CHAPTER 2

Current Operations of the U.S. Healthcare System

LEARNING OBJECTIVES

- Identify the stakeholders of the U.S. healthcare system and their relationships with each other.
- Discuss the importance of healthcare statistics.
- Compare the United States to five other countries using different health statistics.
- Identify three ways the pandemic has impacted global healthcare systems.

DID YOU KNOW THAT?

- According to the Bureau of Labor Statistics, the projection for job growth in the healthcare industry over a 10-year period through 2030 is 16%.
- The healthcare industry and social assistance industry reported more work-related injuries than any other private industry.
- The most important stakeholder in the U.S. healthcare system is the patient.
- Life expectancy and infant mortality rates are indications of the health of a population.

Introduction

The one commonality with all of the world's healthcare systems is that they all have consumers or users of their systems. Systems were developed to provide a service to their citizens. However, the U.S. healthcare system, unlike many other systems in the world, does not provide healthcare access to all of its citizens. It is a complex system that is composed of many public and private components. Healthcare expenditures comprise approximately 19.7% of the **gross domestic product (GDP)**. Health care is very expensive, and most citizens do not have the money to pay for health care themselves. Individuals rely on health insurance to pay a large portion of their healthcare costs. Health insurance is predominantly offered by employers. The government believes this is the result of the universal mandate for individual health insurance coverage. However, with the recent federal ruling stating that the universal mandate is unconstitutional, it is expected that the uninsured rate may increase.

In the United States, in order to provide healthcare services, there are several stakeholders or interested entities that participate in the industry. There are providers, of course, that consist of trained professionals such as physicians, nurses, dentists, and chiropractors.

There are also inpatient and outpatient facilities; the payers, such as the insurance companies, the government, and self-pay individuals; and the suppliers of products, such as pharmaceutical companies, medical equipment companies, and research and educational facilities (Sultz & Young, 2006). Each component plays an integral role in the healthcare industry. These different components further emphasize the complexity of the U.S. system. The current operations of the delivery system and utilization statistics will be discussed in depth in this chapter. An international comparison of the U.S. healthcare system and select country systems will also be discussed in this chapter, which provides another aspect of analyzing the U.S. healthcare system.

Overview of the Current System Update

The United States spends the highest proportion of GDP on healthcare expenditures compared to any country. The system is a combination of private and public resources. Since World War II, the United States has had a private fee-for-service system that has produced generous incomes for physicians and has been profitable for many participants in the healthcare industry (Jonas, 2003). The healthcare industry operates like traditional business industries. Organizations designated as for profit need to make money in order to operate. The main goal of entities that are designated nonprofit is based on a particular social goal such as increasing healthcare access, but they also have to make money in order to continue their operations.

There are several major stakeholders that participate or have an interest in the industry. The stakeholders identified as participants in the healthcare industry include consumers, employers, healthcare and non-healthcare employers, healthcare providers, healthcare facilities, governments (federal, state, and local), insurance companies, educational and training institutions, **professional associations** that represent the different stakeholders, pharmaceutical companies, and research institutions. It is also important to mention the increasing prominence of alternative therapy medicine. Each role will be discussed briefly.

Major Stakeholders in the Healthcare Industry

Consumers

The main group of consumers consists of patients who need healthcare services from a physician, a hospital, or an outpatient facility. From an organizational perspective, the consumer is the most important **stakeholder** for an organization. The healthcare industry operates like a business. If a consumer has the means to pay out of pocket, from governmental sources, or from health insurance, the services will be provided. If an individual does not have the means to pay from any of these sources of funding, a service may not be provided. There is a principle of the U.S. healthcare system, **duty to treat**, which means that any person deserves basic care (Pointer et al., 2007). In some instances, healthcare providers will give care to someone who has no funding source and designate the care provided as a **charitable care or bad debt**, which means either the provider does not expect payment after the person's inability to pay has been determined or the efforts to secure the payment have failed (DiSalvatore, 2015). Businesses also take the same action. Many of them provide a community service or donate funds to a charitable cause, yet both traditional businesses and healthcare organizations need to charge for their services in order to continue their operations (**Figure 2.1**).

Employers

Employers consist of both private and public employers. The healthcare industry is the largest U.S. employer. According to the Bureau of Labor Statistics (BLS), there are several segments of the healthcare industry, including ambulatory healthcare services, hospitals, and nursing and **residential care facilities**. Ambulatory healthcare services are composed of physicians, dentists, other health practitioners; outpatient care centers; medical and diagnostic laboratories; **home healthcare services**; and other ambulatory care. The hospital segment provides inpatient services primarily, with outpatient as a secondary source. It provides general and surgical care, psychiatric substance-abuse hospitals, and other specialty hospitals. Residential care facilities include nursing care, mental health, substance abuse and mental disabilities, community care for the elderly, and other residential care facilities. Employers outside the healthcare industry are also stakeholders because they provide a significant percentage of health insurance coverage to individuals nationwide.

Hospitals

According to the **American Hospital Association (AHA)**, in 2021, there were approximately 6129 registered hospitals in the United States, of which 5157 were community hospitals (AHA, 2023). Hospitals provide total medical care that ranges from diagnostic services

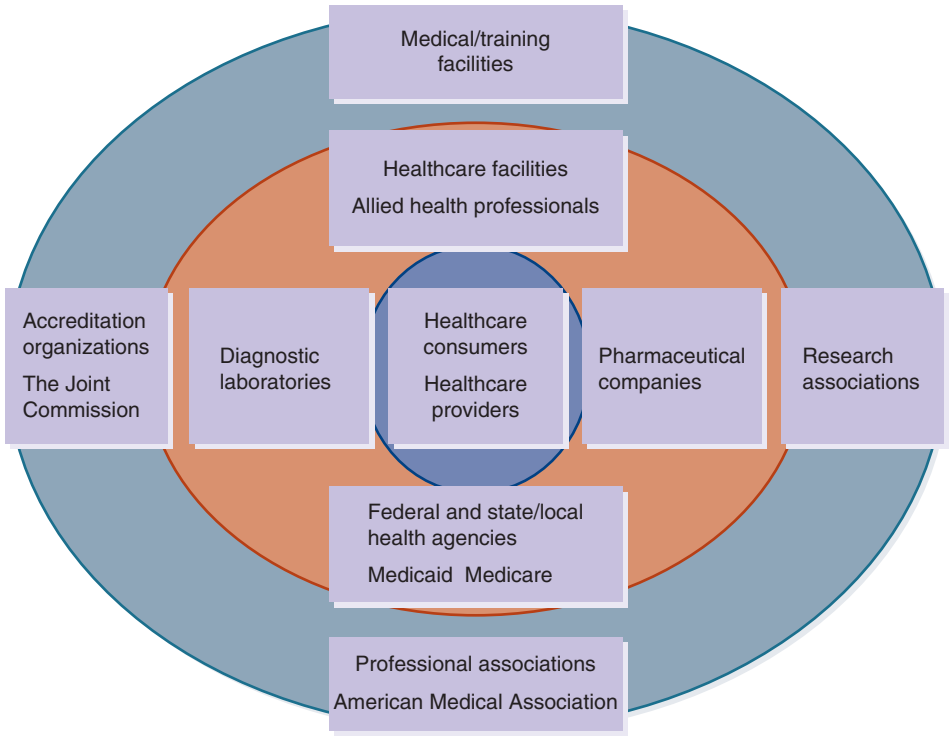

Figure 2.1 Healthcare Industry Stakeholders. There are also other consumer relationships in the healthcare industry. Consumers purchase medications either from their provider or over the counter from pharmacies. The pharmaceutical companies market their products to physicians who, in turn, prescribe their products to their patients. The pharmaceutical companies also market their products to hospitals and outpatient facilities to encourage the use of their medications in these facilities. Medical equipment companies also sell their products to facilities and individual providers.

to surgery and continuous nursing care. They traditionally provide inpatient care, although more hospital systems are also providing outpatient care. Some hospitals specialize in treatments for cancer, children's health, or mental health. It is important to note that hospitals are an integral component of the healthcare system. Many uninsured and underinsured individuals present themselves at emergency departments (EDs) across the country and use EDs as their primary care provider. In 2020, more than 131 million individuals presented themselves to the ED as their entry into health care. Nearly 50% of those visits were from the age group of 25–64 years. Approximately 31% of the visits were expected to be paid by private insurance, with Medicaid and Children's Health Insurance Program (CHIP) expected to provide payment for 37% of the visits. Approximately 8% of the visits were uninsured individuals (Cairns & Kang, 2020).

Nursing and Residential Care Facilities

These types of facilities provide nursing, rehabilitation, and health-related personal care to people who need ongoing care. Nursing aides provide the majority of care. Residential care facilities provide around-the-clock social and personal care to the elderly, children, and others who cannot take care of themselves. Examples of residential care facilities are drug rehabilitation centers, group homes, and assisted-living facilities.

Physicians and Other Healthcare Practitioners

In 2021, there were over 761,000 physicians in the United States. In the past, physicians traditionally practiced solo, but more often physicians work in a group practice setting to reduce administrative costs. Physicians are typically a patient's primary care provider, although there has been an increase in nurse practitioners providing more primary care. Physician job growth is 3%, which is slower than average; however, despite the limited growth, there is a projected annual need of 23,800 physicians and surgeons. There continues to be a shortage of nurses nationally (BLS, 2022d).

According to the National Cancer Institute (n.d.), **complementary and alternative medicine (CAM)** is any medical and healthcare services or products that that are not considered standard or traditional medical care. Complementary medicine is nontraditional medicine that is used in collaboration with traditional medicine. Alternative medicine

is nontraditional medicine that is used solely for treatment. These CAM practitioners, who practice unconventional health therapies such as yoga, vitamin therapy, and spiritual healing, are being sought out by consumers, who have to pay out of pocket for these services because they are currently not covered by health insurance companies. However, chiropractors and acupuncturists, who are also considered alternative medicine practitioners, are more likely to be covered by health insurance companies. Recognizing consumer interest in this type of medicine, in 1998, the **National Center for Complementary and Alternative Medicine (NCCAM)** was established within the National Institutes of Health (NIH). The purpose was to explore these types of practices in the context of rigorous science, train complementary and alternative researchers, and disseminate information. More medical schools are now offering some courses in alternative medicine (NIH, 2021). In a recent National Health Interview Survey, the use of yoga and meditation has increased in children. There was also an increase in chiropractic services by adults (NIH, 2018).

Home Healthcare Services

Home healthcare services, which offer medical care in the home, are provided primarily to elderly, chronically ill, or mentally impaired individuals. Mobile medical technology allows for more home health care for medical problems. Home health care is one of the fastest growing components of the industry as a form of employment because of consumer preference and the cost-effectiveness of home medical care (BLS, 2022b).

Outpatient Care Centers and Ambulatory Healthcare Services

Outpatient care centers include kidney dialysis centers, mental health and substance-abuse clinics, and surgical and emergency centers. Ambulatory healthcare services include transport services, blood and organ banks, and smoking cessation programs.

Laboratories

Medical and diagnostic laboratories provide support services to the medical profession. Workers may draw blood, take scans or X-rays, or perform other medical tests. This segment provides the fewest number of jobs in the industry (BLS, 2022c, 2022e).

Third-Party Payers

Government

As a result of the Medicare and Medicaid programs, the federal and state governments are the largest stakeholders in the U.S. healthcare system. The government at both levels is responsible for financing health care through these programs as well as playing the public provider role through state and local health departments. The U.S. Department of Veterans Affairs medical facilities also provide services to those in the armed forces (Sultz & Young, 2006).

Insurance Companies

The insurance industry is also a major stakeholder in the healthcare industry. It is often blamed for the problems with the healthcare system because of the millions of underinsured and uninsured individuals. There have been many news reports highlighting the number of medical procedures that have been disallowed for insurance coverage, the cost of health insurance coverage, etc. There are traditional indemnity plans, such as **Blue Cross and Blue Shield**, but managed care, which is also considered an insurance plan, has become more popular for cost control for both traditional and Medicare insurance plans. The Affordable Care Act placed restrictions on what health insurance companies can do regarding reimbursement restrictions.

Educational and Training Organizations

Educational and training facilities, such as medical schools, nursing schools, public health schools, and allied health programs, play a key role in the U.S. healthcare industry because they are responsible for the education and training of healthcare employees. These institutions help formulate behaviors of the healthcare workforce.

Research Organizations

Federal governmental research organizations, such as the NIH and the CDC, not only provide regulatory guidance but also perform research activities to improve health care. However, there are also private research organizations, such as the **Robert Wood Johnson Foundation**, the **Kaiser Family Foundation**, the **Pew Charitable Trusts**, and the **Commonwealth Fund**, that support research efforts through grants.

Professional Associations

Professional associations play a key role in healthcare policy. There are associations that represent physicians, nurses, hospitals, long-term care facilities, and so on. Most healthcare stakeholders are represented by a professional organization that guides them regarding their role in the healthcare industry. They also play an influential role in governmental regulations because they often lobby at all governmental levels to protect their constituents. The following are examples of professional associations that represent some of the major stakeholder organizations in this industry.

- American Hospital Association (AHA): The AHA is the most prominent association for all types of hospitals and healthcare networks. Founded in 1898, the AHA, which is a membership organization, provides education and lobbies for hospital representation in the political process at all governmental levels (AHA, 2022).
- **American Health Care Association (AHCA)**: Founded in 1949, the AHCA is a membership organization that represents nonprofit and for-profit nursing and assisted-living facilities, subacute-care providers, and facilities for developmentally disabled individuals. Its focus is to monitor and improve standards of nursing home facilities (AHCA, n.d.).
- **LeadingAge** (formerly the American Association of Homes and Services for the Aging): In 1961, a group of organizations united with a focus of representing aging services, nonprofit adult day care services, home healthcare services, community services, senior housing, assisted-living facilities, continuing care retirement communities, and nursing homes. It has six centers that focus on different issues facing lobbies at all governmental levels regarding legislation that can impact the industry and provides technical assistance for these organizations (LeadingAge, n.d.).

Pharmaceutical Companies

A functioning healthcare system needs medications that are prescribed by a provider or purchased as an over-the-counter medicine from a pharmacy. The pharmaceutical industry is integral to the success of a healthcare system. Innovative drugs have improved people's quality of life. There has been an internal division within the pharmaceutical industry between the manufacturing of **brand name drugs** and generic or "me too" drugs. A **generic drug**, which does not have name recognition, is a less costly alternative to a brand name drug. The generic drug manufacturer must provide the same active ingredients as the brand name drugs; however, the manufacturing process is less costly to makers of generic drugs because they do not have to file for a patent. Generic drugs account for 80% of prescription drugs on the market. However, the Food and Drug Administration (FDA) conducts a stringent review of generic drugs to ensure that the drugs meet the same requirements as brand name drugs.

Brand name drugs, such as Lipitor and Viagra, are typically more expensive than generic drugs because such drugs might cost a pharmaceutical company more than $1 billion and take several years to develop. The FDA has traditionally upheld a very strict and lengthy approval process. However, recently, the FDA has removed red tape to expedite the process for drugs that can help serious diseases. When a patent is awarded, a pharmaceutical company typically has 20 years' patent protection to develop a drug. The time clock starts form the date of the patent application. However, because of the length of time it takes to determine the safety and effectiveness of a drug, once the drug is available to the public, the life span of the patent may be reduced several years (Mandal, 2019). Once that patent protection has ended, there are more opportunities for generic drug companies to control the market (Mandal, 2019).

Like health insurance companies, the pharmaceutical industry is often vilified because of the cost of some prescribed medications, which often precludes any consumers from purchasing these medications themselves without health insurance assistance. There has been public outcry over the continued increase in prescription drug costs nationwide, which has become a bipartisan political issue. The industry's response is that it takes millions of dollars and years of research to develop an effective medication and that is a major reason why some medications cost so much. The pharmaceutical industry is represented by the **Pharmaceutical Research and Manufacturers of America**. As part of the 2022 Inflation Reduction Act, monthly insulin costs have been capped of $35 for certain diabetic users. Medicare has also been given the power to negotiate drug prices with pharmaceutical companies.

Stakeholders' Environment

Working Conditions

Healthcare workers have many varied opportunities for workplace settings. Hospitals are a typical work environment, as are physician offices. As outpatient services have become more popular, healthcare

professionals can work from their homes. Healthcare professionals can work in outpatient facilities, schools, laboratories, corporations, and other unconventional settings. They are exposed to serious health hazards, including contaminated blood, chemicals, drugs, and X-ray radiation. Depending on the job requirements, there may be ergonomic issues due to lifting of patients and heavy equipment. This industry has one of the highest incidences of injuries and illnesses. In 2020, the healthcare industry reported a 40% increase in occupational injuries. Nurse assistants and nurses have the highest injury rates of all occupations (Occupational Safety and Health Administration, n.d.).

Projected Outlook for Employment

The healthcare industry's employment outlook is positive. Between 2020 and 2030, job growth will be 16%, adding an additional 2.6 million jobs, more jobs than any other occupational group (BLS, 2022a). Growth will most likely be outside the inpatient hospital centers because cost containment is the major priority for health care. Health care will continue to grow for three major reasons: the aging of the U.S. population, advances in medical technology, and the increased focus on outpatient care.

Healthcare Statistics

U.S. Healthcare Utilization Statistics

The **National Center for Health Statistics (NCHS)**, which is part of the CDC, produces annual reports on the health status of the United States. This publication, *Health, United States*, provides an overview of current data on healthcare utilization, resources, and expenditures. This publication examines all of the various aspects of the U.S. healthcare delivery system as well as assesses the health status of U.S. citizens. The following information is summarized from the 2020–2021 publication (National Center for Health Statistics, 2023).

U.S. Demographics and Healthcare

Life expectancy and infant mortality rates are indications of the health status of a designated population. **Life expectancy rates** calculate the average life span of an individual. It is typically calculated at birth, by ethnicity, at age 65, and by sex. **Infant mortality rates** are calculated by the number of deaths younger than 1 year of age among live births per 1000 births within a year. In 2019, life expectancy at birth was 78.8 years. Life expectancy at birth was 76.3 for males and 81.3 for females, a difference of 5 years, which is a typical sex trend. Life expectancy for black, not Hispanic, was 74.8 years and 81.9 years for Hispanics; a clear disparity. However, the life expectancy during the pandemic dropped dramatically, particularly among Hispanics and non-Hispanic blacks. Between 2018 and 2020, general life expectancy decreased 1.4 years with life expectancy among Hispanics and non-Hispanic blacks decreasing 3.9 and 3.25 years, respectively. These drops relate directly to vaccine access and beliefs about vaccine effectiveness.

In 2018, he national infant mortality rate was 5.6 deaths per live births. It was higher among non-Hispanic blacks (10.65 deaths 1000 births), non-Hispanic Native Hawaiian or other Pacific Islander (7.7), and non-Hispanic American Indian or Alaska Native (8.1). It was lower in Hispanic (3.6), non-Hispanic white (3.0) and non-Hispanic Asian (2.7) women. The variation in these rates is impacted by the types of program offered in geographic areas, access to prenatal programs, and healthcare cultural competency.

Healthcare Expenditures

Government spending in health care increased 36% in 2020 compared to 5.9% in 2019, which was the highest percentage increase of spending since 2002. The total healthcare spending in 2020 was $4.12 trillion, or 19.7% of the GDP. Increased federal spending was the result of lost revenue through the Provider Relief Fund ($122 billion in 2020) and the Paycheck Protection Program ($53 billion in 2020) and increased federal public health spending ($114.9 billion), including spending for vaccine development, COVID-19 testing, and health facility preparedness.

When spending for federal public health and other federal programs (which includes COVID-19 supplemental funding) is removed, national health expenditures (NHE) growth was only 1.9%, a slower rate of growth from the 4.3% increase in 2019, largely due to reduced use of medical care goods and services because of the pandemic. Out-of-pocket spending declined 3.7%, or $388.6 billion, in 2020, or 9% of the NHE, and private health insurance spending also decreased 1.2%, or $1.5 billion, in 2020.

Healthcare Payers

In 2020, 91.4% of the U.S. population was covered by public or private health insurance. Health expenditures for hospital care increased 6.4%, or $1.27 billion, in 2020. Physician and clinical services grew

5.4%, to $809 billion, in 2020, also a slight increase from 2019. Prescription drug spending increased 3%, or $809 billion, in 2020, a decrease from 4.2% in 2019. Due to more baby boomers retiring, resulting in a higher Medicare enrollment rate, Medicare is expected to experience a 7.6% spending growth per year from 2019–2028.

In 2020, Medicaid and Medicare spending grew 3.5% and 9%, respectively, while private pay and consumer out-of-pocket spending declined by 1.2% and 3.7%, respectively. Because of the pandemic, individuals opted not to visit their healthcare providers for non–COVID-19-related issues. Many hospitals also cancelled elective surgeries. Dental services also declined from the previous year.

In summary, hospital spending accounted for 31% of overall 2020 spending with physicians/clinics representing 20% of total spending. Prescription drug spending accounted for 8% of total health spending in 2020. Out-of-pocket spending decreased because many insurance companies voluntarily waived cost sharing for COVID-19 treatment (Lane et al., 2022).

U.S. and International Comparison of Health Statistics

Established in 1961, the **Organisation for Economic Cooperation and Development (OECD)** is a membership organization that provides comparable statistics of economic and social data worldwide and monitors trends of economic development. Currently, 35 countries, including the United States, are members of this organization. Their budget is derived from the member countries' contributions; the United States contributes 25% of the budget. The OECD produces, on a continual basis, a health data set of the 38 member countries, as well as several candidate and key partner countries. **Table 2.1** is a list of the OECD membership countries and their partners (OECD, 2021).

Health indicators, such as infant mortality rates, average life expectancy, and health risk behaviors, are used to evaluate the health status of a population. Because the United States spends the highest **per capita** or per person on health care in the world, it is expected that U.S. health indicators would rank superior to all other countries' healthcare indicators.

OECD Summary of Countries' Health Status

The following global healthcare discussions are included in the 2021 OECD *Health at Glance* publication. These discussions include the impact of the pandemic on the OECD countries and their partner members, vaccination efforts, the pandemic's impact on mental health, and the socioeconomic factors' impact on COVID-19. There is also a general discussion of the risk factors for health. The narratives also include an analysis of each of the tables and figures derived from the OECD publication.

Global Impact of the Pandemic

Globally, the pandemic impacted many aspects of healthcare services and the overall health status of countries. Healthcare spending increased because of COVID-19; there were more deaths in shorter period of time across the globe, resulting in a decrease in life expectancy; and access to health care was limited because systems were overwhelmed with COVID-19 care, and mental health and well-being were negatively impacted because of COVID-19. Despite these negative impacts, it is important to emphasize that vaccines did reduce the number of COVID-19 deaths. As stated earlier, life expectancy and infant mortality rates are data used to assess the health of a country. These rates speak to the type of health care that is provided or accessed at the beginning and end of life. These rates are used to assess the health of a designated geographic area. Because of the number of deaths resulting from COVID-19, life expectancy decreased in 20 out of the 24 OECD countries. In 2020, the United States, Spain, Lithuania, and Poland had the largest annual drop in life expectancy. Italy, Poland, Spain, and the United Kingdom had life expectancy rates at their 2020 levels. The U.S. 2020 life expectancy is similar to its 2010 life expectancy. Across the 38 OECD countries, the pandemic caused approximately 2.5 million excess deaths.

Prior to the pandemic, average health spending on OECD countries was approximately $4000 per person, with the United States spending nearly $11,000 per person on inpatient and outpatient services. The pandemic impacted healthcare spending, notably in Europe. The average GDP spending percentage increased from 8.8% in 2019 to 9.7% in 2020. For example, the United Kingdom's increase in heath spending rose from 10.2% in 2019 to 12.8% in 2020.

Global Vaccination Efforts

The rollout of vaccination programs globally in 2021 substantially decreased the risk of serious infections and deaths. Vaccination program implementation

Table 2.1 OECD Country ISO Codes

OECD Country ISO Codes			
Australia	AUS	Japan	JPN
Austria	AUT	Korea	KOR
Belgium	BEL	Latvia	LVA
Canada	CAN	Lithuania	LTU
Colombia	COL	Luxembourg	LUX
Costa Rica	CRI	Mexico	MEX
Chile	CHL	Netherlands	NLD
Czech Republic	CZE	New Zealand	NZL
Denmark	DNK	Norway	NOR
Estonia	EST	Poland	POL
Finland	FIN	Portugal	PRT
France	FRA	Slovak Republic	SVK
Germany	DEU	Slovenia	SVN
Greece	GRC	Spain	ESP
Hungary	HUN	Sweden	SWE
Iceland	ISL	Switzerland	CHE
Ireland	IRL	Turkey	TUR
Israel	ISR	United Kingdom	GBR
Italy	ITA	United States	USA
Partner Country ISO Codes			
Brazil	BRA	Indonesia	IDN
China	CHN	Russia	RUS
India	IND	South Africa	ZAF

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

has varied across OECD countries. The proportion of the population fully vaccinated ranged from 40% in Columbia to 86% in Portugal. Vaccination programs were hampered by regulations, vaccine inventory shortages and distribution strategies, and vaccine hesitancy in some countries. Israel, the United Kingdom, and the United States were among the first OECD countries to market and implement their vaccine programs, which resulted in reductions in new cases and deaths in 2021. **Table 2.2** outlines some of the socioeconomic factors impacting COVID-19 outcomes in these countries. Factors of deprivation, income, ethnicity, education, and migration are discussed.

Highlights of Socioeconomic Factors Impacting COVID-19 Outcome

Education

In Germany, 60% of people with lower education levels were at a higher risk of severe COVID-19, compared to 40% who had higher educational levels. In Belgium, older adults who completed lower education levels only were 40% more likely to die from COVID-19 than those with higher education completion. In general, completion of higher education levels had a positive impact among younger populations and women, who experienced lower mortality rates.

Table 2.2 Effect of Socioeconomic Factors on COVID-19 Outcomes in OECD Countries

Socioeconomic Status Indicator	COVID-19 Outcomes
Deprivation	■ In **Belgium**, excess mortality for the most deprived group was 11% higher during the peak of the first wave and 13% higher during the peak of the second wave, compared to the least deprived population (Bourguignon et al., 2020 [60]).
	■ In **Colombia**, the risk of death from COVID-19 was 73% higher among people of low socioeconomic status, compared to those of high socioeconomic status (Cifuentes et al., 2021 [61]).
	■ In **Germany**, while COVID-19 incidence was initially higher in less-deprived areas, this trend eventually reversed as incidence climbed in more deprived areas and declined in areas of low deprivation (Wachtler et al., 2020 [62]; Hoebel et al., 2021 [63]).
	■ In **Italy**, the incidence rate ratio for COVID-19 between the most deprived and least deprived quintile grew following the lockdown, from 1.14 to 1.47 (Mateo-Urdiales et al., 2021 [64]).
	■ In the **United Kingdom**, the COVID-19 death rate was 2.2 times higher in England in the most deprived areas compared to the least deprived areas between March and July 2020 (ONS, 2020 [55]). Between March and May 2020, males in the most deprived quintile in England had death rates 2.3 times higher than those in the least deprived quintile, while females in the most deprived quintile had death rates 2.4 times higher than females in the least deprived quintile (Public Health England, 2020 [65]).
	■ In the **United States**, the most disadvantaged counties consistently reported higher death rates than more advantaged counties (Chen and Krieger, 2020[66]). A 5% increase in poor housing conditions per county was associated with a 42% increase in relative risk of mortality from COVID-19 (Ahmad et al., 2020 [67]).
Income	■ In **Belgium**, excess mortality among gender in the lowest income decile was twice as high as that of people in the highest income decile (Decoster, Minten and Spinnewijn, 2020 [56]).
	■ In **Korea**, lower socioeconomic status was associated with a 19% increase in the risk of infection with COVID-19 compared with higher socio-economic status (Oh, Choi and Song, 2021[68]). The mortality rate for recipients of Medical Aid was seven times higher than for National Health Insurance Service beneficiaries (Lee et al., 2021 [69]).
	■ In **Luxembourg**, COVID-19 cases among low-income groups were more than one-third (37%) higher than among high-income groups, though deaths per population were higher among the high-income group (Berchet, forthcoming [70]).
	■ In the **Netherlands**, the relative mortality risk from COVID-19 was twice as high among households in the lowest income group, compared to households in the highest income group (Statistics Netherlands, 2021 [71]).
	■ In **Sweden**, men in the lowest income tertile experienced about 75% higher mortality than men in the highest income tertile, while women in the bottom income tertile experienced 26% higher mortality than women in the highest income tertile (Drefahl et al., 2020 [57]).
Education	■ In **Germany**, people with low educational attainment were at a higher risk of developing severe COVID-19: 69.8% were at a higher risk of severe COVID-19, compared with 40.9% of those with high educational attainment.
	■ In **Belgium**, older adults who did not finish primary school experienced mortality rates from COVID-19 nearly 40% higher than those who had completed higher education (Decoster, Minten and Spinnewijn, 2020 [56]).
	■ In **Sweden**, men and women with primary educational attainment had COVID-19 mortality rates 24% and 51% higher than men and women who had completed post-secondary education, while men and women with secondary educational attainment had mortality rates 25% and 38% higher than those who had completed post-secondary schooling (Drefahl et al., 2020 [57]). The impact of education was stronger among younger populations and women at all ages (National Board of Health and Welfare, 2021 [73]).

(continues)

Table 2.2 Effect of Socioeconomic Factors on COVID-19 Outcomes in OECD Countries *(continued)*

Ethnicity	■ In **Brazil**, the mortality risk from COVID-19 was 1.5 times higher among the black population, despite a higher incidence rate among the white population, and black and Pardo Brazilians admitted to hospital were at a 1.3–1.5 times higher risk of mortality compared with white Brazilians (Martins-Filho et al., 2021 [58]).
	■ In **Canada**, the mortality rate from COVID-19 in communities with the highest proportion of visible minorities was about twice as high as in communities with the lowest proportion (Subedi, Greenberg and Turcotte, 2020 [74]).
	■ In **Mexico**, Indigenous people had higher odds of dying than non-Indigeneous people, with hospitalized Indigenous patients at 1.13 times higher risk of dying of COVID-19 than non-Indigenous patients (Ibarra-Nava et al., 2021 [75]).
	■ In **New Zealand**, the odds of more severe outcomes were more than twice (2.15) as high for people of Asian ethnicity, and nearly three (2.76) times as high for people of Pacific ethnicity, compared with those of European and other ethnicity (Jefferies et al., 2020 [76]).
	■ In the **United Kingdom**, black African males had a COVID-19 mortality rate 3.7 times higher than that of white British males during the first wave of the pandemic. During the second wave, ethnic minorities remained at an elevated risk of dying, but differences for most groups (excluding people of Bangladeshi and Pakistani descent) were smaller than during the initial wave of the pandemic (ONS, 2021 [77]).
	■ In the **United States**, the risk of hospitalization for COVID-19 was 2.8–3.5 times higher, and the risk of mortality 2.0–2.4 times higher, for American Indian, Native Alaskan, Hispanic, Latino, black and African-American people compared with non-Hispanic white residents (Centers for Disease Control and Prevention, 2021 [78]).
Migration	■ In **Denmark** (capital region), immigrants from non-European countries and their descendants had 26% of all COVID-19 infections, despite representing just 13% of the population in the region (Statens Serum Institut, 2020 [79]).
	■ In **France**, mortality among those born in France increased by 22% in March-April 2020 compared with the same period in 2019, but by 54% among those born in the Maghreb, 91% among those born in Asia, and 114% among those born in non-Maghreb African countries (Papon and Robert-Bobée, 2020 [80]).
	■ In **Italy**, people from countries with a low Human Development Index (HDI) were 1.39 times more likely to be hospitalised, and 1.32 times more likely to die, than people born in Italy (Fabiani et al., 2021).
	■ In **Luxembourg**, people born abroad were 1.18 more likely to be infected with COVID-19, though excess mortality among foreign-born residents was 57% that of the Luxembourg-born population (Berchet, forthcoming [70]).
	■ In **Norway**, COVID-19 hospital admission rates were three times higher for people born outside of the country (and more than 15 times higher for individuals born in Pakistan and Somalia), compared with those born in Norway (NIPH, 2021 [59]).
	■ In **Sweden**, excess mortality between March and May 2020 among those aged 65 and over was more than ten times higher among immigrants from Iraq, Somalia, and Syria (220%), compared to those born in Sweden, Europe, or North America (Hansson et al., 2020 [81]). The mortality risk from COVID-19 for people from the Middle East and Northern Africa was more than 3 times higher for males and 2 times higher for females, compared with people born in Sweden (Drefahl et al., 2020 [57]).
	■ In the **United Kingdom**, excess mortality rose more dramatically among people born outside the country than those born within it. Compared with the average of recent years, deaths between March and May 2020 were 1.7 times higher among those born in the United Kingdom, but more than 3 times higher among individuals born in Eastern and Southern Africa, the Middle East, Southeast Asia and the Caribbean, and 4.5 times higher among migrants from Central and Western Africa (Public Health England, 2020 [65]).

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators.* OECD Publishing. https://doi.org/10.1787/ae3016b9-en

Ethnicity

In Brazil, the prevalence of COVID-19 was 1.5 times higher in the black population despite a higher incidence rate in the white population. In Canada, the mortality rates in communities with higher percentages of minorities was twice as high as communities with less minority populations. In the United States, the hospitalization risk for COVID-19 was 2.8–3.5 times higher for American Indians/Alaska Natives, Hispanics, Latinos, and black and African Americans than non-Hispanic whites.

Migration

In Denmark, immigrants from non-European countries represented 26% of the COVID-19 cases while only representing 13% of the population in that region. In Sweden, mortality between March and May 2020 among those 65 years and older was more than 10 times higher among immigrants from Somalia, Iraq, and Syria. These summary statements reflect those groups who are at higher risk due to lack of access to care, lack of cultural competency with these groups, and higher risk of contracting the disease.

Mental Health Impact of the Pandemic

Mental health issues from the pandemic have impacted professional healthcare workers and the general population. Because of the incredible strain placed on professional healthcare workers, surveys indicated that many of them demonstrated symptoms of anxiety and post-traumatic stress disorder (PTSD). In a March 2020 survey of Italian healthcare workers who worked directly with patients, nearly 50% exhibited symptoms of PTSD, with 25% reporting depression. In the United States, 62% of frontline health workers reported that stress and worry impacted their mental health and their physical health. One-third had received mental health services.

The risk factors for the general population for mental health issues were financial issues, unemployment, risk of contracting the disease, and worry about other family members. The prevalence of anxiety and depression in early 2020 was double from previous years in several countries, including the United States, United Kingdom, and France. Where there was a peak in the disease, levels of anxiety and depression increased. Higher levels of anxiety and depression occurred in people with lower educational status and income, and young people. However, a 2020 U.S. survey indicated that people of higher socioeconomic status (SES) reported higher levels of dissatisfaction and increases in depression than those of lower SES status. This could be because higher SES status results in more disposable income, which people were not allowed to use because of the pandemic. A positive impact of the pandemic was the increased use of telehealth services. Across 22 OECD countries, 45% of adults received a medical consultation by telephone or online. A negative to the use of telehealth is the reluctance for older patients to use this type of service. However, there was a steep decline in preventive screenings for cancer and primary care visits because patients were afraid to visit their providers. Individuals in OECD countries reported forgoing medical appointments during the pandemic because they had no availability or they were afraid of contracting COVID-19. One-third of citizens in Hungary and Poland reported missing medical appointments. It is anticipated that there will be an increase in cancer cases and other chronic diseases post pandemic because of a lack of medical visits worldwide.

Figure 2.2 reflects healthcare spending as a share of the gross domestic product of these OECD countries. Healthcare spending is calculated as part of the country's GDP. The GDP percentage is calculated by how much goods and services are produced in the country during a 12-month period. In 2019, prior to the pandemic, the GDP average across the OECD countries was 8.8%, with the U.S. spending the most at 16.8% and Germany next at 11.7%. The lowest GDP percentages were Indonesia and India at 2.9% and 3.6%, respectively. The amount of the GDP percentage spent on health care increased during the pandemic. In 2020, the average OECD GDP increased to 9.7% from the 2019 rate of 8.8%. In 2020, most countries experienced increases in their healthcare spending rates from 2019. The U.S. rates percentage of the GDP increased to 12.5%. The costs of medical care for COVID-19 were high and the amount of economic interruptions was also high, which increased the rates. Highest Healthcare spending percentage estimates of GDP indicated that from 2019 to 2020, in the UK, increased nearly 3% from 10.2% to 12.8% and Estonia's rate increased from 6.7% to 8.1%.

Risk Factors for Health

Lifestyles, such as tobacco use, alcohol consumption, and obesity, impact health outcomes. Education, SES, and air pollution also have an impact on health status, as well as access to care. If people do not have health insurance, their health status suffers because they do not routinely take care of their health. The following tables and discussion compare the U.S. health data with the other OECD countries.

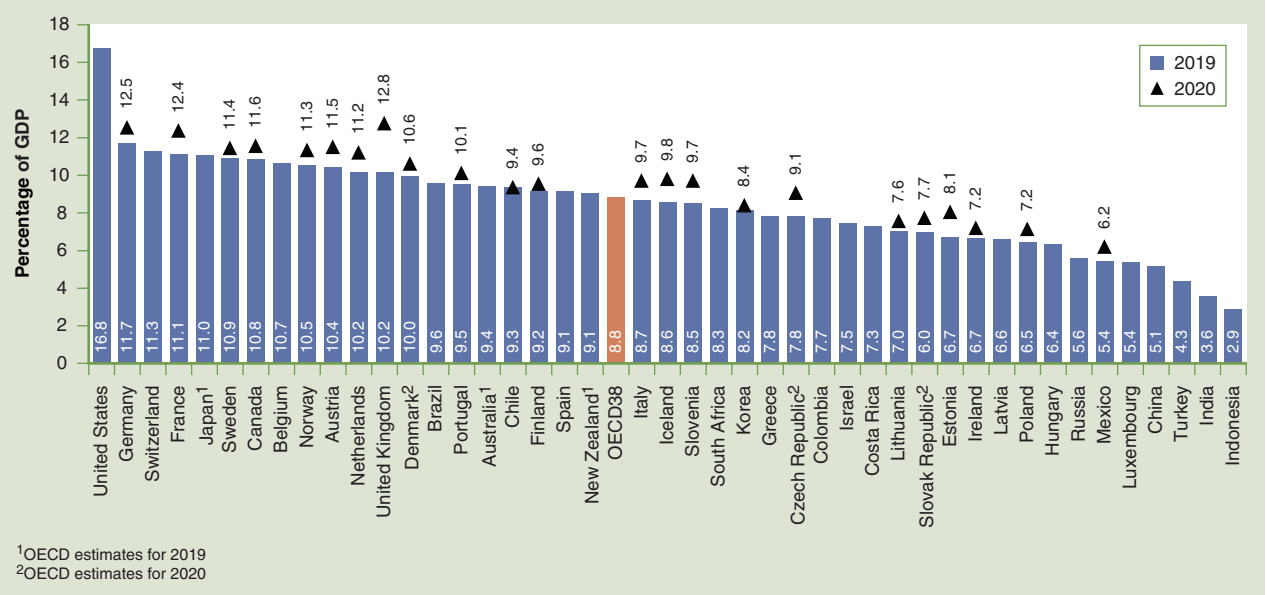

Figure 2.2 Health Expenditure as a Share of GDP, 2019 (or Nearest Year) and 2020

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

Access to Health Care: Affordability, Availability and Use of Services, User Satisfaction

Figures 2.3, 2.4, and **2.5** reflect coverage for healthcare services, consumer satisfaction of access to quality health care, and extent of coverage. The goal of healthcare systems is access to quality health care for their populations. Most OECD countries have universal healthcare coverage for a core set of services, either through government programs or primary health insurance coverage. The United States does not have universal health coverage, though some pundits have indicated that Medicare is a form of universal health coverage for those 65 years or older. In 2019, across 27 countries with similar data, only 2.6% reported unmet need due to geographic limitations or financial constraints. Government programs are typically funded through taxes, such as payroll taxes. The OECD average total population coverage for a core set of services in 2019 was 98%. The United States offers 37% coverage with 53% coverage with primary private health insurance coverage. Chile covered 78% of the population with 18% with private health insurance. Both Switzerland and the Netherlands have systems that are 100% through mandated primary private health

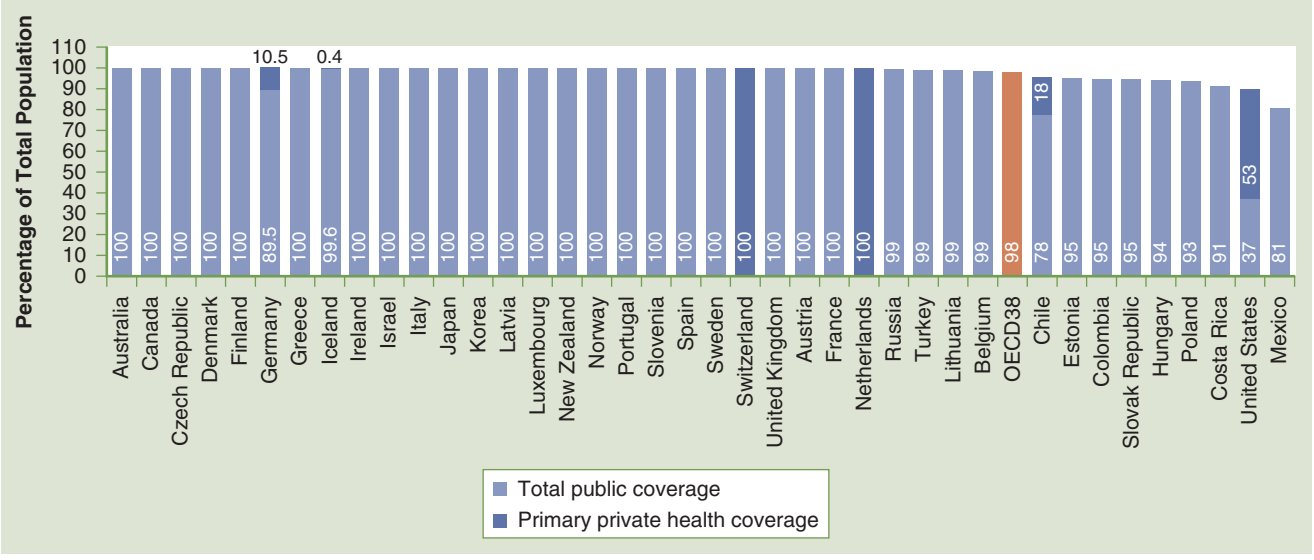

Figure 2.3 Population Coverage for a Core Set of Services, 2019 (or Nearest Year)

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

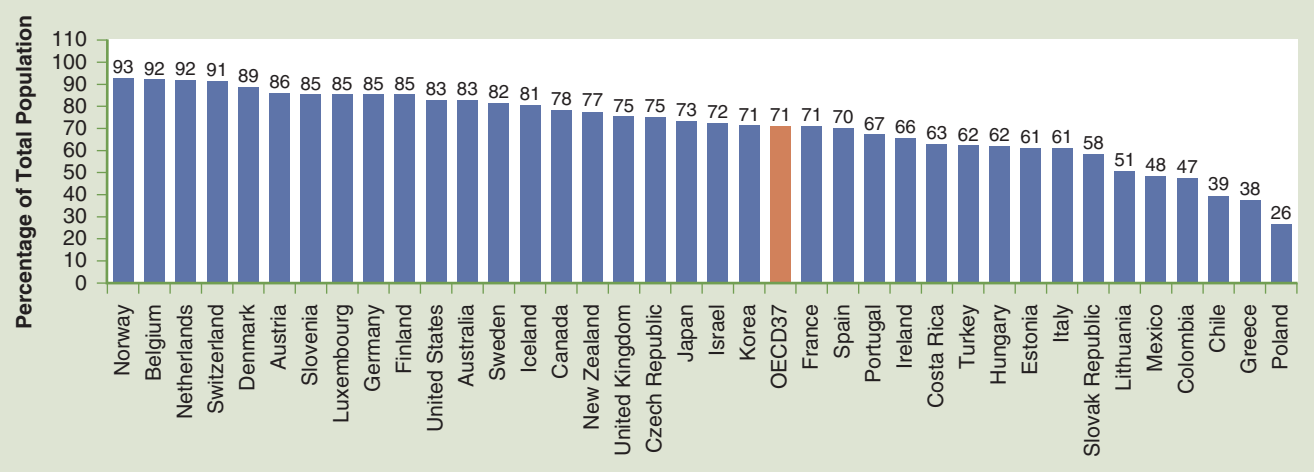

Figure 2.4 Population Satisfied with the Availability of Quality Health Care in the Area Where They Live, 2020 (or Nearest Year)

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

insurance supported by laws and subsidies. In some countries, there is an option to purchase private health insurance to cover out-of-pocket expenses (Figure 2.3). This option is used in Slovenia, Korea, Israel, and the Netherlands. Satisfaction is linked to individuals' access to quality health care. The OECD average of the satisfaction of individuals with their healthcare coverage was 71% (Figure 2.4). The U.S. reported 83% were satisfied with the quality of health coverage in their area. Norway, Belgium, and the Netherlands' satisfaction levels were over 90% with the least satisfied in Chile (39%), Greece (38%), and Poland (26%). Dissatisfaction is consistently reported by lower income groups.

Figure 2.5 reflects the 2019 extent of coverage in reporting OECD countries, which is broken down by hospital care, outpatient care, dental, and pharmaceuticals. The average extent of coverage in OECD countries was 74%, ranging from 41% in Brazil to 86% in Norway (U.S. data were not available). Hospital care coverage in OECD countries was 87% with the lowest in Brazil at 47% and the highest, with 99%, in Norway, Sweden, and Iceland. Several countries had over 90% offering hospital care coverage. Outpatient medical care OECD coverage average was 77% with the highest coverage in the Slovak Republic at 98%, then Denmark and Sweden (91%) and the Czech Republic (90%), with the lowest in Brazil at 58%. Both dental care and pharmaceutical care coverage were two necessary health services that were less covered. The OECD average coverage for dental care was 30%. The lowest percentage of dental care coverage was in Greece (0%), followed by Israel, Spain, and the Netherlands (2%). The highest dental coverage was in Japan at 79%. Pharmaceutical average coverage was 56% in the OECD countries, with the lowest coverage in Poland (36%) and the highest in France (80%) and Ireland (79%). Both dental care and pharmaceutical care are important to the overall positive health status of individuals. Inability to pay for these services effects people's access to health care because those individuals will not seek health care.

Life Expectancy and Influencing Factors

Table 2.3 is a dashboard on the 2019 health status of OECD countries, which provides data on life expectancy, avoidable mortality (deaths per 100,000), chronic disease morbidity (diabetes prevalence) and self-rated health (population in poor health). Life expectancy rates have improved in the majority of OECD countries over several decades, but the impact of COVID-19 led to a decrease in life expectancy rates worldwide. In 2019, the average life expectancy rate reported by 38 countries was 81 years of age. Twenty-seven OECD countries exceeded this average, with Japan, Switzerland, and Spain having the highest life expectancy rates of 84.4, 84 and 83.9 respectively. The United States' life expectancy rate is 78.9 years of age which is below the OECD average. South Africa and India have the lowest life expectancy rates in 2019 of 64.2 and 69.7. Since 1970, Turkey (+24 years), Chile (+18 years), and Korea (+21 years) have experienced the highest life expectancy gains. Life expectancy is tied to lifestyle, socioeconomic and environmental factors, and access to routine health care. Because the United States does not have a universal healthcare system, the life expectancy rate is also influenced by the different accessibility rates to healthcare services in the states. Because of impact of COVID-19 death rates, there was also a decrease in life expectancy rates between 2019 and 2020, which will impact

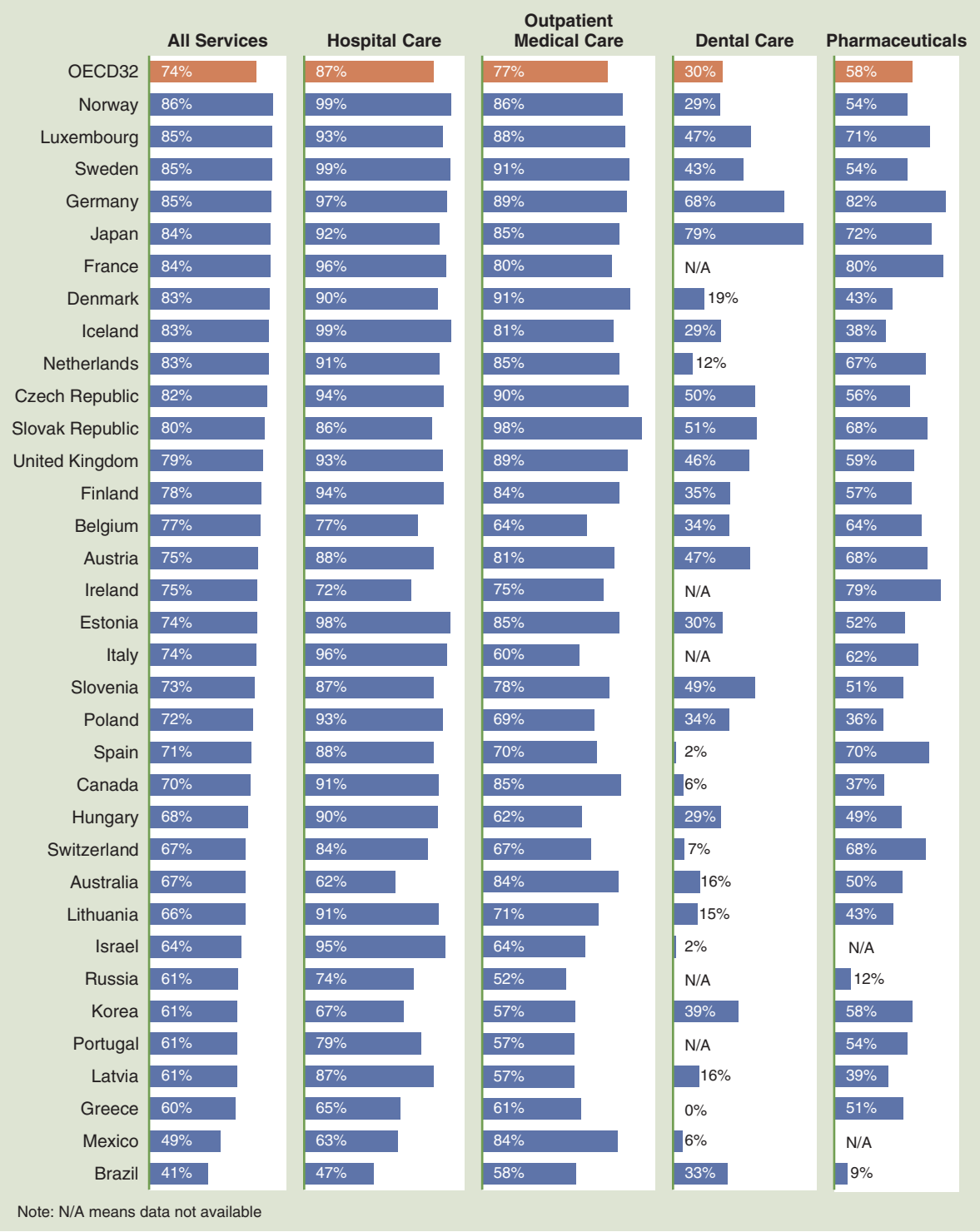

Figure 2.5 Extent of Coverage, 2019 (or Nearest Year)

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators.* OECD Publishing. https://doi.org/10.1787/ae3016b9-en

the overall life expectancy rates. In the United States the life expectancy rate decreased by 18 months because of the COVID-19 mortality rates.

Avoidable Mortality

Avoidable mortality refers to deaths that are preventable and treatable. This term points to the effectiveness of public health measures and healthcare access. In 2019, there were over 3 million avoidable deaths of people 75 years of age and younger. Analysis indicates that 1.9 million deaths were preventable with effective primary prevention and 1 million were preventable with timely healthcare treatment. The main treatable mortality was related to heart attacks and strokes. Effective treatment for cancer would have reduced

Table 2.3 Dashboard on Health Status, 2019 (or Nearest Year)

	Life Expectancy		Avoidable Mortality		Chronic Disease Morbidity		Self-Rated Health	
	Years of Life at Birth		Deaths per 100,000 Population (age-standardized)		Diabetes Prevalence (% adults, age-standardized)		Population in Poor Health (% population aged 15+)	
OECD	**81.0**		**199**		**6.7**		**8.5**	
Australia	83.0	◉	139	☑	5.6	◉	3.7	☑
Austria	82.0	◉	170	◉	6.6	◉	7.8	◉
Belgium	82.1	◉	173	◉			9.1	◉
Canada	82.1	◉	172	◉	7.6	◉	2.8	☑
Chile	80.6	◉	191	◉	8.6	◉	6.6	◉
Colombia	76.7	☒	237	◉	7.4	◉	1.3	☑
Costa Rica	80.5	◉	209	◉	9.1	☒		
Czech Republic	79.3	◉	234	◉	7.0	◉	10.4	◉
Denmark	81.5	◉	167	◉			8.3	◉
Estonia	78.8	◉	281	☒	4.2	☑	13.3	☒
Finland	82.1	◉	176	◉	5.6	◉	5.6	◉
France	82.9	◉	153	◉	4.8	◉	8.9	◉
Germany	81.4	◉	175	◉	10.4	☒	8.5	◉
Greece	81.7	◉	179	◉	4.7	◉	6.6	◉
Hungary	76.4	☒	374	☒	6.9	◉	11.8	◉
Iceland	83.2	◉	126	☑	5.8	◉	5.9	◉
Ireland	82.8	◉	172	◉	3.2	☑	3.2	☑
Israel	82.9	◉	125	☑	9.7	☒	11.0	◉
Italy	83.6	☑	136	☑	5.0	◉	7.0	◉
Japan	84.4	☑	130	☑	5.6	◉	13.6	☒
Korea	83.3	◉	139	☑	6.9	◉	15.2	☒
Latvia	75.5	☒	405	☒	5.0	◉	15.4	☒
Lithuania	76.4	☒	364	☒	3.8	☑	15.2	☒
Luxembourg	82.7	◉	97	☑	5.0	◉	9.0	◉
Mexico	75.1	☒	366	☒	13.5	☒		
Netherlands	82.2	◉	145	☑	5.4	◉	5.5	◉
New Zealand	82.1	◉	168	◉	6.2	◉	2.6	☑
Norway	83.0	◉	145	☑	5.3	◉	8.6	◉
Poland	78.0	☒	268	☒	6.1	◉	12.8	☒
Portugal	81.8	◉	173	◉	9.8	☒	15.2	☒
Slovak Republic	77.8	☒	322	☒	6.5	◉	12.6	☒

(Continues)

Table 2.3 Dashboard on Health Status, 2019 (or Nearest Year) *(Continued)*

Slovenia	81.6	◉	185	◉	5.9	◉	9.6	◉
Spain	83.9	☑	141	☑	6.9	◉	7.2	◉
Sweden	83.2	◉	140	☑	4.8	◉	5.1	◉
Switzerland	84.0	☑	122	☑	5.7	◉	4.2	☑
Turkey	78.6	◉	216	◉	11.1	☒	10.4	◉
United Kingdom	81.4	◉	188	◉	3.9	☑	7.4	◉
United States	78.9	◉	265	☒	10.8	☒	3.3	☑

Note: ☑ Better than OECD average; ◉ Close to OECD average; ☒ Worse than OECD average.
Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

mortality rates. The average age-standardized mortality rate in OECD countries from preventable deaths was 126 deaths per 100,000 people, ranging from 90 to 200 deaths in these countries. The U.S. rate was 177 per 100,000 people. The higher rates were related to heart disease, accidents, and alcohol-related deaths. Mortality rates from treatable causes was lower, at 73 per 100,000 people, ranging from 50 to 130 deaths across these countries. The U.S. rate was 88 per 100,000. Preventable mortality rates were 2.5 times higher in males than females. Also, treatable mortality rates were 36% higher in males than females. These differences are linked to high-risk behavior factors such as smoking and alcohol abuse and how effective and accessible are smoking and alcohol treatment programs.

Chronic Disease Mortality. Diabetes prevalence was chosen because it is a major chronic disease and it is a reflection of obesity rates in countries as well as high-risk lifestyle behaviors such as poor diet and lack of physical activity. The OECD average diabetes prevalence percentage in adults is 6.7%. The U.S. percentage is higher at 10.8%. Other double digit percentages include Germany (10.4), Mexico (13.5), and Turkey (11.1). Countries with the lowest percentages include Ireland (3.2%), Lithuania (3.8%) and the United Kingdom (3.9%). These percentages can be a reflection of the effectiveness of public health programs and access to health care as well as the social determinants of health such as environment, education, and lifestyle.

Self-Rated Health (Percentage reporting over 15 years of age). The OECD average of those rating themselves in poor health is 8.5%. The U.S. self-rating percentage is 3.3%, which is one of the lower percentages. Columbia reported 1.3%, New Zealand (2.6%), Canada (2.8%), Ireland (3.2%), and Australia (3.7%). The highest self-rating of poor health was Latvia (15.4%), and Portugal, Lithuania, and Korea at 15.5%. These results reflect that individuals who have lower incomes are less positive about their health. These data country comparisons are limited by cultural differences, aging demographics, and survey collection differences, but consumer opinions of their health are important. Lower income individuals are impacted by out-of-pocket costs for healthcare, access, quality of healthcare, and their living conditions.

Infant, Child, and Adolescent Health

Environmental and socioeconomic factors influence the health of children. **Figure 2.6** reveals infant mortality rates in the OECD countries. As with life expectancy rates, is an indicator of the health status of a country. Routine access to health care can be extremely valuable in reducing infant mortality rates. Approximately two-thirds of infant deaths occur during the first 28 days of life, which can be prevented if infants have access to health care. Infant death causes after the first 28 days include birth defects, infections, accidents, and infant death syndrome. Child mortality rates have greatly decreased over the past decades. Infant death rates are low in most OECD countries. In 2019, the OECD average was 4.2 infant deaths per 1000 live births. The U.S. rate is 5.7 infant deaths. In the OECD partner countries, the average infant mortality rate is 20 deaths per 1000 live births. Higher death rates exist in vulnerable populations, such as lower 30 statuses and ethnic populations. It is important to emphasize that the infant mortality rates have decreased over the past decades.

Adolescent Health

Smoking and Alcohol Use Among Adolescents. **Figures 2.7** and **2.8** focus on smoking and drunkenness among 15-year-olds by sex. There has been an increase in chronic diseases in children and adolescents due to lifestyle, smoking, and diet. Chronic diseases as well as mental health

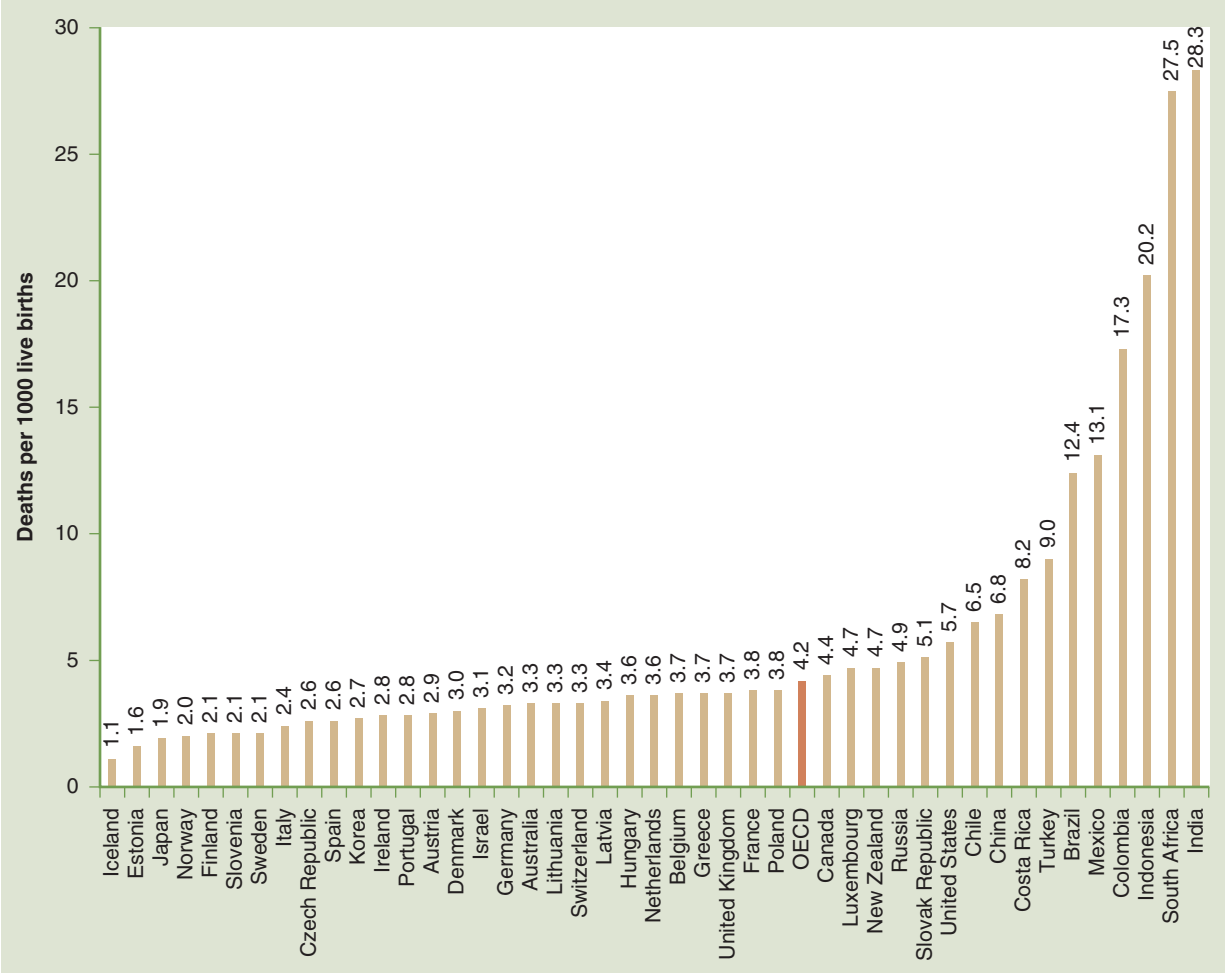

Figure 2.6 Infant Mortality Rates

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

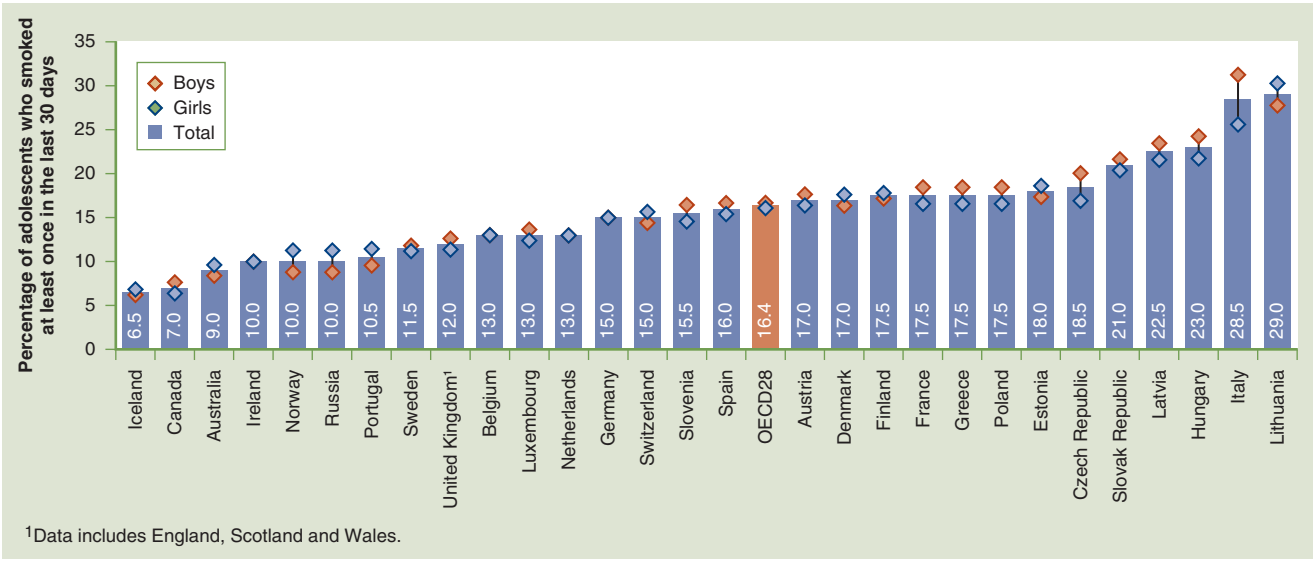

Figure 2.7 Smoking Among 15-Year-Olds, by Sex, 2017–2018

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

Figure 2.8 Drunkenness Among 15-Year-olds, by Sex, 2017–2018

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators.* OECD Publishing. https://doi.org/10.1787/ae3016b9-en

issues, which are becoming more common in young people, can be a predictor of adult chronic health diseases. In 27 OECD countries, 28% of 11-year-old and 41% of 15-year-old children complained about poor physical and mental health more than once per week. When children, like adults, are unhappy, they turn to high-risk behaviors such as smoking and drinking. In 2017–2018, the average OECD percentage rate of smoking at least once per month by 15-year-olds was 16%, and 20% of 15-year-olds experienced drunkenness at least twice, which represented a decrease in these behaviors over the past few years. This decrease is the result in the increase of smoke-free policies in both indoor and outdoor public places, public transportation, and in workplaces. Some countries have banned alcohol sponsorships of sports events.

Overweight and Obesity. Child overweight and obesity rates have increased globally. **Figures 2.9** focuses on changes in overweight and obesity rates in 15-year-olds, and **Figure 2.10** shows overweight and obesity rates in 15-year-olds by sex. Overweight and obesity create a greater risk of high blood pressure. COVID-19 restrictions to people's lives increased the overweight and obesity rates. A limitation of these data is it is not measured data, but self-reported,

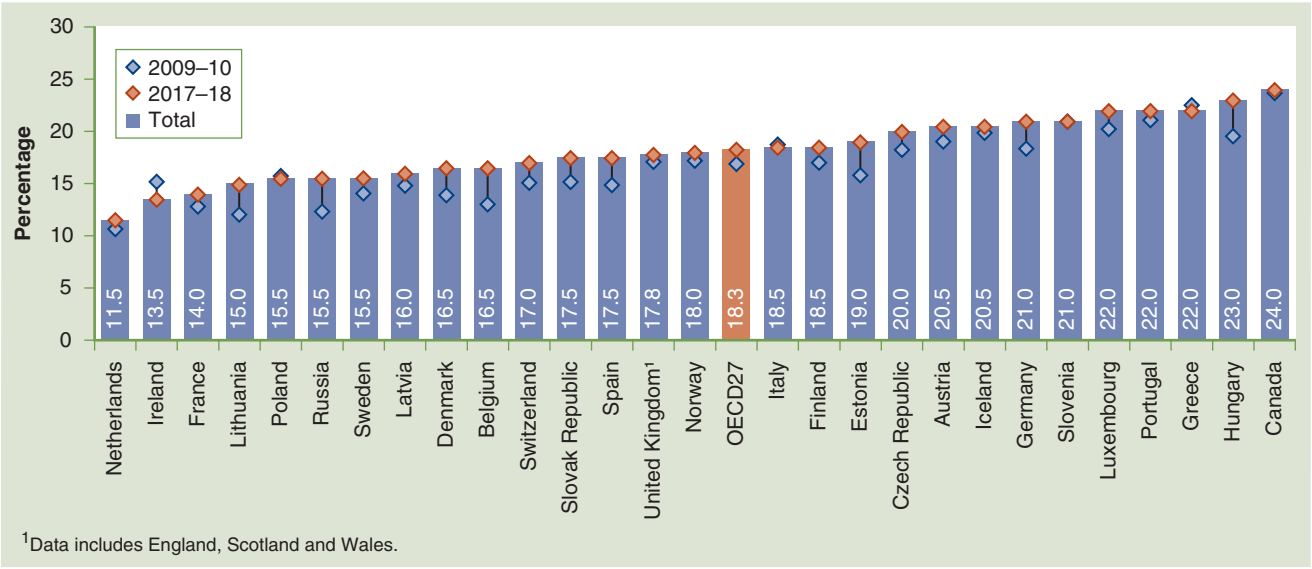

Figure 2.9 Self-Reported Overweight (Including Obesity) Among 15-Year-Olds, 2009–2010 and 2017–2018

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators.* OECD Publishing. https://doi.org/10.1787/ae3016b9-en

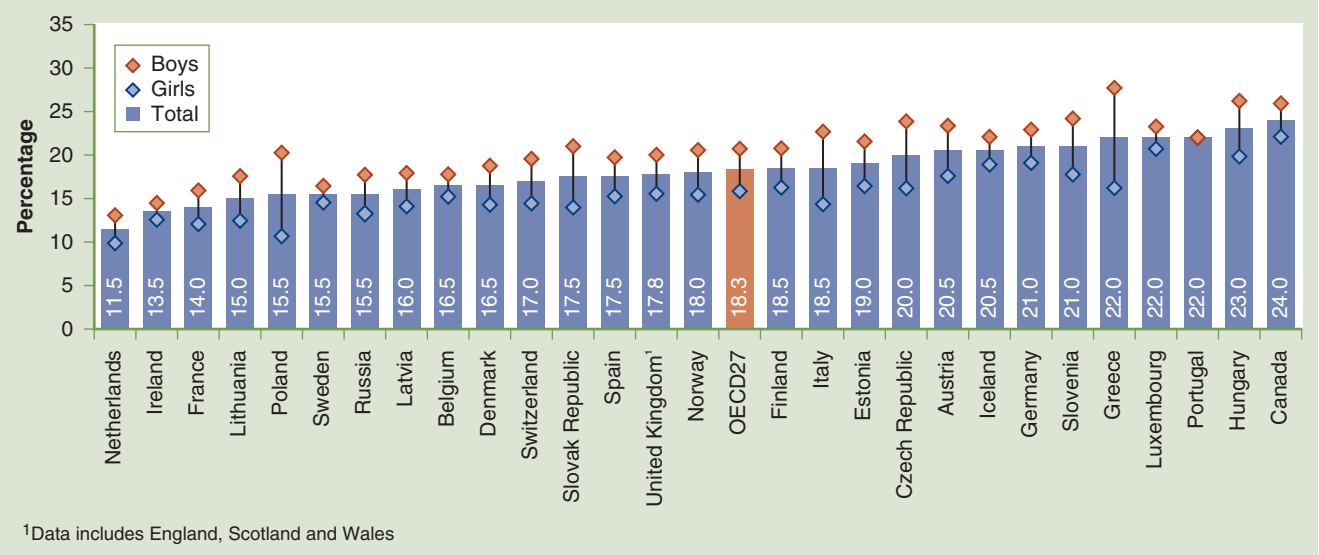

Figure 2.10 Self-Reported Overweight (Including Obesity) Among 15-Year-Olds, By Sex, 2017–2018

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

Table 2.4 Dashboard on Risk Factors for Health, 2019 (or Nearest Year)

	Smoking		Alcohol		Overweight / Obese			Ambient Air Pollution	
	Daily Smokers (% population aged 15+)		Liters Consumed per Capita (population aged 15+)		Population with BMI ≥ 25 (% population aged 15+)		Self-Reported	Deaths (per 100,000 population)	
OECD	**16.5**		**8.7**		**56.4**			**29**	
Australia	11.2	◉	9.5	◉	65.2	◉		7	☑
Austria	20.6	◉	11.6	☒	51.1	◉	*	27	◉
Belgium	15.4	◉	9.2	◉	55.4	◉		30	◉
Canada	10.3	☑	8	◉	59.8	◉	*	10	☑
Chile	24.5	☒	7.1	◉	74.2	☒		31	◉
Colombia			4.1	☑				26	◉
Costa Rica	4.2	☑	3.1	☑				19	◉
Czech Republic	18.1	◉	11.9	☒	58.4	◉	*	59	☒
Denmark	16.9	◉	9.5	◉	48.8	◉	*	22	◉
Estonia	17.9	◉	10.4	◉	51.3	◉		12	◉
Finland	13.0	◉	8.2	◉	67.6	☒		7	☑
France	24	☒	11.4	◉	49.0	◉		20	◉
Germany	18.8	◉	10.6	◉	60.0	◉		32	◉
Greece	24.9	☒	6.3	◉	57.2	◉	*	55	☒
Hungary	24.9	☒	11.4	◉	67.6	☒		72	☒
Iceland	8.2	☑	7.7	◉	65.4	◉	*	5	☑

(Continues)

Table 2.4 Dashboard on Risk Factors for Health, 2019 (or Nearest Year) *(Continued)*

Ireland	14.0	◉	10.8	◉	61.0	◉		11	☑
Israel	16.4	◉	3.1	☑	50.9	◉		27	◉
Italy	18.6	◉	7.7	◉	46.4	◉	*	41	◉
Japan	16.7	◉	7.1	◉	27.2	☑		31	◉
Korea	16.4	◉	8.3	◉	33.7	☑		43	◉
Latvia	22.6	☒	12.9	☒	58.7	◉		59	☒
Lithuania	18.9	◉	11.1	◉	55.0	◉	*	46	◉
Luxembourg	16.8	◉	11	◉	48.4	◉	*	15	◉
Mexico	7.6	☑	4.4	☑	75.2	☒		29	◉
Netherlands	15.4	◉	8.2	◉	48.4	◉	*	27	◉
New Zealand	12.5	◉	8.8	◉	65.1	◉		6	☑
Norway	9.0	☑	6.1	◉	48.0	◉	*	7	☑
Poland	17.1	◉	11	◉	56.7	◉	*	73	☒
Portugal	14.2	◉	10.4	◉	67.6	☒		20	◉
Slovak Republic	21	◉	10.3	◉	57.7	◉	*	64	☒
Slovenia	17.4	◉	11.1	◉	56.5	◉	*	40	◉
Spain	19.8	◉	10.7	◉	50.2	◉	*	19	◉
Sweden	10.4	☑	7.1	◉	49.1	◉	*	6	☑
Switzerland	19.1	◉	9.3	◉	41.8	☑	*	16	◉
Turkey	28	☒	1.3	☑	64.4	◉		50	☒
United Kingdom	15.8	◉	9.7	◉	64.2	◉		21	◉
United States	10.9	☑	8.9	◉	73.1	☒		15	◉

Note: ☑ Better than OECD average; ◉ Close to OECD average; ☒ Worse than OECD average. Hungary, Latvia, and Lithuania excluded from standard deviation calculation for ambient air pollution.
*Likely underestimate of obesity as self-reported data.
Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

which may imply a bias. However, these data provide estimates about this major public health issue. Social inequalities such as lower income resulted in higher overweight and obesity rates. In 27 countries, nearly 26% of adolescents from lower SES areas were overweight or obese compared to 16% in affluent families.

Adult Health

Smoking and Alcohol Use. **Table 2.4** identifies the risk factors for health including smoking, alcohol and air pollution. Smoking is the leading cause of heart attacks, strokes, and cancer. The World Health Organization estimates that 8 million people die annually from smoking, of which 1.2 million deaths are from secondhand smoke. The prevalence of smoking has decreased over the years. The effect of COVID-19 increased smoking among smokers but decreased consumption in older smokers. COVID-19 education indicated that older smokers developed a more severe form of the disease. Alcohol use is a leading cause of death and disability globally. Alcohol intake is a risk factor for strokes, heart diseases, and liver disease. Alcohol abuse contributes to car accidents, violence, suicides, and mental health issues. Alcohol use increased during the pandemic.

In 2019, the average amount of adult alcohol intake was 2.3 gallons per person across all OECD countries. Reports indicated there was an increase in

alcohol intake during the pandemic globally. Based on the country, people with an alcohol abuse disorder make up between 4% and 14% of the population but represent between 30% and 54% of the alcohol consumed. Alcohol users with higher education tended to be weekly drinkers. Individuals with higher education tend to have more disposable income; however, research indicates that alcohol abuse is linked to lower SES.

Overweight and Obesity. Figures 2.11 and 2.12 focus on overweight and obesity rates in adults by sex. Overweight and obesity rates were based on measured height and weight data or self-reported data. Self-reported data may have a bias because participants would underestimate their weights. Overweight and obesity conditions are risk factors for type 2 diabetes, high blood pressure, and heart disease. These conditions will contribute to a loss of life expectancy by nearly 3 years over the next three decades. People who were obese were at risk for severe COVID-19 complications. Height and weight data indicated that 20 OECD countries reported over 60% of their populations were overweight or obese. Mexico, Chile, and the United States reported rates of 70%, with Japan and Korea

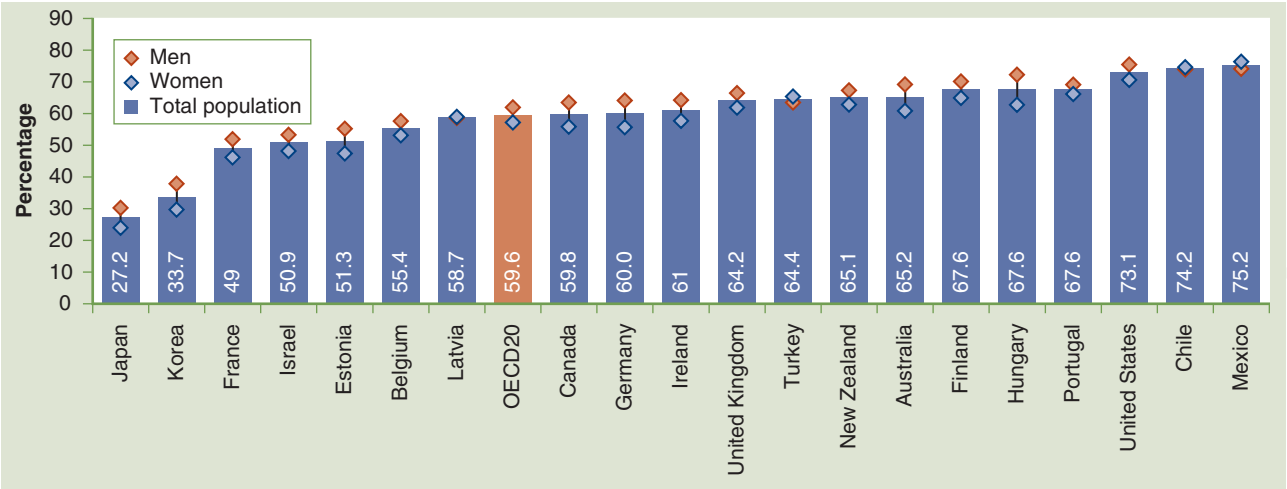

Figure 2.11 Measured Overweight (Including Obesity) Rates Among Adults, by Sex, 2019 (or Nearest Year)

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

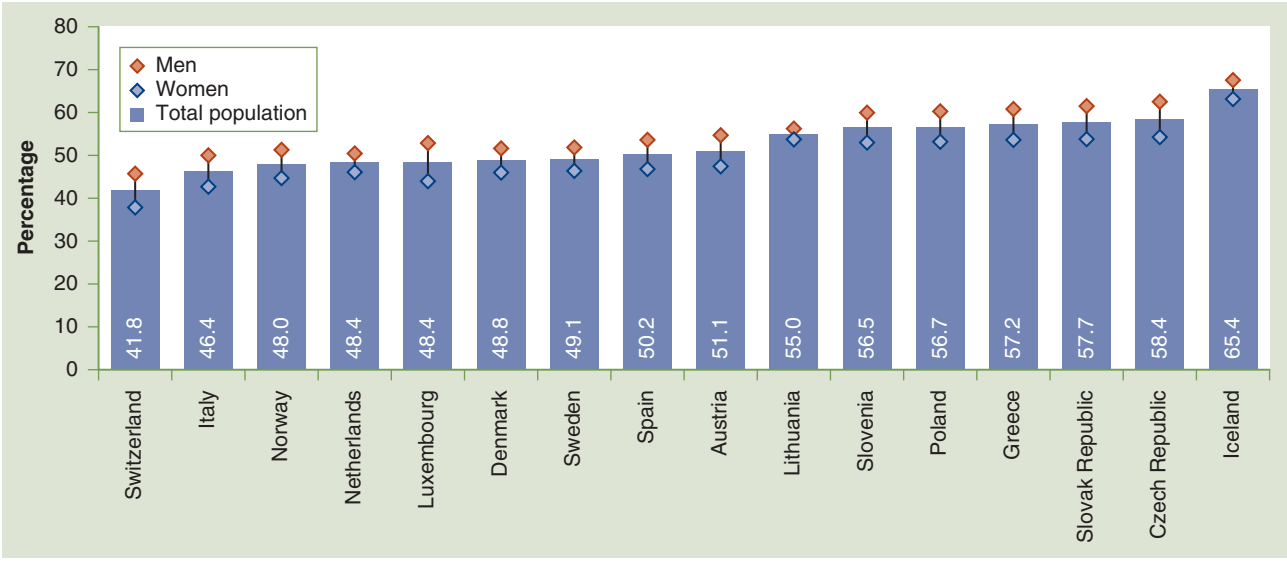

Figure 2.12 Self-Reported Overweight (Including Obesity) Rates Among Adults, by Sex, Selected Countries, 2019 (or Nearest Year)

Reproduced from Organisation for Economic Co-operation and Development. (2021). *Health at a glance 2021: OECD indicators*. OECD Publishing. https://doi.org/10.1787/ae3016b9-en

reporting 35%. In general, most countries' overweight and obesity rates increased between 2009 and 2019. Men were more likely to be overweight/obese than women. Recognizing this statistic as a public health issue, many of these countries have developed health education programs that focus on healthy eating and physical activity. Unfortunately, lower income populations had higher rates of overweight/obesity because healthy food options were typically more expensive.

Conclusion

The U.S. healthcare system is a complicated system composed of both public and private resources. Health care is available to those who have health insurance or who are entitled to health care through a public program. One can think of the healthcare system as several concentric circles that surround the most important stakeholders in the center circle: the healthcare consumers and providers. Immediately surrounding this are health insurance companies and governmental programs, healthcare facilities, pharmaceutical companies, and laboratories, all of which provide services to consumers to ensure they receive quality health care, as well as support providers to ensure they provide quality health care. The next circle consists of peripheral stakeholders that do not have an immediate impact on the main relationship but are still important to the industry. These consist of the professional associations, the research organizations, and the medical and training facilities.

It is important to assess the U.S. system from an international perspective. Comparing different statistics from the OECD is valuable to assess the health of the United States. It is interesting to view their perspective on how the pandemic changed health trends such as decreasing life expectancy and the increase in mental health issues. The analysis of avoidable and preventable mortality is a unique way to observe these death rates, which point to what type of health care is ineffective. Unfortunately, a consistent major public health issue is the global overweight/obesity rates, which are risk factors for many chronic diseases.

Despite the amount of money spent on health care in the United States, the United States ranked lower on many measures than other countries that spend less on their healthcare systems but have increased access to health care. These statistics may point to the fact that there is a combination of influencing factors, such as the effectiveness of countries' healthcare systems and different determinants of health, and that many of the OECD countries have universal healthcare systems, which increase access to healthcare services.

WRAP-UP

Vocabulary

American Health Care Association (AHCA)
American Hospital Association (AHA)
Avoidable mortality
Blue Cross and Blue Shield
Brand name drugs
Charitable care or bad debt
Commonwealth Fund
Complementary and alternative medicine (CAM)
Duty to treat
Generic drug
Gross domestic product (GDP)
Home healthcare services
Infant mortality rates
LeadingAge
Kaiser Family Foundation
Life expectancy rates
National Center for Complementary and Alternative Medicine (NCCAM)
National Center for Health Statistics (NCHS)
Organisation for Economic Cooperation and Development (OECD)
Per capita
Pew Charitable Trusts
Pharmaceutical Research and Manufacturers of America
Professional associations
Residential care facilities
Robert Wood Johnson Foundation
Stakeholder

References

American Health Care Association. (n.d.). *About AHCA/NCAL*. Retrieved May 23, 2023, from https://www.ahcancal.org/About/Pages/default.aspx

American Hospital Association. (n.d.). *About the AHA*. Retrieved May 23, 2023, from https://www.aha.org/about

American Hospital Association. (2023). *Fast facts about U.S. hospitals, 2023*. https://www.aha.org/system/files/media/file/2023/04/Fast-Facts-on-US-Hospitals-2023-Infographics.pdf

Bureau of Labor Statistics. (2022a). *Employment projections—2021–2031*. http://www.bls.gov/news.release/pdf/ecopro.pdf

Bureau of Labor Statistics. (2022b). *Occupational outlook handbook: Home health and personal care aides*. https://www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm

Bureau of Labor Statistics. (2022c). *Occupational outlook handbook: Medical and clinical laboratory technologists and technicians*. https://www.bls.gov/ooh/healthcare/clinical-laboratory-technologists-and-technicians.htm

Bureau of Labor Statistics. (2022d). *Occupational outlook handbook: Physicians and surgeons*. U.S. Department of Labor. https://www.bls.gov/ooh/healthcare/physicians-and-surgeons.htm

Bureau of Labor Statistics. (2022e). *Occupational outlook handbook: Radiologic and MRI technologists*. U.S. Department of Labor. https://www.bls.gov/ooh/healthcare/radiologic-technologists.htm

Cairns, C., & Kang, K. (2022). *National hospital ambulatory medical care survey: 2020 emergency department summary tables*. U.S. Department of Health and Human Services. https://dx.doi.org/10.15620/cdc:121911.

DiSalvatore, A. (2015, May 5). *SO, what is it?... Charity care or bad debt?* VARO Healthcare. http://go.varohealthcare.com/blog/bid/341152/Charity-Care-or-Bad-Debt

Jonas, S. (2003). *An introduction to the U.S. health care system* (5th ed., pp. 17–45). Springer Publishing.

Lane, K., Cox, C., Amin, K., Tettamanti, N., Kurani, N., Wager, E., & Ortaliza, J. (2022, February 3). *Tracking the effects on health outcomes, cost, and access to healthcare*. Health Affairs. https://doi.org/10.1377/forefront.20220201.857067

LeadingAge. (n.d.). *About LeadingAge*. Retrieved May 23, 2023, from https://leadingage.org/our-story

Mandal, A. (2019, February 26). *Drug patents and generic pharmaceutical drugs*. News-Medical.Net. http://www.news-medical.net/health/Drug-Patents-and-Generics.aspx

National Center for Health Statistics. (2023). *Health, United States, 2020–2021: Annual Perspective*. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. https://www.cdc.gov/nchs/data/hus/hus20-21.pdf

National Cancer Institute. (n.d.). *Complementary and alternative medicine for patients*. Retrieved from https://www.cancer.gov/about-cancer/treatment/cam/patient

National Institutes of Health. (2018, November 8). *National survey reveals increased use of yoga and meditation among U.S. children*. https://nccih.nih.gov/research/results/spotlight/NHIS2017-Children-Survey

National Institutes of Health. (2021, April). *Complementary, alternative, or integrative health: What's in a name?* https://nccih.nih.gov/health/integrative-health

Organisation for Economic Cooperation and Development. (2021). *Health at a Glance 2021*. OECD Publishing. https://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance-2021_ae3016b9-en

Occupational Safety and Health Administration. (n.d.). *Healthcare*. Retrieved from https://www.osha.gov/healthcare

Pointer, D., Williams, S., Isacs, S. L., & Knickman, J. R. (2007). *Introduction to U.S. health care*. Wiley Publishing.

Sultz, H., & Young, K. (2006). *Health care USA: Understanding its organization and delivery* (5th ed.). Jones and Bartlett Publishers.

Notes

Student Activity 2.1

In Your Own Words

Based on this chapter, please provide a definition of the following vocabulary words in your own words. DO NOT RECITE the text definition.

Duty to treat:

Infant mortality rate:

Life expectancy rates:

Charitable care or bad debt:

Complementary and alternative medicine:

Outpatient care centers:

Professional associations:

Residential care facilities:

Student Activity 2.2

Real-Life Applications: Case Scenario One

You have decided to become a health education teacher for a high school. One of your first class lessons will be to explain to your students the complexity of the U.S. healthcare system.

Activity

You want to be creative, so you have your students play the role of stakeholders in the healthcare system. You also want them to understand how the United States compares to other countries. You develop a lesson plan that outlines the major stakeholders in the system and describes how they interact with each other.

Responses

Case Scenario Two

Your grandmother will be moving to a continuing care retirement community and is unsure of how to evaluate such facilities. She asked you for assistance.

Activity

Visit the LeadingAge website to find out what information is available for continuing care communities. Give that information to your grandmother to help her make a decision.

Responses

Case Scenario Three

You eventually would like to work for a pharmaceutical company. You decided to perform research on pharmaceutical companies, such as Pfizer and GlaxoSmithKline. You actually did not realize that there are brand name drugs and generic drugs.

Activity

Perform an Internet search on the difference between generic and brand name drugs. Discuss the differences between the two products.

Responses

Case Scenario Four

Your aunt has had back problems for years, and rather than have surgery, she decides to research alternative medicine. You had never heard of this type of medicine and was curious if it can help people.

Activity

You research the term "alternative medicine" and provide a summary of the types of treatments alternative medicine provides.

Responses

Student Activity 2.3

Internet Exercises

Write your answers in the space provided.

- Visit each of the websites listed here.
- Name the organization.
- Locate the organization's mission statement on the website.
- Provide an overview of the organization's activities.
- How do these organizations participate in the U.S. healthcare system?

Websites

https://leadingage.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

www.commonwealthfund.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

www.phrma.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

www.oecd.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

www.diabetes.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

www.ahcancal.org

Organization Name:

Mission Statement:

Overview of Activities:

Importance of Organization to U.S. Health Care:

Student Activity 2.4

Discussion Questions

The following are suggested discussion questions for this chapter.

1. Which of the OECD statistics about the United States surprised you?

2. Identify three stakeholders and their role in the healthcare industry.

3. Do you feel the United States should have a universal healthcare system? Defend your answer.

4. Select one of the OECD countries and discuss three of its statistics. You cannot pick the United States.

5. Select three statistics for the United States and comment on their ranking among the other countries.

Student Activity 2.5

Current Events

Perform an Internet search and find a current events topic from the last 3 years that is related to this chapter. Provide a summary of the article and the link to the article and explain how the article relates to the chapter.