The delivery and funding of healthcare in the United States are complex and uncertain for many people. In fact, Americans experience vastly different levels of care, depending on their age, race/ethnicity, socioeconomic status, and geographic location. These differences are products of the convoluted development of healthcare in the United States. Today, whether healthcare is a right or a privilege for those who can afford it is one of the most pressing questions in American society.

Is healthcare a privilege or a right? That may be the most contentious question in the whole healthcare debate. Pope Francis and US Senator Bernie Sanders have advocated that healthcare is a right. Pope Francis stated that “health is not a consumer good, but rather a universal right, and therefore access to health care services cannot be a privilege.” Yet former President Donald Trump and others consider it a privilege to be earned (Kershner 2019).

The impact of having health insurance is dramatic. In general, people with health insurance tend to get help earlier, when it is less costly and more effective. In fact, one Harvard study suggests that “45,000 Americans die prematurely every year because they lack health insurance. . . . There is no such thing as an American healthcare system. . . . What we have instead is a hodgepodge of private and public insurance plans with cracks between them” (Johnson 2017).
➤ Understand how the diversity of the US population influences healthcare.

➤ Explain why healthcare costs vary so widely in the United States.

➤ Identify the factors that affect life expectancy and explain why life expectancy in the United States has declined.

➤ Understand the dangers of new and emerging diseases.

**The History of the US Healthcare System**

Healthcare in the United States and elsewhere in the world was primitive and lacked sophisticated technology until the beginning of the twentieth century. Before then, the training and practice of medicine was not standardized, and most practitioners were unlicensed. Between 1760 and 1850, some educated doctors sought to establish special recognition for their profession and organized medical schools. However, US state legislatures consistently rejected the need to professionalize medicine, and many states even eliminated what little medical licensure existed. During this time, lay practitioners with little or no formal medical education proliferated, many of whom practiced herbal and folk remedies. Some physicians even denigrated the value of medical training, suggesting that “professional knowledge and training were unneeded in treating most diseases” (Starr 1982, 33).

American physicians initially sought to model their profession after England’s Royal Society of Medicine, which set physicians apart as an elite order. Physicians did not physically examine patients but primarily recommended courses of treatment. Physicians at first were distinguished from surgeons, who came from the same guild as barbers and primarily performed manual tasks, such as draining wounds and pulling teeth. Another important group in the medical establishment was apothecaries, who prescribed and charged for medicines, which they made by hand. By the late 1700s, these roles began to converge, with physicians both examining and treating patients as well as creating and dispensing their own medications. Few, however, had any formal training: At this time, only about 200 of 4,000 physicians in the United States held medical degrees. The rest were lay personnel, who were inconsistently trained (at best) in areas such as childbirth, bone setting, cancers, inoculations, and abortions (Starr 1982).

By the early 1800s, medical schools were being established in the United States. By the mid-1850s, 42 US medical schools were in operation. Most were located in rural areas that lacked hospitals and clinical facilities. A degree from such a school was generally considered sufficient training to practice medicine without state licensure. Hospitals also began to emerge during this time. Some communities opened hospitals and “pesthouses” to isolate those with contagious diseases, and every state had at least one mental asylum. By 1850, the number of physicians had increased eightfold, to about 40,000.

Medical care typically was provided on credit. Physicians billed their patients directly, but patients often paid only a fraction of their charges, or they provided goods in kind or
bartered for the medical services they received. The increase in the number of physicians saturated many markets. As a result, many doctors chose to relocate to rural areas, while others took second jobs to make a living.

The lack of transportation infrastructure was a major factor that constrained the use of medical care. Most of the US population lived in rural areas, where transportation was relatively inaccessible. In 1850, 84.6 percent of the US population was rural; by 1900, this number had decreased to 60.4 percent (US Census Bureau 1993). In both rural and urban areas, most physician consultations took place in patients’ homes rather than in offices, and physicians generally charged according to the distance they had to travel. Before the invention of the telephone, families had to travel to find a doctor; because most doctors were out visiting patients, they were difficult to locate. As a result, families in rural areas sought a doctor only for very serious conditions. The advent of railroads and canals, followed later by the automobile and the telephone, facilitated greater access to care by lowering the cost and time required to obtain healthcare services (Starr 1982).

In the early 1800s, Americans perceived little need for hospitals, as most people received healthcare services in their homes. The few hospitals that did exist generally provided poor and dirty conditions and were primarily designed to isolate the sick from their communities. Hospitals were most often established by religious and charitable organizations as holding institutions for the sick, rather than as places for curing illness. Mental asylums, likewise, were created as holding facilities for the mentally ill. These places were frequently dangerous, however, and most patients felt safer at home (see sidebar).

THE ORIGIN OF NEW YORK CITY’S BELLEVUE HOSPITAL

In 1736, the New York Almshouse was founded as a pest and death house for people suffering from communicable diseases such as cholera and yellow fever. The poor and the mentally ill were treated with experimental care there—often without the use of anesthesia. For those who could not afford a private doctor, the almshouse sometimes was their only choice for medical care. Later, the facility was used as a “dumping ground” for many patients who were terminally ill or otherwise unwanted.

Because of the diversity of cases treated there, the Almshouse—renamed Bellevue Hospital in 1824—provided an ideal setting for clinical training and research. Training for physicians as interns began there in 1856, and the first professional nursing school opened at Bellevue in 1873. In the twentieth century, the hospital continued to improve its quality of care and professionalization, and it became known as one of the premier training and treatment centers in the United States (Howe 2016).
Advances in transportation and technology made the centralization of patients into hospitals and physician offices more practical. Both the automobile and the telephone allowed patients to more easily schedule and access medical care. Physicians could practice in their offices, rather than travel to patients’ homes. This concentration of practice allowed greater efficiencies of scale for medical personnel, as physicians could see greater numbers of patients in a day. This practice also gave rise to specialization. Still, however, few physicians in the 1800s could become wealthy practicing medicine.

Toward the end of the nineteenth century, most states had implemented medical licensure for physicians. Initially, licensure laws allowed anyone graduating from any operating medical school to practice medicine. Gradually, these laws changed to allow only those who graduated from recognized, accredited medical schools to practice medicine. These stricter regulations led many poorly trained and marginally competent physicians to stop practicing.

The rapid expansion of the American Medical Association (AMA), along with local medical societies, had a powerful influence on physician training by organizing and standardizing it throughout the country. In the early 1900s, the AMA helped reform medical school education, requiring a minimum number of years of high school education and medical training, in addition to a test for licensure. The AMA also began to grade medical schools. Ultimately, the AMA facilitated the greatest change in medical school education by sponsoring a research group from the Carnegie Foundation that examined and recommended changes to medical training. The issuance of the so-called Flexner Report (named for its lead author, Abraham Flexner) in 1910 resulted in the closure of about 35 percent of existing medical schools by 1915 and decreased the number of medical school graduates from 5,440 to 3,536 (Starr 1982, 120). The higher standards may have improved the quality of practitioners, but they also increased the cost of medical education and resulted in a greater concentration of physicians in urban settings, which exacerbated the physician shortages in rural and poor areas.

Hospitals also benefited from the recommendations of the Flexner Report and the changes it spurred in medical education. More and more physicians began to train in hospitals. In 1902, about 50 percent of physicians trained in hospitals; by 1912, the share had risen to almost 80 percent (Starr 1982, 124). In addition, advances in bacteriology and antibiotics dramatically expanded the range of surgical operations. This, coupled with developments in diagnostic testing that required expensive equipment, reinforced the importance of medical practice in hospitals. Patients began to use hospitals for more complicated medical treatments, rather than simply for isolation for acute illnesses.

As healthcare education and practice moved toward standardization in the early twentieth century, the structures of hospitals and the roles of healthcare professionals evolved as well. The roles of physicians and nurses were defined more clearly, especially as these professionals began to specialize in areas such as surgery, children, adult medicine, and
so on. Nonphysician providers, such as pharmacists, laboratory assistants, and dieticians, were trained to take over some of the tasks that traditionally had been done by physicians. Advances in surgery, as a result of the discovery of effective anesthetics and antibiotics, drew many physicians to hospitals. Doctors began treating patients in these facilities and relying on them for much of their income. However, because physicians typically did not own the facilities, nor were they employed or paid by hospitals, they retained a high degree of autonomy and could bill patients directly for their services.

Gradually, hospitals shifted from organizations funded by charities to institutions financed by patients, insurance companies, and employers. Hospitals became one of the main employers in the United States and centers for the practice of medicine. From their humble beginnings, hospitals have grown into a mammoth industry, now accounting for $1.2 trillion in healthcare spending each year in the United States (AHA 2022).

The same developments that shaped the delivery of healthcare also influenced the pharmaceutical industry. Prior to the twentieth century, the quality and composition of drugs sold to the public were unreliable. Many so-called *patent medicines* were composed of proprietary, or secret, compounds. The pharmaceutical industry emerged as a result of the AMA’s efforts to make physicians the preferred prescribers of drugs as well as investigative journalism that exposed dangerous, unregulated drugs. Many of these products, as seen in exhibit 1.1, contained toxic, addictive, or dangerous ingredients. By the early 1900s, the public was being encouraged to obtain their medications from doctors (see sidebar). Further, new discoveries, such as vaccines and antibiotics, bolstered the reputation of the nascent industry.

**Exhibit 1.1**

Dangerous Patent Medicines in the 1800s and Early 1900s

Norodin—a methamphetamine product that promised to dispel the shadows of depression  
Laudanum—an opium mix used to treat everything from meningitis to yellow fever  
Cigares de Joy—tobacco to treat asthma  
Quaalude 300—a sedative used to treat insomnia  
Mrs. Winslow’s Soothing Syrup—a morphine concoction given to teething children  
Kimball White Pine & Tar Cough Syrup—a chloroform syrup for colds and bronchitis  
Bayer Heroin Hydrochloride—a heroin product used as a cough suppressant  
Cocaine Toothache Drops—a cocaine product for children’s toothaches

By the mid-twentieth century, laws had been passed that outlined the formal approval process for drugs and designated which drugs required written prescriptions from physicians and which could be sold “over the counter” (Rahalkar 2012). Since then, the pharmaceutical industry has become a trillion-dollar global industry. North America alone accounted for almost half (40.8 percent) of the worldwide pharmaceutical market in 2021 (Statista 2023b). Over 323,000 pharmacists are now working in the United States, filling almost 5 billion prescriptions annually (BLS 2022; Statista 2023c).

**The “Iron Triangle” of Healthcare**

As medical technology has advanced, governments around the world have struggled to balance three dimensions of healthcare: providing adequate access to care, containing the cost of care, and improving the quality of care. As shown in exhibit 1.2, access, cost, and quality make up the **Iron Triangle of Healthcare**.

The concept of the Iron Triangle was introduced by William Kissick in his 1994 book *Medicine’s Dilemmas: Infinite Needs Versus Finite Resources*. Kissick, a physician, public health official, and scholar, argued that the three dimensions of access, cost, and quality necessarily compete with one another—that is, a change in one factor must have an impact on the others. For instance, increasing the quality of care requires increasing costs, because quality requires the allocation of more resources, including people and equipment.
to improve clinical processes and outcomes. Likewise, increasing access to care requires providing more services at more locations, which also increases costs. Conversely, cutting costs, which might mean limiting resources or minimizing operational locations, hours, equipment, and clinicians, decreases quality and access. This trade-off is a key principle of the Iron Triangle: Healthcare organizations can improve only two of the three dimensions while sacrificing the third. Many, like Kissick, argue that these trade-offs are inevitable.

However, others believe that all three of the dimensions of care can be pursued concurrently (IHI 2023). They propose that achieving access, cost, and quality can be accomplished by improving healthcare efficiencies, changing the way healthcare is paid for, and fostering disruptive innovations (Berwick, Nolan, and Whittington 2008).

The Institute for Healthcare Improvement (IHI), a national healthcare organization that is focused on improving healthcare in the United States, has proposed a modified version of the Iron Triangle called the **Triple Aim**, which highlights the interdependencies of population health, quality, and cost. The Triple Aim was developed to help healthcare organizations focus on these three dimensions simultaneously. The IHI does not regard the three components of the Triple Aim as independent of one another; rather, it recommends that healthcare organizations pursue a balanced approach to reducing cost while increasing quality among at-risk populations and addressing communities’ health concerns (Kokko 2022; Berwick, Nolan, and Whittington 2008). As shown in exhibit 1.3, the Triple Aim differs slightly from the Iron Triangle of Healthcare. The Triple Aim focuses on three factors:

- **Population health.** Population health centers on improving the health of entire populations. Identifying populations to work with, especially at-risk populations, is essential to addressing the Triple Aim.

- **Experience of care.** This component includes quality of care but is broken down into two measures: patient satisfaction and clinical quality of care.

- **Per capita cost.** This factor refines healthcare costs by measuring them on a per capita, or per person, basis. The Triple Aim seeks to lower, or at least maintain, actual costs for individuals while improving care outcomes (Kokko 2022; Galvin 2018).

The US healthcare system has struggled to balance the three dimensions of access, quality, and cost. Healthcare spending has risen steadily over the last century. As shown in exhibit 1.4, by the middle of the twentieth century, healthcare spending accounted for 4.5 percent of US gross domestic product (GDP). By 1980, this figure had reached 8.9 percent, and by 2021, it stood at 18.3 percent (Statista 2022). Today, US healthcare expenditures account for more than 40 percent of the amount spent on healthcare worldwide (Morabito 2022). Much of the increase in healthcare spending is attributable to increases in the price and intensity of healthcare, higher rates of chronic diseases, and higher expenditures on pharmaceuticals (Scutti 2017).
The Affordable Care Act (ACA) of 2010 sought to address the three aims of the Iron Triangle by simultaneously improving healthcare access and quality while reducing the cost of care. However, the expansion of access and quality came at a cost. The implementation of the ACA increased the costs of compliance and thus contributed to a rise in healthcare costs and insurance premiums, as predicted by the Iron Triangle of Healthcare (Godfrey 2012; Manchikanti et al. 2017; Weiner, Marks, and Pauly 2017).

**Exhibit 1.3**
The IHI Triple Aim

<table>
<thead>
<tr>
<th>Population Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience of Care</td>
</tr>
<tr>
<td>Per Capita Cost</td>
</tr>
</tbody>
</table>

**Exhibit 1.4**
US National Healthcare Expenditures as a Percentage of GDP, 1950–2021

Source: Data from Statista (2022).
Dr. Aaron Carroll (2012), a pediatrician and healthcare researcher at Indiana University, summarized the trade-off in this way:

I can make the healthcare system cheaper (improve cost), but that can happen only if I reduce access in some way or reduce quality. I can improve quality, but that will either result in increased costs or reduced access. And of course, I can increase access . . . but that will either cost a lot of money (it does) or result in reduced quality . . . . The lesson of the iron triangle is that there are inherent trade-offs in health policy.

Healthcare remains a top concern for Americans. A 2022 survey showed that healthcare was the top concern for 61 percent of the US population (Pew Research Center 2022). In addition, about three-quarters of Americans give the US healthcare system a D or F rating, believe that it is broken or not working well, and perceive the quality and cost of healthcare as very significant concerns (Burky 2022). (See chapter 14 for an in-depth discussion of efforts to improve healthcare quality in the United States.)

Escalating healthcare costs in the United States have affected both access to and the quality of care. As the Institute of Medicine (2001, 1) stated over two decades ago, “The U.S. healthcare delivery system does not provide consistent, high-quality medical care to all people. Healthcare harms patients too frequently and routinely fails to deliver its potential benefits.” Yet more than 20 years later, healthcare disparities persist, which have direct effects on Americans’ life expectancy. As a National Academy of Medicine report noted, “Despite decades of accumulating evidence and policy recommendations, deep racial and other inequities remain in health care and outcomes in the United States. The existing health care quality infrastructure has not adequately addressed this issue, even though equity has been identified as one of the core domains of quality” (O’Kane et al. 2021).

Employers, politicians, insurance companies, and providers continue to struggle with the Iron Triangle of Healthcare and achieving the Triple Aim of controlling costs without unreasonably affecting quality and access. Nevertheless, increasing costs have forced many Americans to give up their health insurance (see sidebar), leaving them vulnerable to higher healthcare expenses and, potentially, decreased access to and quality of care.

**Aging and Chronic Disease**

Statistics show a direct correlation between age and the amount of healthcare an individual uses. As in most industrialized nations, the population of the United States is aging rapidly. Demographers estimate that by 2040, about 20 percent of the US population will be over the age of 65, an increase from 12 percent in 2000. The sheer number of the elderly is projected to grow from 54 million in 2020 to 80 million in 2040 (The Urban Institute 2022).

Aging puts people at greater risk of developing a chronic disease, which, in turn, increases the use, cost, and intensity of healthcare. In 1900, infectious diseases such as...
pneumonia, tuberculosis, and gastrointestinal infections were the leading causes of death (Statista 2020). The twentieth century saw a major shift as chronic diseases, such as heart disease, stroke, cancer, and diabetes, became the leading causes of death in the United States, with six in ten Americans now suffering from a chronic disease (CDC 2023; Rutledge et al. 2018).

Today, as shown in exhibit 1.5, about 60 percent of adults in the United States have one or more chronic diseases, and 40 percent have two or more. The most prevalent chronic diseases are heart disease, cancer, chronic lung disease, stroke, Alzheimer’s disease, diabetes, and chronic kidney disease. Furthermore, 40 percent of all adults in the United States are obese, and more than one-third of adults who are obese have diabetes, which is

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**DEBATE TIME A Retiree’s Difficult Decision**

In 2018, Dana Farrell, a 54-year-old retired social worker, had to make a difficult decision. Her monthly health insurance premiums had jumped to about $600 per month. Even with coverage, she still had to pay $80 per doctor visit. This expense, coupled with her many other bills and limited savings, made her health insurance unaffordable, so she made the difficult decision to drop it. Dana was nervous about not having coverage. Although she hoped she would not get sick or have an accident, she felt she simply did not have a choice (Bazar 2018).

Why do people choose not to have health insurance? What happens when people drop their health insurance? What options might a person have to retain some form of health insurance?

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**Exhibit 1.5**

Most Prevalent Chronic Diseases Among Americans

Six in ten adults in the US have a chronic disease and four in ten adults have two or more.

*Source: CDC (2023).*
the leading cause of kidney failure, limb amputations, and blindness. Tobacco use, poor nutrition, lack of physical activity, and excessive alcohol use contribute to many of these chronic diseases (CDC 2023).

Among the whole population, a small number of those who are sicker spend much more money on healthcare. In 2019, 1 percent of the population accounted for 21 percent of healthcare costs, and 5 percent accounted for almost half of healthcare expenses (Ortaliza et al. 2021). People aged 65 and older make up 15 percent of the US population, but they account for 34 percent of total healthcare spending—$19,098 per person. On average, healthcare spending for the elderly is five times more than for children and three times more than for those under age 65 (CMS 2023). Healthcare use—and hence cost—continues to rise with age. As exhibit 1.6 shows, the amounts spent on healthcare in 2021 rose from just over $1,000 to over $7,000 from the younger to the older generations.

**Diversity and Healthcare**

As the United States becomes a more diverse country, its healthcare needs are changing as well. Although non-Hispanic/Latino whites still make up a majority of the US population, accounting for 59.3 percent (197 million people), Hispanics/Latinos have become the second-largest population, accounting for 18.9 percent (63 million), and Blacks and African Americans are the third-largest population, with 13.6 percent (45 million) (US Census Bureau 2023).

The composition of the US population is projected to continue these trends over the next several decades, as shown in exhibit 1.7. Demographers forecast that by 2060, the United States will not have a single racial or ethnic majority, as the white population is expected to shrink to 44 percent of the total population, while Hispanics/Latinos are projected to make up over 42 percent (Vespa, Medina, and Armstrong 2020).

<table>
<thead>
<tr>
<th>Generation (Born)</th>
<th>Age</th>
<th>Average Spent on Healthcare, 2021</th>
<th>Percentage of Total Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent (&lt;1945)</td>
<td>&gt;75 years old</td>
<td>$7,053</td>
<td>15.8%</td>
</tr>
<tr>
<td>Boomer (1946 to 1964)</td>
<td>60 to 75 years old</td>
<td>$6,594</td>
<td>10.6%</td>
</tr>
<tr>
<td>Generation X (1965 to 1980)</td>
<td>40 to 60 years old</td>
<td>$5,550</td>
<td>6.7%</td>
</tr>
<tr>
<td>Millennials (1981 to 1996)</td>
<td>25 to 40 years old</td>
<td>$4,026</td>
<td>5.8%</td>
</tr>
<tr>
<td>Generation Z (1997 or later)</td>
<td>25 or younger</td>
<td>$1,354</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

*Source: World Economic Forum (2022).*
Historically, people of African American and Hispanic/Latino backgrounds in the United States have experienced greater difficulty accessing healthcare services and health insurance than whites, and they have tended to receive lower-quality care and experience worse healthcare outcomes (Hayes et al. 2017). These outcomes are attributable to two factors: These groups tend to have lower incomes compared with whites, and they are more likely to work for businesses that do not provide health insurance. Both of these factors limit access to healthcare, which leads to untreated health conditions and exacerbates health problems.

As shown in exhibit 1.8, many more Blacks and Hispanics lack insurance and almost twice the number of Blacks have Medicaid as their primary health insurance (Artiga, Hill, and Damico 2022). In addition, those without health insurance often use emergency rooms as their primary source of care (Artiga and Orgera 2019).

### Exhibit 1.7
Population by Race, 2016

<table>
<thead>
<tr>
<th>Race</th>
<th>2016</th>
<th>2030</th>
<th>2060</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (millions)</td>
<td>Percentage</td>
<td>Number (millions)</td>
</tr>
<tr>
<td>Total Population</td>
<td>323.1</td>
<td>100</td>
<td>355.1</td>
</tr>
<tr>
<td>White</td>
<td>198.0</td>
<td>61.3</td>
<td>198.0</td>
</tr>
<tr>
<td>Black</td>
<td>43.0</td>
<td>13.3</td>
<td>49.0</td>
</tr>
<tr>
<td>Hispanic</td>
<td>57.5</td>
<td>17.8</td>
<td>74.8</td>
</tr>
</tbody>
</table>

Source: Vespa, Medina, and Armstrong (2020).

### Exhibit 1.8
Health Coverage of Nonelderly by Race, 2021

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage Uninsured</th>
<th>Percentage with Medicaid or Other Public Insurance</th>
<th>Percentage with Employer or Other Private Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>7</td>
<td>20</td>
<td>73</td>
</tr>
<tr>
<td>Black</td>
<td>11</td>
<td>38</td>
<td>51</td>
</tr>
<tr>
<td>Hispanic</td>
<td>19</td>
<td>33</td>
<td>48</td>
</tr>
<tr>
<td>Asian</td>
<td>6</td>
<td>19</td>
<td>75</td>
</tr>
</tbody>
</table>

Source: Artiga, Hill, and Damico (2022).
Even though most African American and Hispanic/Latino families have at least one full-time worker, they are twice as likely as whites to be living under the federal poverty level. For this reason, as shown in exhibit 1.8, many more African American and Hispanic/Latino families qualify for and receive health coverage from Medicaid. In fact, among these groups, Medicaid has historically covered more than half of all children (Child Trends 2019).

Although having Medicaid coverage has been shown to improve people’s health, many states have refused to expand Medicaid, available as a result of the passage of the Affordable Care Act enacted in 2010. By 2022, twelve states had continued to refuse to expand their Medicaid eligibility, which would cover an additional 3.7 million people in these 12 states (Buettgens and Ramchandani 2022).

In addition, people with Medicaid coverage have a harder time finding a doctor who will accept them as a patient. Across the United States, about 30 percent of all physicians and 65 percent of psychiatrists refuse to accept new Medicaid patients (King 2019).

People of color are more likely to have co-occurring behavioral health illnesses and chronic medical conditions (see chapter 6 for a more in-depth discussion of mental health). The combination of these conditions increases the severity of disease and accentuates the effects of reduced access to care and lower income. The percentage of low-income individuals who have both a chronic disease and serious psychological stress is more than four times the rate of higher-income individuals (29 percent versus 7 percent), and this population spends over three times more on inpatient and emergency care each year. In addition, low-income individuals with chronic conditions are about 2.5 times more likely not to obtain medical care than those with higher incomes (22 percent versus 9 percent) (Cunningham 2018).

**Healthcare Cost Variations**

Research has shown significant differences in healthcare spending by geographic location with little impact on health. Consistently, where you live and what you pay for healthcare has been found to have little or no correlation with mortality. Yet the price differences are very high. For instance, residents of the Bronx, New York, spend almost twice as much on healthcare than those living in Honolulu, Hawaii. The amount spent also varies greatly depending on who pays for the healthcare. For example, the annual cost of a Medicaid recipient in Rochester, New York, is $8,239, while those living in the same city with private health insurance spend only $3,177 annually (Ma 2022). Price variations exist in most services. As shown in exhibit 1.9, the average price of a magnetic resonance imaging (MRI) scan is almost two and a half times more in Oakland, California, than in Orlando, Florida.

As stated, these annual cost differences depend on who pays the bills. A greater use of services, such as skilled nursing and home health care for Medicare patients, and just higher prices for healthcare services impact annual costs. In some US cities, Medicare costs are higher because of the greater intensity and volume of services used (see sidebar). Higher costs for commercial payers appear to be driven primarily by higher prices charged
**EXHIBIT 1.9**

Average Price of an MRI Across Regions

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oakland, CA</td>
<td>$853</td>
</tr>
<tr>
<td>Fort Worth, TX</td>
<td>$851</td>
</tr>
<tr>
<td>Denver, CO</td>
<td>$641</td>
</tr>
<tr>
<td>Atlanta, GA</td>
<td>$557</td>
</tr>
<tr>
<td>Washington, DC</td>
<td>$508</td>
</tr>
<tr>
<td>Riverside, CA</td>
<td>$422</td>
</tr>
<tr>
<td>Orlando, FL</td>
<td>$349</td>
</tr>
</tbody>
</table>

*Source: Kurani et al. (2021).*

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**COSTS AND MONOPOLY POWER**

Studies show that higher healthcare costs are largely attributable to the small number of healthcare providers and other “supply-side” factors that permit providers to establish higher prices and operate less efficient clinical practices (Pearl 2023; Callison, Kaestner, and Ward 2018). The federal government now recognizes that “mergers can be harmful to patients” (Rosalsky 2021). When less competition exists, higher pricing results. From 1998 to 2017, there were almost 1,600 hospital mergers, with many causing price increases of more than 20 percent (Kannarkat and Mostashari 2021).

Where little competition occurs, private and commercial payers may pay very different amounts for similar services. Sadly, today there is little competition for hospital and outpatient specialty services in many metropolitan areas (Miller and Ehrenfeld 2022).

When there is little competition, healthcare organizations can negotiate more aggressively. For healthcare providers, this means higher pay. For insurance companies, it means lower healthcare provider charges. In 2022, MaineHealth, a health system in an area with little competition, threatened to withdraw as a provider for its major insurer, Elevance Health (formerly Anthem Blue Cross). This withdrawal would have left thousands of patients facing out-of-network charges, even though the system had been highly profitable. Eventually, the contract was settled with confidential terms (Miller and Ehrenfeld 2022).
in different locations. High-cost areas are less likely to provide preventive services, such as vaccinations, but they also have much longer physician office waits and more emergency room visits. Higher prices are one of the most important contributors to the increased annual cost of care (Fisher and Skinner 2013; Institute of Medicine 2013; Health Affairs 2022).

**Rural Versus Urban Healthcare**

More than 60 million Americans (about 20 percent of the total population) live in rural areas. Rural residents are generally older and have worse health conditions than urban populations. Those who live in rural areas also struggle with much longer distances to hospitals and treatment, and about 50 percent of rural communities lack obstetrical services (GAO Watchblog 2023). The challenges for rural health are greater in the United States than in other high-income countries. These challenges include higher rates of chronic disease and suicide than in urban communities (Ganja 2023).

**Life Expectancy, Lifestyle, and Chronic Disease**

Perhaps surprisingly, people in the United States have a relatively low life expectancy of 79.11 years. In fact, in 2023, 40 countries had a higher life expectancy than that in the United States (Macrotrends 2023). The COVID-19 pandemic significantly affected life expectancy in the United States, as it fell by 2.7 years from 2019 to 2021.

As illustrated in exhibit 1.10, life expectancy in the United States is significantly lower today than in other developed countries, even though in 1960 the United States had the highest life expectancy in the world. Interestingly, though the United States spends much more money on healthcare than other countries do, there seems to be little effect on the average number of years a person in the United States lives.

Americans’ lower life expectancy compared with other countries is attributable to overall poorer health and to factors such as worse birth outcomes and higher numbers of injuries at birth, as well as increasing rates of obesity, diabetes, heart disease, drug overdose, and homicide.

Americans are more likely than people in other nations to not be vaccinated for COVID-19, eat too many calories, abuse drugs, and misuse firearms. On average, Americans eat more than 3,600 calories each day, far beyond the 2,000 calories recommended, and do not exercise as much as recommended (Renee 2018; Lewis 2022).

By 2020, the Centers for Disease Control and Prevention (CDC) reported that 42 percent of adults in the United States were obese and 9 percent were severely obese (Hill et al. 2020). In 2021 alone, almost 107,000 Americans died from drug overdoses (CDC 2022). And, about 45,000 people die each year from gun-related injuries, including over 24,000 suicides, which represent 54 percent of gun deaths (Gramlich 2022).
Americans’ unhealthy lifestyles encourage the onset and severity of disease, and this, combined with the lack of access to healthcare services, causes many to die unnecessarily early. Jacob Bor, ScD, an epidemiologist at Boston University School of Public Health, estimates that in 2021 alone, about 1.1 million Americans died before they should have (Yong 2022).

Researchers believe that about half of the major causes of death in the United States, such as heart disease, stroke, cancer, lower respiratory illness, and unintentional injuries, could be prevented by modifying bad habits. Reducing or eliminating smoking and drinking, increasing exercise, and eating a healthier diet, coupled with a decrease in obesity, could dramatically improve Americans’ life expectancy, experts say (Cook et al. 2022).

The decline in life expectancy in the United States is also directly related to the lower amount of money spent on social services. More money spent on healthcare and social services, such as housing assistance, food assistance, and child support services, positively impacts a country’s life expectancy. The United States spends only about 56 cents on social services for each dollar it spends on healthcare services. On the other hand, countries belonging to the Organisation for Economic Co-operation and Development (OECD), which spend far less on healthcare per citizen, spend $1.70 on average on social services for each healthcare dollar. Based on this evidence, some believe that the United States could lower its healthcare costs by investing more in social services to prevent disease and related expenditures (Butler 2016). The United States spends only 60 to 64 percent of what France, Finland, and Belgium expend on social services, yet US healthcare costs are two to three times the costs in those countries (Buchholz 2021; OECD 2023).

Source: Rakshit et al. (2022).

### Exhibit 1.10
Life Expectancy and Healthcare Spending by Country, 2021

<table>
<thead>
<tr>
<th>Country</th>
<th>Life Expectancy</th>
<th>Per Capita Health Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>76.1</td>
<td>$12,318</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>80.8</td>
<td>$5,387</td>
</tr>
<tr>
<td>Germany</td>
<td>80.9</td>
<td>$7,383</td>
</tr>
<tr>
<td>Austria</td>
<td>81.3</td>
<td>$6,693</td>
</tr>
<tr>
<td>Netherlands</td>
<td>81.5</td>
<td>$6,190</td>
</tr>
<tr>
<td>Belgium</td>
<td>81.9</td>
<td>$5,274</td>
</tr>
<tr>
<td>France</td>
<td>82.5</td>
<td>$5,468</td>
</tr>
<tr>
<td>Sweden</td>
<td>83.2</td>
<td>$6,262</td>
</tr>
<tr>
<td>Australia</td>
<td>83.4</td>
<td>$5,627</td>
</tr>
<tr>
<td>Switzerland</td>
<td>84.0</td>
<td>$7,179</td>
</tr>
<tr>
<td>Japan</td>
<td>84.5</td>
<td>$4,666</td>
</tr>
</tbody>
</table>

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NEW DISEASES

In addition to meeting the current challenges of healthcare in the United States and around the world, countries and healthcare systems must also anticipate new diseases whose source and timing are uncertain. For example, the COVID-19 pandemic emerged suddenly, and by 2023 over 650 million people worldwide had become infected with the disease, with over 100 million of these cases in the United States. COVID-19 was responsible for about 6.7 million deaths worldwide and 1.1 million in the United States (Statista 2023a).

In addition, antibiotic-resistant infections have become a serious concern. Because bacteria are constantly mutating, existing antibiotics may eventually become ineffective; this has already occurred with infectious diseases such as gonorrhea and tuberculosis. In 2019, more than 2.8 million Americans became infected with antimicrobial-resistant germs, and more than 35,000 die from these infections each year (CDC 2019).

In the twenty-first century, global outbreaks of new diseases such as the bird flu, Zika, Ebola, and COVID-19 are tied to the exchange of bacteria or viruses from animals to people. For example, the bird flu (avian influenza, also known as H5N1) first spread from birds to humans in 2013 and has continued to resurface since then. The disease has been devastating: it has killed over 300 million chickens, ducks, and geese and hundreds of people (Kassam 2023).

Public health organizations and the United Nations have warned that other new diseases are likely to emerge and that a pandemic sweeping across the globe could kill millions of people. To better prepare for future outbreaks, the World Health Organization (WHO) has launched an effort to identify pathogens that could cause epidemics and pandemics (WHO 2022).

The WHO also has identified a list of diseases that require accelerated research (exhibit 1.11). The last disease on that list, labeled “Disease X,” represents the next big epidemic, which will come from a completely unexpected source, a pathogen, or vector that is currently unknown. To better prepare for the next pandemic, perhaps Disease X, the World Economic Forum recommends the following actions:

1. Increase genomic pathogen surveillance to rapidly detect pandemic-causing pathogens.

2. Create modular vaccine factories to facilitate and speed the production of critical vaccines.

3. Better protect wildlife habitats and ecosystems to minimize the potential for animal-to-human disease transfer, as it has caused about three-fourths of all pandemics (Torkington 2023).
Healthcare in the United States

The complicated system of healthcare in the United States has its roots in the early days of the nation, when healthcare was fragmented among a variety of unlicensed practitioners who may or may not have received formal medical training. During the late nineteenth and early twentieth centuries, healthcare professions, licensure, and hospitals gained prominence as scientific discoveries improved health outcomes and as organizations such as the American Medical Association (AMA) helped standardize medical education based on the recommendations of the Flexner Report. The creation of railroads, canals, telephones, and automobiles facilitated greater access to care by lowering the cost and time to obtain healthcare services.

These developments allowed more people to access healthcare and bolstered the central role of hospitals. By the early 1900s, most physicians were receiving their education in hospitals. Advances in medical technology for diagnosis and treatment required expensive equipment that was concentrated in hospitals. With the growth of hospitals, the roles of healthcare professionals became more clearly defined. Over time, funding for hospitals shifted from charitable organizations to patients, insurance companies, and employers.

The pharmaceutical industry also emerged during this period. By the middle of the twentieth century, laws had been passed to require prescriptions from physicians for designated drugs. Patent drugs with secret ingredients were eliminated, and the safety of drugs was regulated.

As the US healthcare system developed, the struggle to balance access, cost, and quality became apparent. These three dimensions, known as the “Iron Triangle” of Healthcare, are interrelated—that is, a change in one dimension necessarily affects the others.
The rising cost of healthcare, especially since the middle of the twentieth century, has put pressure on access and quality of care.

The struggle to balance access, cost, and quality becomes more difficult as Americans grow older and sicker. The United States, like most industrialized countries, has an aging population with ever more chronic illnesses. Obesity, which is linked to diabetes and other chronic diseases, affects almost one-third of US adults. As a result, the elderly and those with chronic diseases spend much more on healthcare services.

People of color have historically had more difficulty accessing healthcare services and health insurance. As a result, they have traditionally received lower-quality care and experienced worse health outcomes. African Americans and Hispanics/Latinos are more frequently covered by government healthcare programs, with Medicaid covering more than half of African American and Hispanic/Latino children. These groups also tend to have a higher incidence of behavioral health illness and chronic disease.

Research has shown that healthcare spending varies by geographic location. Higher costs for Medicare patients are tied to higher prices.

Life expectancy in the United States is lower than in other industrialized nations. The lower life expectancy is the result of worse birth outcomes and higher injuries at birth; conditions such as obesity, diabetes, and heart disease, as well as drug overdose and homicide; and a weaker social support system. Countries with stronger social support services appear to spend less money on healthcare services. In addition, unhealthy behaviors cause the onset and severity of chronic diseases. Almost 40 percent of disease, it is estimated, could be prevented by modifying bad habits.

In addition to these challenges, the United States—with the rest of the world—faces the threat of new diseases that could have serious effects on the healthcare system. Physicians are already seeing antibiotic-resistant infections. Other global outbreaks are expected, with new diseases originating in almost any location. The World Health Organization and other public health agencies are preparing for new, unknown diseases in the future.

**Questions**

1. How did improvements in transportation facilitate the expansion of healthcare in the United States?
2. Before the 1700s, how was the role of the physician distinguished from that of a surgeon or an apothecary?
3. How did the American Medical Association, along with local medical societies, help organize and standardize medical training?
4. What was the Flexner Report, and what changes resulted from it?
5. What was a “patent” medicine?
6. What are the three dimensions of the “Iron Triangle” of Healthcare? How are they related?
7. What are the three components of the IHI Triple Aim? How does the Triple Aim differ from the Iron Triangle of Healthcare?
8. What are two reasons why minorities have greater difficulty obtaining healthcare services and health insurance in the United States?
9. Why are costs for Medicare patients and for private and commercial payers higher in some parts of the country than in others?
10. What are some of the reasons for the decline in US life expectancy?
11. What can be done to prepare for new diseases in the future?

Assignments

1. Why does the United States spend so much more on healthcare? Read the following article: “Why Does the U.S. Spend So Much More on Healthcare? It’s the Prices,” Modern Healthcare, April 7, 2018, available at www.modernhealthcare.com/article/20180407/NEWS/180409939. Write a one-page essay that answers the following questions:
   a. What are some of the reasons for the healthcare spending gap between the United States and other countries?
   b. Why are healthcare administrative costs so much higher in the United States than in other countries?
   c. What actions does the author suggest to control US healthcare costs? If these actions are taken, what impact do you think they would have on healthcare quality and access?
2. How are companies such as Amazon working to change the US healthcare system? Read the following article: “Amazon Care Shutdown Is a Strategic Play, Not a Failure, Some Healthcare Experts Say,” Fierce Healthcare, August 29, 2022, available at https://www.fiercehealthcare.com/health-tech/amazons-move-eighty-six-amazon-care-strategic-play-not-failure-some-experts-say. Write a one-page essay explaining why Amazon shut down Amazon Care and what its strategy going forward is.

Cases

Nursing and Physician Power

Jim is a registered nurse who recently completed his degree. He took his first nursing job at University Specialty Hospital, where he was excited to contribute to improving the health of his patients.
On his first day after orientation, Jim was assigned to a medical floor with eight patients in his care. One of his patients, Flora, was quite ill, and Jim thought that he should contact her attending physician to change her medication. One of the other nurses cautioned him about calling her doctor, Dr. Tall, as he had a reputation of being rather short with nurses and quite arrogant. Jim felt that it was important for the medication administration to take place soon and, disregarding his colleague's advice, called Dr. Tall. Jim introduced himself and started telling the doctor about his suggested change in the medication. Jim was unable to finish, as Dr. Tall cut him off in the middle of a sentence and started yelling: "Understand—YOU DO NOT PRACTICE MEDICINE! Never question my orders!" The doctor hung up.

Jim was embarrassed and disappointed. He questioned why the doctor had such power over him and why he would not listen.

**Discussion Questions**

1. Based on what you learned in chapter 1, what historical developments shaped the dominant role that doctors play in healthcare?
2. What could Jim do the next time he encounters a problem with a patient?
3. What could Jim do to change the dynamic with Dr. Tall?

**DIVERSITY IN HEALTHCARE**

By 2020, African Americans made up 14.2 percent of the US population but only 5.3 percent of practicing physicians. In addition, more than half of US children belong to a minority racial or ethnic group, and by 2060, this share will increase to 64 percent. At the same time, health professionals are transitioning to a more patient-centered model of care, as patients demand more personalized services and want to be comfortable with their healthcare providers and care teams. Although studies have shown that greater representation of minorities in healthcare professions improves access to care for those minority communities, only about 5 percent of all doctors, dentists, and nurses now come from minority racial and ethnic groups (NCSL 2014; *Journal of Blacks in Higher Education* 2022).

**Discussion Questions**

1. What are some reasons why minorities lack equal representation in healthcare professions?
2. How might having more minorities in healthcare professions affect access to healthcare for those populations?
3. What actions would you take to improve opportunities for minorities to enter healthcare professions?
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Chapter 1: The History of US Healthcare and the Demographics of Disease


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