its markets is the sole provider of hospital services. Tenet Healthcare Corporation is the third largest chain owning 53 hospitals and employing 62,000 people.<sup>32</sup>

During the time period of 1975 to 2000, the total number of hospital admissions declined slightly, from 36,157,000 to 34,891,000 and then by 2007, admissions were up to 37,120,387. The number of births increased, from 3.09 million in 1975 to 3.94 million in 2000 and 4.3 million in 2007. Throughout this period, hospital personnel increased from 3.023 million people to 4.5 million.<sup>33</sup>

What is going on? What is behind all these numbers that at first glance do not seem to make any sense whatsoever? Fundamentally, what has occurred in the last 50 years has been an internal reorganization of bed

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<sup>31</sup>Health, United States, 2007, Table 113, p. 365 and <http://www.aha.org/aha/resource-center/Statistics-and-studies/fast-facts.html>.

<sup>32</sup>Ibid.

<sup>33</sup>US Census Bureau, Statistical Abstract of the United States: 2009, Table 154, p.109 and Table 162, p. 113.

utilization. For example, psychotropic drugs have allowed many persons to function outside of psychiatric hospitals, with the result being that the number of psychiatric beds has decreased from 620,000 in 1950 to 285,000 in 1977 to a mere 84,000 in 2006.

Other shifts in incidence and treatment of diseases have resulted in similar decreases, such as the decrease in the number of beds in tuberculosis and respiratory disease hospitals from 72,000 beds in 1950 to 3315 in 1977 to 253 in 2000. However, it should also be recognized that some of these cases are also handled with dedicated services within traditional acute care settings.

The heart of the hospital system is the community hospital—the short-term, nonfederal hospital that provides a range of general medical and surgical services. In 2007, these 4897 hospitals—which include in their classification the 2913 nongovernment, nonprofit hospitals, the 873 investor-owned, for-profit hospitals, and the 1111 state and local government-owned community hospitals—had a total of 800,892 beds.<sup>34</sup> While there is clearly a great variety within this group of hospitals, some basic data regarding the “average” community hospital can be identified. The average hospital in the United States has a total of 188 beds with considerable variation both between states and within states. For example, the average number of beds per hospital in Alaska is 68, in South Dakota 91, and Wyoming 81.6. On the other hand, in New York the average bed size is 317, Texas 151, Pennsylvania 201, North Carolina 209, Connecticut 246, and my home state of Florida at 248. However, all these numbers mask significant differences within the states. For example, Florida has 4 hospitals with over 1000 beds and 26 under 100 beds. South Dakota, as another example, has 29 hospitals with 12 of them being under 100 beds. But, in South Dakota there are also 3 large hospitals, a 546-bed and a 538-bed facility in Sioux Falls, and a 359-bed hospital in Watertown.<sup>35</sup> National average length of stay in hospitals as of 2006 was 4.8 days with a range of 5.3 days in the northeastern part of the United States to 4.2 in the Midwest. We also see a difference in length of stay by race (white 4.7 days and black 5.6 days) and age of patient (25–34 years old, 3.4 days; 35–44 years old, 4.3 days; 45–64 years old, 5.0 days; 65–74 years old, 5.2 days; and over 75 years of age, 5.6 days).<sup>36</sup>

<sup>34</sup>Data retrieved (n.d.) from <http://www.aha.org/aha/resource-center/Statistics-and-Studies/fast-facts.html>.

<sup>35</sup>Data retrieved (n.d.) from [http://www.ahd.com/state\\_statistics.html](http://www.ahd.com/state_statistics.html).

<sup>36</sup>Data retrieved (n.d.) from <http://www.cdc.gov/nchs/ptoducts/pubs/pubd/series/ser.htm>.

## AMBULATORY CARE

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Ambulatory care is provided in a variety of locations: physicians' offices, hospital outpatient departments (OPDs), hospital emergency departments (EDs), and a range of other facilities such as surgical day centers, optometrists' offices, day care centers, neighborhood health centers, substance abuse clinics, mental health centers, and pharmacies.

In 2006, 902 million visits were made to physician's offices; 100 million visits were made to hospital outpatient departments (many hospitals do not have outpatient facilities); and 111 million visits were made to hospital emergency rooms.<sup>37</sup> What is perhaps most noteworthy is that, although the hospital is still the center of complicated and high-tech care, the ambulatory care setting has increasingly become the site of choice for what used to occur in the hospital. For example, arthroscopic procedures on the knee have practically disappeared as an inpatient procedure, endoscopies have increasingly become an outpatient procedure, and hernia repairs are frequently done in ambulatory facilities. An interesting example of change is in the area of eye care. A Web page from a Massachusetts group promotes their day surgery services, and they note that their most frequently performed same-day procedures are “[c]ataract extraction with intraocular lens implantation, cornea transplants, laser surgery for treatment of glaucoma and retinal surgery.”<sup>38</sup>

For a number of years, the federal government's National Center for Health Statistics has conducted an annual survey of ambulatory medical services provided by physicians in office-based practices. This study, the National Ambulatory Medical Care Survey (NAMCS), provides valuable insights into the practice of medicine. The following are some extracts from the data highlights section of their year 2008 report which offers estimates for 2006:

In 2006, 1.1 billion visits were made to physician's offices, hospital OPDs and EDs—about 381.9 visits per 100 persons.

- a. The overall visit rate for white and black persons was not significantly different.

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<sup>37</sup>US Government, Department of Health and Human Services, Ambulatory Medical Care Utilization Estimates for 2006, Number 8 (August 6, 2008), p. 1.

<sup>38</sup>Data retrieved (n.d.) from <http://www.eyehalthservices.com>.

- b. Private Insurance was the most frequently recorded source of payment, accounting for 60.5% of visits.
- c. Medicare and Medicaid and State Children's Health Insurance Program (SCHIP) accounted for 23.6 percent and 14.0 percent of visits.
- d. Established patients accounted for 87.8 percent of office visits.
- e. Approximately 19.2 percent of visits were for preventive care.
- f. The most frequent diagnoses were: essential hypertension, acute respiratory infections, arthropathies and related disorders; diabetes, and spinal disorders.
- g. There were an estimated 81.2 million visits related to injury, poisoning and adverse effects of medical treatment.
- h. Since 1996, the percentage of visits made by adults 18 years and over with diabetes increased 40%. During the same period, visits by adults with hypertension increased by 28% and depression by 27%.<sup>39</sup>

In 2005, the United States had 762,438 professionally active physicians, 571,798 of whom were graduates of US medical schools; the remainder were international medical graduates. Of these physicians, 718,473 were engaged in patient care, with 563,225 in office-based practice. The four largest specialty groups were the primary care specialties of general practice, internal medicine, obstetrics and gynecology, and pediatrics, which together account for 268,540 office-based physicians, or 47%.<sup>40</sup>

But the health system is not merely physicians and hospitals. Indeed, managers are primarily responsible for managing the human resources of the system, which includes 172,360 emergency medical technicians, 78,950 occupational therapists, 688,510 licensed practical nurses and licensed vocational nurses, 2,205,430 registered nurses, 1,308,740 nurses aides, 226,300 pharmacists, 177,850 radiologic technicians and technologists plus millions of other critical healthcare staff, and, in this generation, countless massage therapists and New Age healers.<sup>41</sup>

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<sup>39</sup>US Government, Department of Health and Human Services, Ambulatory Medical Care Utilization Estimates for 2006, Number 8 (August 6, 2008), pp. 3–4.

<sup>40</sup>National Center for Health Statistics, Health, United States, 2007 With Chartbook on Trends in the Health of Americans, Table 107, p. 357.

<sup>41</sup>Ibid., Table 109, p. 359.



## OTHER HEALTHCARE INSTITUTIONS AND PROVIDERS

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The US health system includes scores of categories, including the more than 1 million people receiving home care services and the 1.5 million people in nursing homes. Fully 80 million people obtained their care from HMOs.<sup>42</sup>

It is sometimes difficult to know the boundaries of the “health system.” What should be included and excluded within a definition of health services, as opposed to other social services? For example, should the definition include pharmacies that not only dispense prescription drugs but also sell billions of dollars of nonprescription, over-the-counter preparations that people use to self-medicate? Clearly, the corner drugstore for many is the source of primary care; thus, it is important to count it in a tally of healthcare resources. What about the range of nontraditional healers, such as herbalists and therapeutic masseurs? No doubt they help people. For the most part, however, they are excluded from the traditional health system in that they cannot utilize the system’s major resources (such as hospitals) and often have only limited access to its insurance mechanisms. For the purposes of this review, they shall generally be excluded. However, the extent of their involvement in the health system should be recognized.

Sometimes the exclusion of practitioners is a matter of medical politics. For example, as part of my doctoral work, I studied the history of midwifery in the United States. My research clearly demonstrated that during the early 20th century there was a campaign of organized medical professionals, in particular, professors of obstetrics in the major medical schools, against American midwives. This campaign was not based on sound scientific evidence but rather based on self-interest in establishing the new medical specialty of obstetrics and gynecology. Indeed, had the United States followed the lead of England at that time, this country would have had a totally different approach to obstetrical care—perhaps even a different health system.<sup>43</sup>

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<sup>42</sup>Health, United States, 2002, Tables 88, 97, 132, and 105.

<sup>43</sup>S.B. Goldsmith. Physicians Attitudes toward Nurse-Midwives, Sc.D Dissertation (The Johns Hopkins University, 1970).

## THE NEW ORGANIZATIONS IN TOWN

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It sometimes appears that the past decade or two has spawned an entire generation of organizations whose prime concern is either regulating or redirecting the health system. Some of these organizations are not actually new, but are reincarnations of older and similar programs.

The regulators are likely to be on any manager's mind. There are literally hundreds of organizations involved in regulation in the healthcare field; others want to be. The Federal Trade Commission is interested in instigating some antitrust activity in the health field, and the Federal Communications Commission has expressed concern over the proliferation of sophisticated electronic medical equipment that is allegedly causing problems with certain communications equipment. At the federal level, in addition to the organizations fully involved with health—primarily large sections of the Department of Health and Human Services, including the Centers for Medicare and Medicaid Services (formerly the Health Care Financing Administration) and the Office of the Inspector General—other nonhealth-related executive branch departments, such as the Bureau of the Budget, the General Accounting Office, and the Office of the US Attorney General, play critical roles in the health system.

State governments have similar structures: health departments that often have considerable regulatory power and various related organizations, such as rate commissions and health planning departments. The local level also has a range of government or government-related health planning bodies and, again, some regulatory agencies, such as boards of health.

Organizations for personal professional development, special medical interest groups, and lobbying groups appear to be omnipresent. Virtually every health profession (or group of workers) has its own organization. Specific disease- or problem-oriented organizations are abundant, as are the lobbyists, some of whom tend to focus on organizations, such as the American Medical Association or the American Hospital Association, and some on fund-raising for activities to combat specific diseases, such as Alzheimer disease, multiple sclerosis, alcoholism, mental retardation, AIDS, or mental illness.

The picture is one of an expensive, complex, and quite fragmented system. Clearly, the health system is not simply a group of well-defined and integrated components, all of which relate to a common goal. On the contrary, it is a system with considerable overlap, waste, and a multiplicity of goals.

### Case Study 1-1

#### **CHAMBER OF COMMERCE PRESENTATION**

Jillian Reilly, the CEO of the Plaidville Hospital, has sent you a memo asking that you prepare a 5–7 minute speech for him to deliver to the local chamber of commerce. The title of his speech is “Health Care: National Trends and What it Means to Plaidville.” In his memo he has asked you to include some national data but to also focus on the local scene (Plaidville is the ultimate average hospital in the average community). Finally, Mr. Reilly has urged you to not prepare a sterile presentation but rather find a way to humanize the presentation.

Assignment: Write the speech.

### Case Study 1-2

#### **THE FLORIDA CENTER FOR GERIATRIC ASSESSMENT**

The Florida Center for Geriatric Assessment (FCGA) was developed by three entrepreneurial health professionals who were interested in “doing good and doing well.” Their focus was starting a new type of organization that would offer high-quality diagnostic services to the elderly of South Florida in a freestanding office setting. In discussing their project they described it simply as “Mayo Clinic quality medical services in a Ritz Carlton environment.” If successful they planned to move from the original prototype center to several others in Florida, and eventually they hoped to build other centers in large retirement communities.

*(continues)*

### Case Study 1-2

The model for their clinical operation was the Mayo Clinic's executive assessment program. As explained by Dave Hodges, a former senior executive in the nursing home industry and a partner in FCGA, the executive assessment at Mayo provided not merely a comprehensive physical examination but an exam that was preceded by an extensive written history submitted by the patient prior to the 2-day visit to Rochester, Minnesota. Hodges himself had gone through the executive assessment at Mayo and described it as "totally amazing. In less than 48 hours I met with a primary care physician who spent over an hour reviewing my questionnaire and then examining me. Next I had blood tests, an EKG, a stress test, a special nuclear cardiac test, and consultations with everyone from nutritionists to a psychiatrist because of a knee injury. At the end of the 2 days I met again with the primary care physician and he discussed everything that was needed for me to be in optimal health. For example, he suggested a change in my cholesterol medication and explained why the change. Additionally, he told me that he would provide my regular primary care practitioner and me the results of my testing. He also made sure that I was up to date on my immunizations. It was the most satisfying clinical experience I have ever had."

Hodges's experience and the logic of the proposed FCGA quickly found two partners, Mort Reese and Dan Robinson. Reese had been a medical school dean in a neighboring state and Robinson came from a finance background and had extensive experience in the health field. Together, the three put together a business plan for the FCGA to service the needs of the population of Palm Beach, Broward, and Miami-Dade Counties in South Florida.

The following is a summary of the plan.

## Case Study 1-2

### ***A PROPOSAL TO ESTABLISH A MODEL FREESTANDING GERIATRIC ASSESMENT PROGRAM***

*The proposed center would offer senior citizens a two-day comprehensive health and social evaluation that would be available to the patient and the family for the purpose of a family and patient making short term and long term decisions with regard to the patient's health and welfare.*

*Proposed elements of this GAP are as follows:*

- 1. First class facility, easily accessible, with high quality public areas*
- 2. Model apartment as part of facility to test for ability to conduct various activities of daily living*
- 3. High quality exam and conference rooms*
- 4. Health education DVDs available and/ or playing in theatre style room*
- 5. Healthy snacks while waiting*
- 6. Concierge to arrange for non-health related issues*
- 7. Full range of clinical examination as per Mayo Clinic and US Age Specific Guidelines for Preventive Medicine*
- 8. All patients will:*
  - a. Have an extensive history taken*
  - b. Will have a thorough physical administered*
  - c. Will have a psychiatric evaluation with particular attention to dementia*
  - d. Will have a nutritional review*
  - e. Will have a social work review to examine living conditions*
  - f. An OT evaluation will be done in the model apartment*
  - g. If appropriate, a site visit will be made to the patient's home to evaluate it for safety and utility*

*(continues)*

### Case Study 1-2

#### **THE NEED FOR A GERIATRIC ASSESSMENT CENTER IN THE TRI-COUNTY REGION**

*Most seniors in the Tri-County area, regardless of economic status receive the bulk of their medical care from local practitioners. The typical encounter, perhaps with the exception of a select group of people, who have signed up for VIP/Concierge medicine, lasts only a few minutes. Practitioners simply don't have the time or maybe the inclination to do extensive fact-finding with the elderly.*

#### **FINANCES**

*The key to the finances of this project is that the client or their family will be responsible for paying the estimated \$3250.00 fee privately. The FCGA will not participate in the Medicare or Medicaid programs or accept any private insurance payments.*

*The program will be staffed to accommodate 15 clients per week. It is estimated that at 80% capacity the FCGA will generate \$1.7 million per year with fixed operating expenses of \$490,000 and variable expenses of \$687,000 (of which approximately \$400,000 is in program marketing).*

#### **MARKETING**

*From a demographic perspective there are (based on the 20— census estimates) 831,000 persons over the age of 65 in the Tri-County region. The largest group is in Broward County with 306,400 people but Palm Beach County with 272,620 people represents the area with the highest percentage of senior citizens (21.5% vs. 14%+/-).*

*The initial market plan contemplates the first center's location in the Delray Beach area of Palm Beach County. This area was selected because it is easily accessible to a significant percentage of the target population and a startup facility was readily available.*

*Marketing efforts will initially be concentrated in the New York Metropolitan area because 80% of the elderly in Palm Beach County have no relatives in South Florida but rather family in the NY area. Marketing would utilize a web site as well as targeted print ads.*

### Case Study 1-2

## A CRUCIAL AFFILIATION

The partners realized that in order for the FCGA to have credibility, it would be advisable to either develop a medical advisory board or, alternatively, an academic affiliation. Because it was more expedient, they immediately began assembling an advisory group. Fortunately, before commitments were made, Dr. Reese was able to interest in the project Dr. Alvin Campanella, a former colleague who had been a medical school dean and now was the president of a nearby university with a medical school. This led to a series of discussions between the partners and the university and a “loose affiliation” for marketing purposes, with the expectation that the affiliation would be formalized if the project showed signs of success.

## DISCUSSION QUESTIONS

1. Does the concept of freestanding geriatric assessment centers make sense?
  - a. Why isn't the service widely available already?
2. Why would the founders choose to not accept Medicare, Medicaid or insurance funding?
3. Are there likely licensure issues associated with their plan?
4. Do you think the idea will be successful?

