

# INTRODUCTION AND OVERVIEW OF THE UNITED STATES HEALTHCARE SYSTEM

America's health care system is neither healthy, caring, nor a system.  
—Walter Cronkite

## Learning Objectives

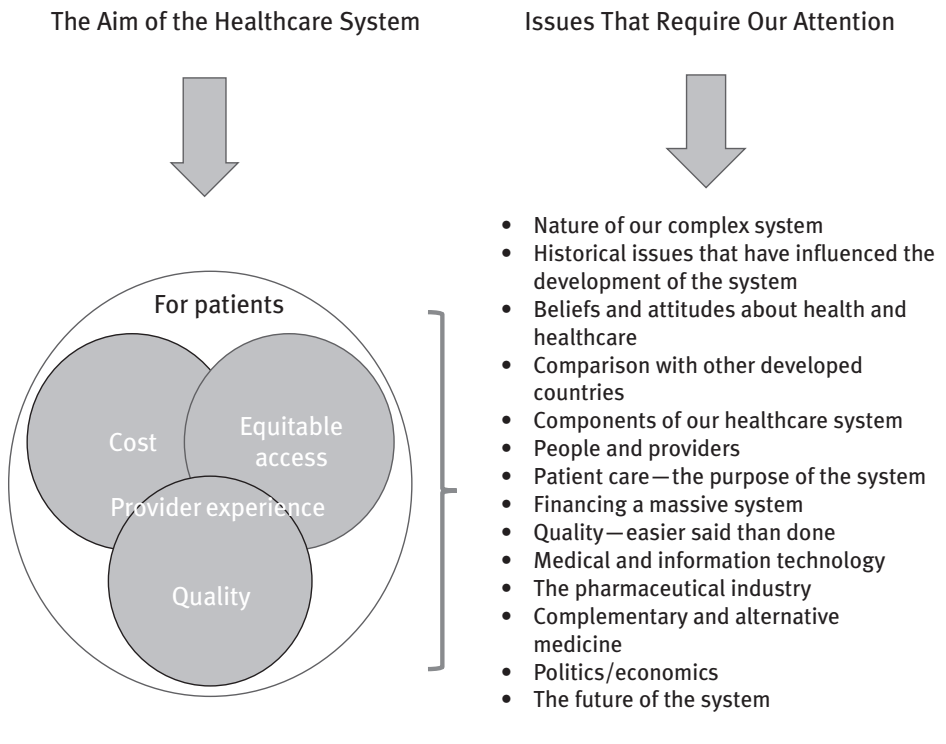
- Understand the general characteristics that differentiate the US healthcare system from the health systems of other countries.
- Evaluate the “conundrum” of cost, quality, and access.
- Understand the forces acting on the US healthcare system.
- Identify areas where the United States leads and where it lags other countries in healthcare.
- Recognize the major sources of concern about the US healthcare system.
- Understand the payment system used for healthcare in the United States.

Exhibit 1.1 presents the basis for the structure of this book. The aim of our healthcare system is to provide high-quality healthcare that leads to better health for our population. This effort requires optimizing the relationship between cost, equitable access, and quality of care in the context of what is best for patients. We also must consider the experience of the providers of care, who face tremendous pressure and high levels of stress (Bodenheimer and Sinsky 2014). This book will explore several specific areas that require the focus of our healthcare system, shown on the right-hand side of the exhibit.

We will begin our journey by considering some general aspects of our system, framed in the context of the Triple Aim. Developed by the Institute for Healthcare Improvement (IHI), the Triple Aim seeks to reduce per capita costs, improve the experience of care, and improve the health of populations (Berwick, Nolan, and Whittington 2008; IHI 2019). In pursuit of these aims, the US healthcare system must seek to balance the following:

1. *A per capita cost that is under control.* Overall costs, in absolute terms, will rise as our population grows. However, costs on a per person basis should rise more modestly or even decrease.

**EXHIBIT 1.1**  
Areas of Focus  
for This Book



2. *Improved patient experience.* For healthcare organizations, a positive patient experience—reflecting both quality and satisfaction—provides a competitive advantage. It can also improve patients' compliance with medical advice—after all, if patients are satisfied with their provider, they are more likely to do what the provider says (Dias-Barbosa et al. 2012). Better healthcare outcomes require a focus on population health, as opposed to simply individual health.

3. *Access to healthcare that is fair and equitable.*

Healthcare is an excellent barometer of our society at large. Consider that there is virtually no aspect of our society's social problems, or the human enterprise in general, that does not wind up in the healthcare system (Andersen and Newman 1973). Most of us are born in a hospital, and many of us die there. The healthcare system is a place of great joy and sorrow, hope and despair; one only need visit an office waiting room or the local emergency room to see this reality. The importance of the healthcare system is hard to overstate, and recognizing the pivotal role that the system and its many components play is essential as we usher in a new era.

Many agree that a new paradigm of care delivery is needed (Cuckler et al. 2018) and that this new paradigm will require a mind-set in which the central

goal of our healthcare system shifts from *healthcare* to *well-being*. This book will examine the current US system while also offering insights about the creation of this new paradigm of sustainable care. Meaningful and lasting change will require the full engagement of all stakeholders in the healthcare system.

Our task in this book is to help readers understand the integration between the aims of our healthcare system and the issues that require our focus to achieve the performance and outcomes we desire. As shown in exhibit 1.1, our healthcare system is struggling to balance cost, equitable access, and quality while also acting in the best interest of patients and improving provider experience. Attention to provider experience has increased in recent years because of the high levels of burnout and rising dissatisfaction seen in the healthcare professions. According to several surveys and reports, many physicians today would not encourage their children to follow them into the medical profession (Higgins 2017; Keeton et al. 2007; Shanafelt et al. 2012). Such findings do not bode well for recruiting the best and brightest to the field.

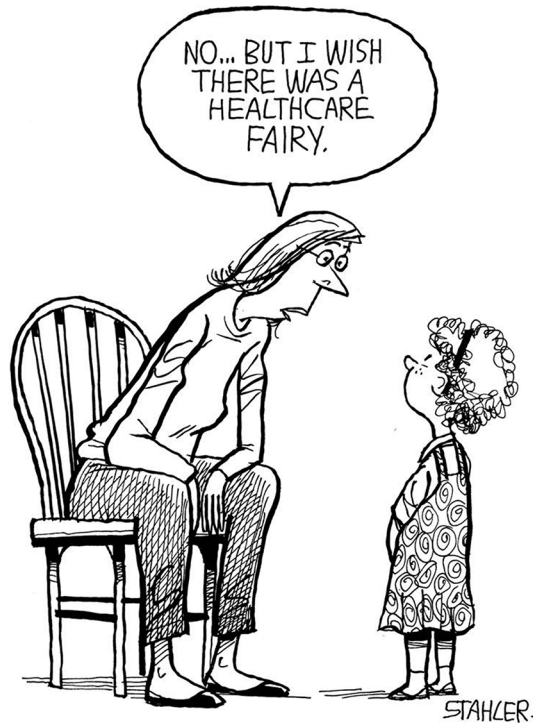
This book is divided into 14 chapters covering major areas of concern in the US healthcare system, and they seek to both foster understanding of the existing system and provide information to help us to move forward. Readers are encouraged, above all else, to think critically about the issues affecting our healthcare system; this critical thinking is, in many ways, more important than memorizing facts. Facts and figures within the healthcare system are changing constantly, but a thorough understanding of the system's drivers and their interrelationships will remain valuable to healthcare leaders well into our future. Having a diverse academic basis is an essential starting point.

As you read, think about the integration of the various issues and the ways each affects the others. Rarely can changes be made to one aspect of the healthcare system without affecting other parts of the system, often with unforeseen or even unwelcome consequences.

## Understanding the Challenge Before Us

The cartoon in exhibit 1.2 reflects the feelings of many Americans as they try to make sense of the various aspects of the US healthcare system. The system is massive and complex, and keeping up with its ongoing changes requires continuous vigilance. The healthcare system is also highly politicized, especially with regard to financing and access, making future changes difficult to predict (Marmor and Wendt 2012).

The study of healthcare and the healthcare delivery system covers an enormous amount of information and opinion, touching virtually every aspect of human life. A thorough understanding of healthcare requires not only consideration of patient care and service but also cultural

**EXHIBIT 1.2**  
Healthcare Fairy

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competency. To serve our diverse society, cultural and language differences must be respectfully acknowledged and adequately accounted for throughout the healthcare system. In addition, numerous complex social problems—such as unhealthy eating, addiction, gun violence, domestic violence, inadequate access to mental healthcare, and inadequate access to family planning and high-quality childcare—need to be considered, as individuals and society commonly look to the healthcare system for solutions.

A quote commonly attributed to W. Somerset Maugham states that “there are three rules for writing a novel” but that “no one knows what they are” (Daigh 1979). The same applies to understanding our vast and complex healthcare system. We lack clear rules, and the landscape is changing at a rapid pace. Addressing every viewpoint and issue that will be of interest to students of the US healthcare system is impossible (Kisekka and Giboney 2018); nonetheless, this book tries to cover a wide scope. If we are to be effective as healthcare leaders, we need to have perspectives on the various aspects of the system, and we need to support those perspectives with research and facts.

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Readers must develop a rigorous process for the analysis of issues and facts, and they should develop their own points of view based on that analysis. They should find and use diverse sources of information to stay informed of new developments, to expand their knowledge base, and to inform their thinking on complex and ever-changing issues. Critical thinking is probably the most important competency a leader in healthcare can possess. This book challenges the reader to think, ask questions, and seek facts. In many cases, it represents the starting point rather than the answer to the questions raised.

Healthcare leadership is a noble profession—one that requires a high level of commitment and dedication to balancing the needs of patients and the allocation of resources in a moral and just way. We are called upon to do what machines cannot do: to act ethically, competently, and with integrity and courage. As W. Edwards Deming (1982, 18) once said, “The transformation can only be accomplished by man, not by hardware (computers, gadgets, automation, new machinery). A company cannot buy its way into quality.” We should keep these words in mind as we pursue a transformation in healthcare that, by many accounts, is certainly needed (Anderson 2006; Porter and Lee 2013).

## General Characteristics That Distinguish the US Healthcare System

A comparison of the US healthcare system with the healthcare systems of other nations of the Organisation for Economic Co-operation and Development (OECD) highlights a number of ways in which the US system is unique (OECD 2013). By every measure, healthcare spending in the United States exceeds that of any other OECD country. Most of the other countries in the comparison provide universal coverage through a range of methods, using both private and public mechanisms. A more thorough comparison will be provided in chapter 4, but several distinguishing characteristics of the US system are listed in exhibit 1.3 and addressed in the sections that follow. Three areas that merit particular attention are division and fragmentation, technology, and the system’s well-known problems and politicization.

### ***Division and Fragmentation***

In the opening of *A Tale of Two Cities*, Charles Dickens famously writes, “It was the best of times, it was the worst of times. . . .” We see this binary reflected in our healthcare system today. The United States offers some of the best treatment for serious disease and injury of any country in the world; however, for less serious conditions, preventative care, and more routine services, the United States is less effective than many other countries

**EXHIBIT 1.3**  
 Unique  
 Characteristics  
 of the US  
 Healthcare  
 System

- Highest cost of all Organisation for Economic Co-operation and Development countries
- Technological leader
- No system to provide universal coverage
- Highly fragmented delivery of care
- Many payer arrangements
- Major industries around performance, electronic systems, delivery system restructuring, and quality
- Lack of standardization, leading to inefficiencies and variation
- High administrative cost
- Leader in medical education and research
- Complex and sophisticated organizational structure and delivery models

(Heineman and Froemke 2012). An investigation into the reasons for these shortcomings will, in many instances, point clearly to the fragmented nature of US healthcare.

Indeed, the US healthcare “system” is not a single system but rather a hodgepodge of approaches, encompassing characteristics found in a number of other systems across the world. If you receive care through the US Department of Veterans Affairs, then you are in a system similar to the National Health System of the United Kingdom, which is owned and operated by the government and funded by taxes. If you have Medicare, your healthcare is a lot like Canada’s, with private care delivery and a single-payer system funded by taxes and premiums. If you have Medicaid, then, well, who knows what you’ve got? The 50 states have 50 programs, with a combination of rules at the state and federal levels, funded by state and federal taxes. If you have employer-based coverage—something unique to the United States—then your care is funded privately. If you do not have any insurance, you have what is often called “self-pay–no-pay,” which is funded privately (self-pay) or through charitable activities (no-pay). If you are extremely poor and do not qualify for Medicaid, then your only real option might be care in the emergency room, funded by everyone in society through cost shifting and subsidies (Lee 2004). Obviously, these descriptions are grossly oversimplified, but one can easily see how such a mix of options contributes to fragmentation, poor outcomes, injustice, and the incredible administrative costs of our system (Jiwani et al. 2014; Woolhandler, Campbell, and Himmelstein 2003).

One of the most significant features of the US healthcare system is its lack of a central process for governing it. The system is governed by a rather disorganized series of laws, policies, and rules at the local, state, and federal levels (Rice et al. 2013; Commonwealth Fund 2017)—an arrangement that produces complexity and confusion and certainly adds to the burden of

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administration, especially if an organization crosses state lines. In addition, many people have difficulty accessing US healthcare because of the cost, leading them to use the emergency room as a provider of last resort—which is both expensive and suboptimal (Carret, Fassa, and Kawachi 2007).

In the United States, access to healthcare is based on a system of third-party payment, in which insurers serve as intermediaries between finance and delivery. Such arrangements are seldom found in other countries, where single-payer systems are the norm (Rice et al. 2013). In the United States, a variety of payers offer a variety of plans, which makes the system cumbersome. One of the hopes of the Affordable Care Act, passed in 2010, was to make healthcare plans less diverse. Provisions of the law sought to ensure that plans covered similar things, so that people could better understand the coverage and make informed comparisons between different plans (Gaffney and McCormick 2017).

### **Technology**

Scientific and technological advancement is another factor that sets the United States apart from other countries. Technology has made incredible progress across a wide variety of areas, and the United States has been a leader in the adoption of new equipment, procedures, pharmaceuticals, and other capabilities.

Numerous advances have helped make care more efficient and brought about significant improvements in people's health and well-being. Years ago, people would have surgery for peptic stomach ulcers; today, they buy over-the-counter medicine to reduce stomach acid to prevent the ulcers from occurring. Hip replacement was a major advance of the 1960s (American Association of Orthopedic Surgeons 2015), but the procedure remained somewhat rare until the late 1980s. Then, as technologies improved, the number of cases grew from an estimated 9,000 in 1984 to 138,700 in 2000 and to 310,800 in 2010 (Wolford, Palso, and Bercovitz 2015).

Such technological progress is life changing, and it is rightfully a source of pride. It does come with a cost, however. To paraphrase a famous line from the 1989 film *Field of Dreams*, “If we build it, they will use it.” When new technologies become available, the US healthcare system is quick to adapt and begin using them, but it is often slow to develop policy to support those technologies. Additionally, we have often tended avoid tough societal questions about the direction of our healthcare system and the ways technology will fit into it (Starr 2011).

### **Well-Known Problems and Politicization**

The US healthcare system is a constant source of debate, discussion, and concern. If you Google “US healthcare system,” you will see more than 4 billion results (as of early 2020)—a powerful indication of how extensive

and important the subject is. Discussion about the challenges of the US healthcare system is present even in our entertainment. In one episode of the animated series *The Simpsons*, the family travels to Denmark because Grandpa needs a medical procedure and Homer has learned that the healthcare system there is “free.” The characters also discuss the issues of moral hazard and taxation (Polcino 2018).

In the United States, the fact that we spend nearly 1 of every 5 dollars of our economy on healthcare (amounting to 3.3 trillion spent in 2016) is practically common knowledge (Papanicolas, Woskie, and Jha 2018). This level of spending is significantly higher than that of any other country in the world, and yet most of us in the United States, whether we work in healthcare or not, have serious concerns about the value we get in return. If you bring up the topic at a social gathering, you will hear a variety of stories, some good and some bad, about people’s experiences with the system.

To add to the complexity, healthcare has become a “hot button” political issue in the United States. In fact, one of several reasons the United States does not have a universal coverage system like those found in other countries is the prevalence of political messaging and corporate influence in the US government. Many US politicians and their followers do not consider healthcare a right or an entitlement, so the government’s role in healthcare has been a constant source of political debate (Backman et al. 2008; Wilson 2018). As we will discuss later in the chapter, these political squabbles make reform extremely difficult.

## Spread of Global Disease

Although the US system provides services for the people of the United States, it also must consider the global aspects of healthcare. Today, a person can travel almost anywhere in the world within 24 hours. The flow of goods and people from all over the world, the introduction of invasive species into our environment, and the effects of climate change are all leading to new challenges for healthcare delivery professionals, institutions, and policymakers. Many diseases seen in the United States today were, until a few years ago, found only in other parts of the world (Singh et al. 2017). The first US case of Ebola, for instance, occurred in 2015 (Lindblad, El Fiky, and Zajdowicz 2015). In light of these rapid changes, healthcare stakeholders must not only be able to recognize new ailments and issues but also know how to effectively treat and manage them (Fauci and Morens 2016; Paules et al. 2018).

In 2015, with subsequent reviews, the World Health Organization (WHO) identified the following infectious diseases that are likely to cause epidemics and that require serious research and development for vaccines and



treatments (Luxton 2016; Mackey et al. 2014; WHO 2015; Medscape 2018; *Scientific American* 2018):

- Crimean-Congo hemorrhagic fever
- Ebola
- Filovirus diseases (e.g., Marburg)
- Highly pathogenic emerging coronaviruses relevant to humans (e.g., Middle East respiratory system coronavirus [MERS-CoV], severe acute respiratory syndrome [SARS])
- Lassa fever
- Nipah
- Rift Valley fever
- Chikungunya
- Severe fever with thrombocytopenia syndrome
- Zika

## Information Technology

The internet has been—and will continue to be—a significant force for change. Although healthcare historically has been regarded as a local issue, advances in information technology have placed it in an increasingly global context (Hopkins et al. 2010). With a high-speed internet connection, services can now be provided by or to any person, virtually anywhere in the world (Weinstein et al. 2014).

In some ways, the internet is democratizing healthcare by providing a wealth of information and improved access to a greater number of people. A person seeking information about a medical condition need not rely completely on a health professional; much information can be accessed online. Significant concerns exist, however, about the quality of the information found online and its proper use (Cohen and Adams 2011; Ford et al. 2012).

Our improved ability to collect, analyze, and correlate health information, coupled with the development of artificial intelligence and the use of data analytics, offers the potential for healthcare advances that, in years past, we could have only dreamed of (Finlay 2014; Wu et al. 2016). With access to vast collections of information—often referred to as “big data”—we can analyze disease and health patterns like never before, enabling us to predict trends and even outbreaks of disease. By analyzing social media key words, we can identify the origins and status of outbreaks of infectious diseases such as the flu. Big data has been critical to the field of genomics and its applications in healthcare. These advances would have been impossible without

the assistance of high-speed computers such as IBM's Watson; the human mind, or even any collection of humans, is incapable of such analytical work (Ferrucci et al. 2010; Wakeman 2011).

## Physical Environment and Geography

The impact of our environment on our health and well-being has been well established (Roeder 2015). Pollution, for instance, can have a serious effect on people's health, as shown by a number of studies linking asthma in children to local air quality (Gauderman et al. 2015; Mabahwi, Leh, and Omar 2014). Safety concerns can also influence health. If you live in a neighborhood that lacks sufficient sidewalks and lighting, you might not feel comfortable going for a walk to get exercise, or letting your children play outside. In light of these and other issues, some have stated that a person's zip code is more predictive of health status than the person's genetic code (Graham 2016; Slade-Sawyer 2014).

Zip code will also affect a person's access to high-quality healthcare services, which will in turn influence health. For instance, if you live in rural Wyoming, 100 miles from the nearest town or doctor, your access to care is going to be limited, and the care you receive will likely not be as good as that provided in an urban downtown area with multiple major hospital organizations. The 1990s television show *Northern Exposure* reflected this situation. The story revolves around efforts to entice a young medical graduate from New York City to come to a rural Alaskan town to provide care. Although the show was a comedy, the situation is indicative of serious issues that exist around the distribution of medical services in the United States.

## Legal Issues

The legal risks associated with practitioners' behaviors are an important factor in the rising cost of healthcare and the complexity of the US healthcare system. Relative to other nations, the United States is highly litigious; it has 13 times more lawyers per capita than Japan does (Obe 2016). Given the constant threat of malpractice lawsuits, practitioners purchase malpractice insurance, which significantly drives up costs.

The legal risks may also lead healthcare professionals to practice so-called defensive medicine, in which additional tests and services are ordered to minimize the risk of being sued (Jena et al. 2011; Anderson et al. 2004). Some tests and services are performed, at significant cost, primarily to prevent claims of omission, regardless of whether they will produce any meaningful

benefit to the patient. In some instances, these extra services may produce data useful to the treatment of the patients, but these benefits still must be weighed against the additional costs and the potential for patient harm stemming from the procedures (Waxman et al. 2014).

## The Conundrum

Can you see the conundrum in exhibit 1.1? We want high-quality care, we want access, and we want lower cost. As economists will acknowledge, having any two of these things is possible, but having all three at once is extremely difficult.

Some countries, for example, have chosen to pursue higher quality and lower cost while allowing reduction of access. Someone who needs a knee replacement in Scotland might get a perfectly good procedure at a reasonable cost, but they might have to wait for nine months to get it. By contrast, a similar patient in the United States might need wait for just a few weeks for the same procedure. The US system offers a high level of access, but our society pays dearly to build the necessary capacity.

Going forward, healthcare system managers have the task of optimizing the relationship between quality, access, and cost. Keeping quality high and at the same time preserving access and bending the cost curve will not be an easy task; it will require major reform to the delivery system and a greater emphasis on prevention and self-care.

## Values, Attitudes, and Beliefs

Our healthcare system is heavily influenced by our society's beliefs about health and healthcare (Bunker 2001). We are constantly trying to balance social justice with market justice, and personal freedom with social responsibility, to name just two examples. Finding these balances will be difficult. To succeed, we need to commit to continuous learning and remain open to the new ideas and information that develop daily. The challenges we face require all of us to become lifelong learners, to be diligent in keeping up with the rapidly changing environment.

The diversity of our society its greatest strength; however, the many attitudes, beliefs, and values that come with such diversity present challenges to the healthcare system—a system that, at this point, does not always have the necessary level of cultural competence. *Cultural competence* in healthcare refers to the ability of providers and organizations to effectively deliver services that meet the social, cultural, and linguistic needs of patients (Health Policy Institute, Georgetown University 2004). Cultural competence is an essential aspect of providing competent care.

In a free market economy, we are constantly bombarded with marketing messages, some of which are not in the best interest of our health. Health literacy, therefore, is of paramount importance in helping people make proper lifestyle choices to support health status at the highest level possible. The ways we live, work, and play and our attitudes toward aging and prevention all affect the life choices we make, which in turn have consequences for our health status. These choices also have a lasting impact on our healthcare system.

## **A Large and Growing Problem: The Number of People with Chronic Medical Conditions**

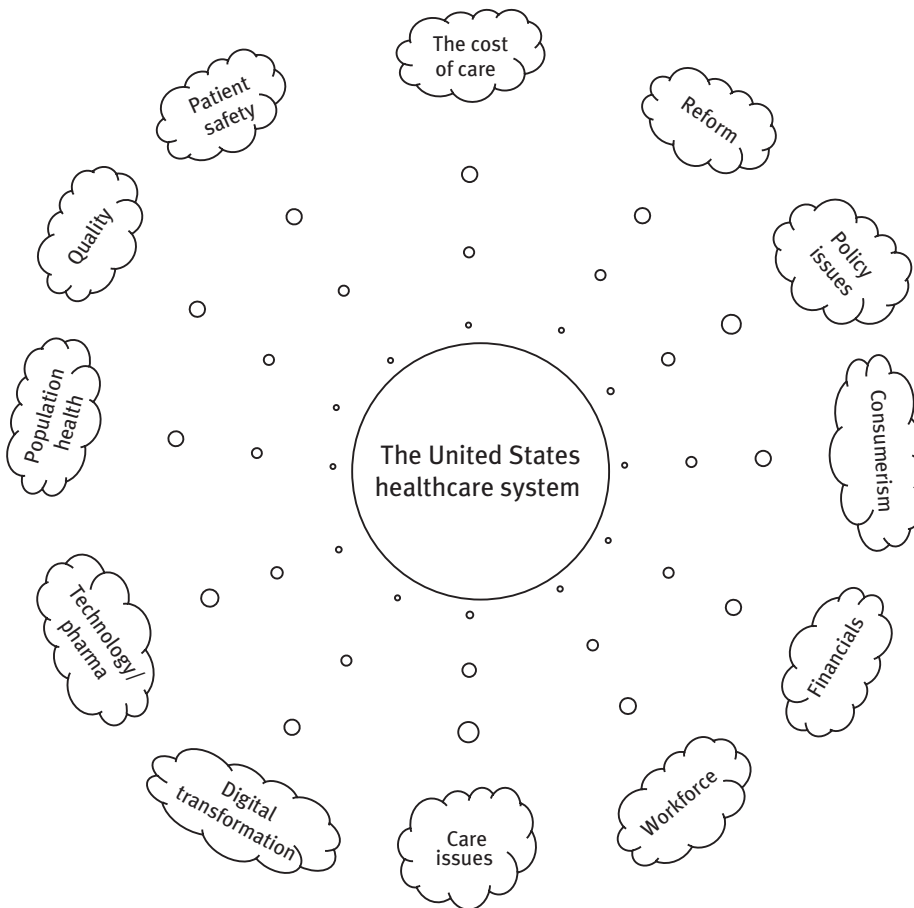
About half of US citizens have a chronic disease. Of the approximately \$3 trillion the United States spends on healthcare, 86 percent goes toward chronic disease (Centers for Disease Control and Prevention [CDC] 2018). In 2014, the CDC (2014) reported that 9.4 percent of Americans had type II diabetes and another 33 percent were prediabetic. Such statistics have staggering implications, given that diabetes can lead to blindness, kidney failure, and other complications. Many people with heart disease also have diabetes (American Diabetes Association 2014). Type II diabetes is a severe health problem; however, it is also a relatively preventable and treatable condition.

The US healthcare system must become a system of health by better managing chronic disease. Improvement will require greater patient engagement. Patients must engage by helping to take care of themselves and by buying into practices that support wellness. We need to find ways to counterbalance the hamburger commercials that are often so seductive. Behavioral economics—the field focusing on cognitive, psychological, social, and culture aspects of people’s economic decision making—will play an important role in this effort (Cox 2017; Craig 2011; Sugden 2009).

## **A Perfect Storm**

The popular book and movie *A Perfect Storm* (Junger 1997) is about a highly unusual meteorological storm that results from the confluence of several weather factors. The US healthcare system is experiencing a “perfect storm” of its own as a confluence of factors is producing a similarly unprecedented event, as illustrated in exhibit 1.4. Key factors in the storm include patient safety, cost of care, concerns about access and quality, huge demographic changes, rapid advances in technology and treatments, the digital

**EXHIBIT 1.4**  
The Perfect Storm: Forces of Change Acting on the US Healthcare System



transformation, and data analytics. Workforce issues are also part of the storm. Today's workforce is unprecedented in that it consists of four generations at once. Each of these generations has its own cultural attitudes about work, creating significant challenges for management.

Generational differences in people's attitudes about healthcare are often striking. For example, members of the traditional generation (born prior to 1945) tend to be compliant and willing to follow instructions from the doctor or nurse. Baby boomers and younger people are less so, and they tend to have high expectations for anyone providing them service (Bowling, Rowe, and Mckee 2013). Perceptions and expectations associated with patients' age can contribute to differences in the way practitioners provide care (Wennberg 2011).

Exhibit 1.5 shows an expanded list of the pressures on the US healthcare system, bringing the perfect storm into greater detail.

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**EXHIBIT 1.5**  
Select Issues  
That Will Have a  
Major Impact on  
Future Health  
and Healthcare  
Delivery in the  
United States

**Changes in Environmental and  
Demographic Factors**

**Operational Changes and Challenges**

Aging population	Cybersecurity and the Internet of Things
Increasing diversity	Social media
Addressing end-of-life care	Artificial intelligence
Genomics	Big Data / data analytics
Shortage of certain healthcare workers (e.g., home health care workers)	Robotics in surgery
Effect of climate change on the nature and spread of disease	Robotics in instruments of daily living
New emerging diseases	Robotics in machine-assisted care
Zoonoses	Precision medicine
Population expansion	Culinary medicine
Pollution	Telemedicine and virtual care
Environmental degradation	Narrative medicine
Anthro-cultural forces	Addressing end-of-life care
Patient activation	Mini-hospitals
Continued political uncertainty	More nontraditional providers
Competing funding interests	Consolidation and larger healthcare systems
	More horizontal integration, funding
	Organization and delivery are combined

## Major Obstacles to Reform

The resistance to change in the healthcare system is formidable (Gilley, Godek, and Gilley 2009; Gorman 2015; Kumar and Khiljee 2016). Reform efforts go back as far as the Roosevelt administration—not Franklin, but Theodore (Igel 2008)—and most have failed despite the overwhelming sense that change is necessary.

The US healthcare system’s independent nature, its fragmentation, and its lack of centralization have made resistance to change a major issue. Entities with a vested interest in our system in its current state have been able to exert their influence and impede change (Kuratko, Covin, and Hornsby 2014). Additional obstacles stem from the large size of the country, its diversity, and various aspects of America’s cultural identity. With so many different providers and components working independently of one another, it is difficult to change directions and even more difficult to stop the system from continuing on its course. As they say, “When the healthcare machine gets rolling, it is hard to stop.”

One obstacle to reform is the fundamental disagreement about two common principles for equitable or reasonable distribution of healthcare services: market justice and social justice. Market justice theory states that

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healthcare is a product for purchase and therefore, like all other goods and services, is subject to the principles of economic theory. Supply and demand—which, in our context, may reflect a willingness to pay for a service—determine price and availability. Under market justice, the individual is responsible for the cost of their healthcare, the government should play a limited role, and the poor should be served through charitable means. The focus is clearly on the individual rather than on a collective responsibility for health. This theory accepts the notion that care will be rationed by the ability to pay (Karsten 1995; O’Laughlin 2016; Weinstein et al. 2017; Williams, Walker, and Egede 2016).

By contrast, social justice theory sees healthcare as a social good that should not be subject to strict economic principles. Under social justice, everyone should have access to care regardless of their ability to pay, and the government should intervene in situations where the market fails to provide adequate levels of service to people in need. Advocates of social justice believe that the government is better suited than the market is to determine how healthcare is distributed. Social justice theory, therefore, recognizes a shared responsibility for the health of the community and the factors beyond individuals’ control (Braveman et al. 2011).

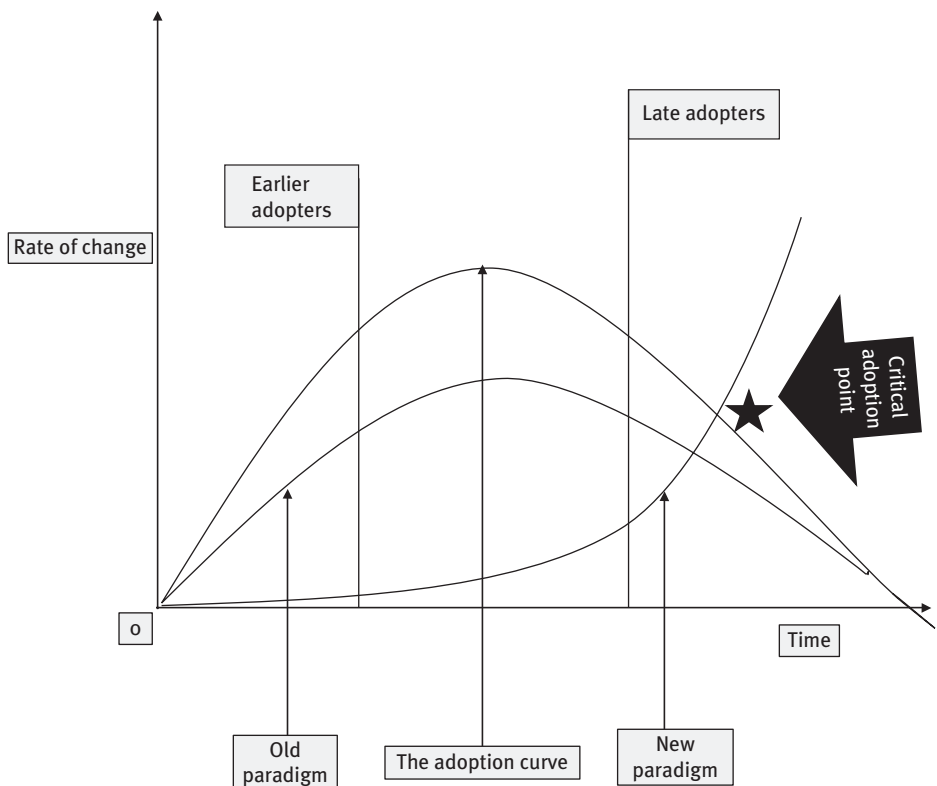
The disagreement between proponents of social justice and market justice can seem to be almost an insurmountable obstacle, both within our healthcare system and across the country itself. We must decide what kind of country and what kind of healthcare system we want to be part of.

## Transitioning Toward Value

As an industry matures, most businesses undergo a transition, from a first curve to a second, shown in exhibit 1.6 (Morrison 1996). Each curve represents a paradigm—a distinct concept or, to put it more simply, a way of thinking about something or about what something is (Carraccio et al. 2002; Göktürk 2005). Paradigms are powerful tools, and they can be difficult to change.

The current US healthcare system is likely in the latter stages of the first curve, undergoing a painful transition to a new paradigm. Providers are still primarily paid for volume, based on what they do and how much of it they do, rather than on the quality, impact, or outcomes of what they do. A provider might say, “Well, we provided hundreds of services every day”—but if they were not necessary, high-quality services, then so what? In the second curve for healthcare, providers will be paid based on value (Ahmed et al. 2017; Gray 2017; Mandal et al. 2017; Porter 2010).

**EXHIBIT 1.6**  
The Second  
Curve and  
Adoption of  
Innovation



Source: Adapted from Morrison (1996).

Value is a function of cost and quality, and it can be expressed in an equation as follows:

$$\text{Value} = \text{Cost}/\text{Quality}$$

Imagine you are going to the grocery store to buy a can of peas. Why do you buy one can versus another can? Maybe one is less expensive? Maybe you perceive that one is better than another, or has a better value? You might even be willing to pay a little bit more for a can that you presume to be of higher quality. Cars offer another example. Some people drive expensive cars because they perceive that they are getting more quality for their money. In healthcare, paying providers for the value of their services rather than the quantity of their services will lead to better outcomes and better patient experience (Porter 2010).

As the US healthcare system transitions to the second curve, providers are beginning to be paid based not only on volume but also on quality, which is creating pressure and spurring change. Exhibit 1.6 shows the intersection of the first and second curves at the *critical adoption point*. This point occurs

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The Old Paradigm	The New Paradigm
<b>Volume</b> of service	<b>Value</b> of service
Acute care (specialty-focused inpatient)	Primary care (outpatient-focused)
Treating illness	Preventive care
Fragmented care	Care on a continuum
Individual care	Population health
Generalized treatment for medical conditions	Precision medicine
Healthcare independent of social needs	Community well-being as part of healthcare
Independent organizations	Integrated delivery systems (e.g., accountable care organizations)

**EXHIBIT 1.7**  
A New Paradigm  
of Healthcare

when strain is at its maximum in the system. It is a difficult and dangerous time for organizations; indeed, many businesses fail (Kotter 2009; Walston and Chou 2006). The challenge is to transition safely from the first curve to the second curve while working in both systems.

Exhibit 1.7 lists some key aspects of the paradigm shift affecting the fundamental nature of healthcare delivery in the United States. How does one make the necessary changes to transform to the new value-based paradigm of care and at the same time continue to be paid primarily by volume-based methodologies? Just imagine you are a provider caring for a patient. Are you being paid under a volume- or value-based system? Does the payment arrangement affect your behavior? This is the dilemma. We may like to think that provider behavior would be consistent regardless, but such thinking is simply naïve (Pracht, Langland-Orban, and Ryan 2018; van Dijk et al. 2013).

### ***Missing the Second-Curve Paradigm Shift: The Kodak Story***

History is replete with stories of missed paradigm shifts and their consequences. Consider, for instance, the record executive who rejected the Beatles in 1962, allegedly saying that “guitar groups are on the way out” and that the Beatles had “no future in show business” (*Telegraph* reporters 2012).

Consider the example of Kodak, once the leader in the production of cameras and film. Not long ago, people would go to the store to buy film for their cameras. Multiple types of film were available—fast speed or slow speed, daylight or nighttime, color or black and white. Shoppers would choose between multiple sizes of film, with various options for the number

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of pictures that could be taken on each roll. Film at that time was expensive, which helped make Kodak one of the most important companies in the United States—even part of the “Nifty 50” on Wall Street. For many years, Kodak was one of the safest, most stable investments that one could own. In 2012, however, the company went bankrupt after 131 years in business (De la Marced 2012; Mui 2012). So, what happened? Kodak failed to transition to the second curve.

Today, of course, most of us use digital cameras or our smart phones to take photographs. When was the last time you purchased a roll of film? Can you even find it in a store? We no longer think about the number of pictures we take, film size, choice between black and white or color, or other such matters. Kodak actually invented digital photography, but it lacked the insight to commit to the change. Instead, it remained fixated on film and cameras.

In a sense, Kodak forgot what business it was in. The company was managed by chemical engineers who had a great appreciation for the chemistry of photographic processes. However, customers were not actually enamored with film and cameras—they just wanted memories. If people go on vacation and get their picture taken by a waterfall, they are not doing so because of the film or the camera; they simply want a memory of the experience (Carl 2015). Kodak failed to realize that it was not in the film business but rather the picture-taking business, the memory business.

Kodak was a casualty of shifting paradigms in its industry. It remained on the first curve—film photography—until the curve went down to zero. Had Kodak moved on to the second curve—digital photography—at the right time, it would not be out of business.

Another important point to make is that, when an industry starts the second curve, that industry’s knowledge base is small. In other words, everybody in that industry essentially starts over again in developing their business and their expertise. Entering the second curve is not an easy task, and organizations need time to gain proficiency. In the US healthcare system, we are going to need time to learn how to deliver care based on value rather than on quantity.

### ***A Second Example: The Quartz Watch***

Another example of a missed paradigm shift is the story of the quartz watch movement, often told by business and technology author Joel Barker (1993).

The quartz watch movement was invented by the Swiss, who are famous for their precision timepieces, in the 1960s. However, because the existing paradigm of what a high-quality watch should be was so strong within the community of Swiss watchmakers, they did not patent the quartz

movement. The movement was displayed at a subsequent trade show, attracting significant interest from several Japanese companies. The Japanese quickly began producing watches with quartz movements, and the Swiss watch market soon collapsed—dropping from a 65 percent market share in 1968 to less than 10 percent in 1980 (Barker 1993). The story is yet another example showing how strong our paradigms can be and how those paradigms can cause smart people to overlook significant shifts in their industry.

We will discuss several paradigm shifts in healthcare over the course of this book. Is the healthcare field too comfortable with the status quo? Do we think that technology is the cure for all our problems? These and other questions need to be asked as we explore the complexities of the US system.

## The Graying of America: US Census Projections

The American population is aging. As of 2017, people aged 65 or older represented 15.6 percent of the population (US Census Bureau 2017). The fastest-growing group of people in the country are those 85 or older. About 10,000 baby boomers turn 65 each day (Biegert 2016; Cohn and Taylor 2010).

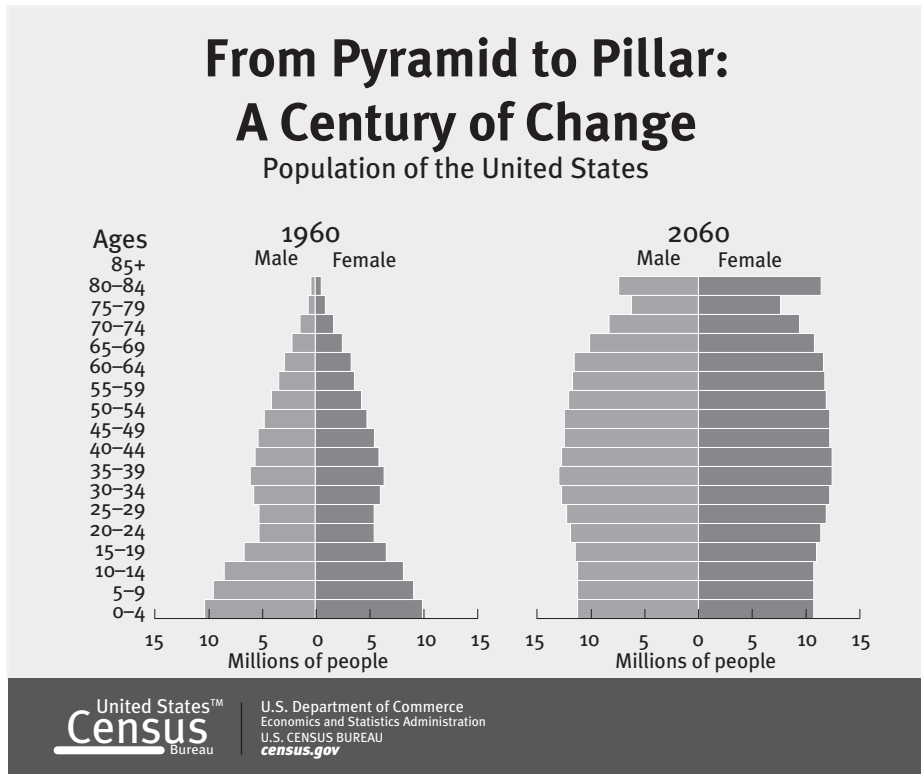
The implications of this “Silver Tsunami” are significant for the healthcare system. Generally, the older we get, the more healthcare we use, and most Americans 65 or older rely on Medicare to fund their healthcare expenses. People are living much longer than in the past but often with failing health (Alemayehu and Warner 2004; Gawande 2014; Canadian Medical Association 2013). At the same time, the number of people working and funding Medicare relative to the number of people receiving Medicare benefits is shrinking (Centers for Medicare & Medicaid Services 2016).

Exhibit 1.8 shows projected changes in the US population between 1960 and 2060 across various age groups, clearly indicating the degree to which we are getting older as a society. By 2035, for the first time in history, people 65 or older are projected to outnumber children (US Census Bureau 2018b).

## Equality Is a Healthcare Issue

While at a conference at St. Andrews College, I was speaking with a physician from Turkey. Noting that Turkey had increased its population’s longevity dramatically—from about 45 years in 1960 to 78 years in 2016 (Countryeconomy.com 2018)—I asked: “What did you all do to jump-start such a magnificent improvement in life expectancy?” She answered, “We

**EXHIBIT 1.8**  
 Census Bureau  
 Projections



Source: Reprinted from US Census Bureau (2018a).

taught women how to read.” Her answer was a little surprising, but also not so surprising when you really think about it. Who are the primary caregivers in Turkey and many other societies? Who are the people who tend to make sure that the children have healthcare? Traditionally, those people have been women. So, perhaps we should not be surprised that empowering women would have such an enormous impact on an entire society.

In the United States, healthcare and health issues are too often regarded as a group of services that are provided to the population. This kind of thinking is incomplete and needs to change. As the story about the Turkish doctor makes clear, access to healthcare services is only one factor in health status; numerous other factors play a role as well, including the following (Healthy People 2018; WHO 2010):

- *Income and social status.* Higher income and social status are linked to better health. In any society, the greater the gap between the richest and poorest people, the greater the differences in health will be.

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- *Education.* Low education levels are linked with poor health, more stress, and lower self-confidence.
- *Physical environment.* Safe water and clean air, healthy workplaces, safe houses and communities, and good roads all contribute to better health.
- *Employment and working conditions.* People who are employed are healthier, particularly if they have control over their working conditions.
- *Social support networks.* Strong support from families, friends, and communities is linked to better health.
- *Culture.* Customs, traditions, and the beliefs of family members and the community all affect health.
- *Genetics.* Inherited traits and hereditary diseases affect life span, healthiness, and the likelihood of developing certain illnesses.
- *Personal behavior and coping skills.* Eating a balanced diet, keeping active, not smoking, drinking only in moderation if at all, having access to mental health care, and effectively coping with life's stresses and challenges all affect health.
- *Biological sex.* People may be susceptible to different types of diseases at different ages depending on their biological sex.

To effectively manage illness and well-being, healthcare organizations must become more actively involved in their communities. They need to be concerned with such things as the following:

- Making sure that people have places where they can safely walk
- Making sure that neighborhoods have good lighting in the evening, so people are safe going outside
- Making sure that people have access to grocery stores that sell healthy, affordable food
- Making sure people have access to clean drinking water
- Making sure that people are able to read and understand basic facts about medicines, disease and illness, and their own bodies (i.e., healthcare literacy and accurate sex education)

In the United States, many of these concerns are treated as political issues, but they are undoubtedly healthcare issues—and the healthcare community needs to start taking responsibility for them. Health outcomes can be improved through a variety of approaches other than simply providing more healthcare services.

## End-of-Life Care

With the aging of our population, the need to manage end-of-life care in a dignified and appropriate manner becomes increasingly important. In the quest to live as long as possible, people often engage in futile care during the last days, weeks, or months of their lives, rather than making the most of their remaining time with friends and family.

Unfortunately, death is inevitable, and the US healthcare system needs to develop better approaches for managing health and health resources at the end of life. This effort will require better education about end-of-life issues not only among health professionals but also across the public at large. Positive change will require new policies and approaches for the funding of alternative services such as hospice and palliative care. It will also require us to provide appropriate mental health care, counseling, and support services to patients and families at this important stage in life's journey (Bélanger et al. 2014; Prina 2017; Schneiderman 2011).

## Physician Shortages

The United States is facing a physician shortage, and the situation is projected to worsen in the years ahead (Bodenheimer and Smith 2013; Dall et al. 2015; Edelman et al. 2013). The American Association of Medical Colleges (2015) estimates that the country will have a shortage of roughly 100,000 physicians by 2025. The shortage is particularly prevalent in primary care, but other specialties will feel the impact as well. According to McKibben and colleagues (2016), the average age of urologists in the United States is 55—which might be considered “getting up there” in terms of surgical careers—and shortages are likely to worsen as large numbers begin to retire. Increased use of advanced clinical professionals, such as physician assistants (PAs) and nurse practitioners (NPs), may offer some solutions to shortages (Bodenheimer and Smith 2013; Green, Savin, and Lu 2013). However, addressing issues of provider experience and attitudes toward the practice of medicine will likely have the most profound effect on the future supply of healthcare professionals.

## The United States Leads the World in Many Ways

Luckily, the state of the US healthcare system is not all doom and gloom. Despite its many challenges and shortcomings, the system has many positive attributes. For instance, the United States is a global leader in medical technology—though, of course, we must reconcile the benefits of this

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technology with the cost. In addition, the United States remains a world leader in medical research, medical education and training, and advanced organizational development and processes.

The National Institutes of Health (NIH)—despite, regrettably, facing possible budget cuts and other problems due to political circumstances—funds and conducts a tremendous amount of research that helps advance healthcare in the United States and throughout the world (Gillum et al. 2011; Jacob and Lefgren 2011; NIH 2019). The NIH was responsible, for instance, for a breakthrough in the treatment of sickle cell anemia, a genetic disorder in which the individual does not have enough healthy red blood cells to carry sufficient oxygen throughout the body (Mayo Clinic 2019). The NIH pioneered a gene-based therapy that replaces the defective gene in the stem cell of the patient. The patient receives a bone marrow transplant with genetically modified stem cells that produce healthy red blood cells—leading to what appears to be a cure for the disease (*60 Minutes* 2019; NIH 2018).

Advances in healthcare technology are doing what once seemed unimaginable, with new treatments emerging for ailments previously considered untreatable (Kakkis et al. 2015). Take, for example, HIV. Not long ago, a diagnosis meant almost-certain death; now, HIV infection is regarded as a manageable chronic disease that can be treated via medication (Maartens, Celum, and Lewin 2014). Similarly, a hepatitis C infection at one time could only be treated with a series of drugs that had significant—nearly intolerable—side effects; now, most cases can be cured with oral medicine that has virtually no side effects (Webster, Klenerman, and Dusheiko 2015). Of course, these treatments described for HIV and hepatitis C are both very expensive; in the United States, they are only miracle cures for the people who can afford them.

Most people agree that change is needed in the US healthcare system. If you are reading this text, then you are responsible for helping make this change come about. So, what are we going to do? First, we need to ask two basic questions:

1. Is reform needed?
2. What is the purpose of reform?

To the first question, the answer is a resounding yes. The second question has many possible answers, but, for starters, we might say that the purpose of healthcare reform is to deliver healthcare to all our citizens in a cost-effective and high-quality way. As members of the healthcare community, we must learn as much as we can about the various elements of our system, broken as it is, so that we can design the best reforms possible.

## Discussion Questions

1. What is the healthcare system's place in US society?
2. What challenges does the US healthcare system face?
3. What are some of the obstacles to healthcare reform?
4. What is or should be the goal for the US healthcare system?

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