CHAPTER 9

POPULATION AND COMMUNITY HEALTH: LEVERAGING LEADERSHIP AND EMPOWERING NURSES TO UNDERSTAND AND POSITIVELY IMPACT SOCIAL DETERMINANTS OF HEALTH

Natalia Cineas and Donna Boyle Schwartz

"I'm opposed to any policy that would deny in our country any human being from access to public safety, public education, or public health, period."

Kamala Harris, American politician and attorney, serving as the 49th and current vice president of the United States

LEARNING OBJECTIVES

- Demonstrate knowledge of the primary social determinants of health (SDOH) and the impact on individual, community, and population health.
- Describe the connection between governmental policies and the impact on SDOH.
- Define the role nurses and nurse leaders play in advocacy and aligning nurse assessments with SDOH.

INTRODUCTION

The terms "population health" and "community health" have become increasingly important in the past two decades. The healthcare industry has shifted its focus from simply treating the physical illness or injury of an individual patient to putting the patient's health into a broader context, encompassing the various physical, mental, social, and environmental factors that can positively or negatively impact individuals and communities. These factors have come to be identified as the "social determinants of health" (SDOH) that collectively impact population health, community health, and individual health, and form the basis for numerous national and international public health policies designed to mitigate widespread disparities in health and healthcare.

The concept of "population health" may be traced back to the earliest inception of the World Health Organization (WHO) in the 1940s, when the nascent group defined health in a broader sense as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" in its constitution (WHO, 1946, p. 1).

Generally, the concept of population health is centered on improving the overall health of an entire human population, as opposed to a specific group or category of the population.

By many accounts, the United States is lagging behind other developed nations in terms of population health, and the decline is expected to continue: According to the U.S. Census Bureau, the United States had the 20th highest life expectancy among developed nations in 1960; that ranking dropped to 40th by 2015, and is expected to drop to 43rd by 2060 (Medina et al. 2020).

Many international and national organizations—including WHO, the U.S. Centers for Disease Control and Prevention (CDC), and the U.S. Department of Health and Human Services (DHHS)—have established the goal of achieving population health by reducing health disparities or health inequities. These inequities are due to the SDOH, which are loosely defined as a host of factors that have a measurable impact on the health of individuals, communities, and overall human populations, including economic, educational, social, environmental, cultural, and physical components. The CDC defines SDOH as the "conditions in the places where people live, learn, work, and play that affect a wide range of health and quality-of life-risks and outcomes" (n.d.-a, para. 1). Various industry associations and analyses have indicated that these factors may be responsible for more than 70% to 80% of all health outcomes (Moody's Analytics, 2017; Robert Wood Johnson Foundation, 2019); medical care is estimated to account for just 10% to 20% of outcomes. In fact, the impact of the SDOH on health outcomes and health disparities is considered to be so great that the Robert Wood Johnson Foundation sponsored a series of in-depth reports, town halls, site visits, and public meetings across the country in 2019, summarizing its findings for the *Future of Nursing 2020–2030* report by the National Academies of Sciences, Engineering, and Medicine (NASEM). This report, released in 2021, identifies and categorizes the myriad contributions of nurses and the nursing profession to addressing the SDOH and the goal of achieving health equity in the United States (Wakefield et al., 2021).

"Community health" is typically defined as a subset of population health, focusing on specific population groups, as defined by geographical factors, such as cities, towns, counties, or neighborhoods; demographic factors, such as children or Medicare recipients, specific racial or ethnic groups, and differing income echelons; and, in some cases, chronic disease factors, such as asthma sufferers, diabetes patients, cancer cases and other pervasive disease classifications. Community health is defined by WHO as the "environmental, social and economic resources to sustain emotional and physical well-being among people in ways that advance their aspirations and satisfy their needs in their unique environment" (Health Promotion International, 1986, pp. 73–76). Community health also is a subset of public health, spotlighting the role governmental policies and people play in their own health, as contrasted with "environmental health," which is primarily concerned with the physical environment.

Community health initiatives in the United States received increasing amounts of attention and funding following the passage of the Affordable Care Act (ACA) by the U.S. Congress in 2010. The ACA also is known as the Patient Protection and Affordable Care Act and nicknamed "Obamacare," for being championed by President Barack Obama, who signed the bill into law during his term. The ACA increased funding and expanded insurance coverage for Medicaid, representing the most comprehensive overhaul of this massive public health program since it was originally enacted in 1965.

This chapter examines the primary SDOH, providing concrete examples of each major factor and the associated subfactors, as well as addressing the roles that nurse leaders, nurse managers, and frontline nurses can play in addressing these issues, mitigating health disparities, promoting health literacy and wellness programs within communities, and thereby fostering enhanced overall population health.

CONSIDERING SOCIAL DETERMINANTS OF HEALTH

An essential tenet of the nursing profession is that nurses and nurse leaders are a driving force in promoting health and wellness within the communities they serve, thereby enhancing overall population health. Nursing, therefore, is the logical healthcare segment to take the lead in addressing population health and community health because nurses and nurse leaders traditionally take a broader view of the overall continuum of care. Rather than treating patients only when they are sick in acute care environments, nurses and nurse leaders address larger population and community health issues, focusing on preventive care, health education, and health literacy, and understanding and evaluating the SDOH as they relate to providing better and more comprehensive patient care (Carlson et al., 2016).

Nurses and nurse leaders also play a vital role in advocating for public policy changes that address the SDOH. Increased engagement by nurses and nurse leaders in public policy advocacy can help provide a framework for enhancing overall population health at the local, state, regional, national, and international levels.

Many thought leaders point out that it is essential for the nursing profession to incorporate the SDOH into professional practice and patient care to achieve improved overall community and population health (Wilson, 2019). *The Future of Nursing 2020–2030* report, for instance, calls for a strengthening of nursing capacity and expertise in pursuit of health equity in the United States (Wakefield et al., 2021).

One emergent strategy for identifying and addressing community health needs—and the SDOH specific to a particular population—grew out of 2010's ACA, which added a new Internal Revenue Service (IRS) requirement for hospitals to conduct a community health needs assessment that assesses and identifies the existing health resources and prioritizes the health needs of the community being served, and to develop and implement a plan to answer those needs (Stoto, 2013). The assessment typically leads to an "action plan," also known as a community health improvement plan, defined by the Public Health Accreditation Board (PHAB) as a "long-term, systematic effort to address public health problems on the basis of the results of community health assessment activities and the community health improvement process" (PHAB, 2012, p. 8).

The role of the SDOH in community health assessments and improvement plans has taken center stage as decades of evidence have demonstrated that economic, environmental, educational, community, and social context, as well as healthcare conditions, are the primary drivers of disease and health for individuals, communities, and the human population as a whole. The decennial *Healthy People* initiative launched in 1979 by the DHHS has steadily updated its definitions of the SDOH and has made eliminating health disparities a centerpiece of the program in its 2010, 2020, and 2030 incarnations.

The *Healthy People 2020* and *Healthy People 2030* updates to this initiative codified the "place-based" framework for the SDOH, organizing these factors into five key areas: neighborhood and built environment, social and community context, economic stability, education access and quality, and healthcare access and quality (DHHS, Office of Disease Prevention and Health Promotion [ODPHP], n.d.-a, n.d.-b; Figure 9.1). These five categories form the umbrella for a defined set of underlying factors that reflect the key issues and problems that can contribute to diseases, chronic illnesses, infections, maternal mortality and morbidity, situational emergencies and accidents, and domestic violence.

Each of the categories defined by the *Healthy People* initiative presents a unique set of situations and circumstances that can affect individual, community, and population health (Table 9.1). The category of "neighborhood and built environment," for instance, involves issues such as environmental crises; water, soil, and air pollution; aging and degraded housing stock; unsafe neighborhoods; and other physical characteristics affecting people where they live, work and play. "Social and community context" addresses the negative health impacts of discrimination, racism, sexism, the excessive and inordinate high rates of incarceration among minorities, and distrust of authority. The "economic stability" classification deals with the impact of poverty, unemployment, food insecurity and homelessness as contributors to health inequities. The

FIGURE 9.1: Social determinants of health.

Source: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (n.d.). *Social determinants of health*. https://health.gov/healthypeople/objectives-and-data/social-determinants-health.

TABLE 9.1: Social Determinants of Health and Key Influencers Within Each

Neighborhood and Built Environment	
Key Influencers	**Examples**
Environmental conditions	Water, soil, air quality, parks and recreation, transportation access
Quality of housing	Aging or degraded housing stock, vermin infestations
Crime and violence	Unsafe neighborhoods, unsafe family or social situations
Access to foods that support healthy eating patterns	Availability of grocery stores, farmers markets, locally grown fresh foods
Social and Community Context	
Key Influencers	**Examples**
Discrimination	Racism, poverty, sexism
Incarceration	Negative impact on minority families and communities
Civic participation	Voting, distrust of government, distrust of authority, including healthcare institutions
Social cohesion	Psychosocial impact, community health

(*continued*)

TABLE 9.1: Social Determinants of Health and Key Influencers Within Each (*continued*)

Economic Stability	
Key Influencers	**Examples**
Poverty	Income stress, access to healthy foods, adequate housing, transportation, healthcare
Employment	Fair employment, minimum/living wage
Food insecurity	Hunger and nutrition
Housing instability	Homelessness
Education Access and Quality	
Key Influencers	**Examples**
Language and literacy	Immigration status, english as a second language, health literacy
Early childhood education and development	Proper nutrition, exercise, stress
High school graduation	Role in poverty, joblessness, future success
Enrollment in higher education	Teenage dropout rates, teenage pregnancy
Health and Healthcare Access and Quality	
Key Influencers	**Examples**
Access to healthcare	Transportation, hospital/clinic closures, language barriers
Access to primary care	Lack of access/transportation, especially in rural areas, lack of physicians
Health literacy	Providing patient education, establishing trust, developing better communication strategies
COVID-19	Racial disparities in cases, hospitalizations and deaths, racial disparities in essential workers
COVID-19 vaccines	Vaccine hesitancy, racial disparities in hesitancy and access

area of "education access and quality" focuses on the importance of early childhood development, high school graduation rates, enrollment in higher education, and the problems of language and literacy in terms of delivering healthcare and wellness information to immigrant and impoverished populations. The "health and healthcare access and quality" segment engages with the problems of access to care in both urban and rural locations, and the overall challenges of improving health literacy and promoting wellness among minority and disadvantaged communities; this section also articulates many of the health disparities revealed by the COVID-19 global pandemic, including higher rates of cases, hospitalizations, and deaths among minority populations and the racial disparities in vaccine access and vaccine hesitancy.

In its *Future of Nursing 2020–2030* report, the NASEM point out that it is the role of nurse executives and nurse leaders to know and understand the collection, relevance, and interpretation of data on the SDOH in order to effectively communicate and lead frontline nurses on community health initiatives (Wakefield et al., 2021). Similarly, Wilson (2019) calls on nurse leaders and nurse informaticians to develop an expertise in the evaluation of data and programs concerned with the SDOH and their impact on patient care. Additionally, the American Organization of Nurse Executives (AONE) and the American Organization

for Nursing Leadership (AONL) list "improving the health of populations" as an essential competency for all nurse executives (AONE & AONL, 2015, p. 3).

Each of the main categories of the SDOH and its attendant concerns represents an opportunity for engagement and interaction on the part of the nursing profession; therefore, it is incumbent upon nurse leaders to acquire expertise in all applicable categories.

NEIGHBORHOOD AND BUILT ENVIRONMENT

The impact of the "neighborhood and built environment" on individual, community, and population health is all around us. One only needs to look as far as today's news headlines to see the pervasive, far-reaching effects of location-based health consequences, especially when it comes to contamination of the water, soil, and air quality; a high prevalence of violence and crime; and the degradation of urban housing stock, home to many minorities, children, older adults, and low-income people.

From the contamination of Flint, Michigan's drinking water with lead and the third-largest outbreak of Legionnaires' disease recorded in U.S. history (Natural Resources Defense Council, 2018) to the ongoing chemical contamination from perfluorooctane sulfonate and perfluorooctanoic acid (PFAS/PFOA) at some 2,854 locations in 50 states and two territories (Environmental Working Group, 2021), it is clear that the places where many people live, work, and play are proving to be hazardous to their health. The main SDOH under this category include the following: environmental conditions, quality of housing, crime and violence, and access to foods that support healthy eating patterns (Table 9.2). Each of these subcategories has serious ramifications for the healthcare industry in general, and the nursing profession specifically, as these issues have a direct impact on the health and well-being of the patient population and the communities in which they reside.

TABLE 9.2: Neighborhood and the Built Environment—Social Determinants of Health

Examples	Negative Health Outcomes
Environmental Conditions	
• Climate and climate change • Water, soil, and air quality • Access to parks, gardens, and green spaces • Transportation access • Urban versus rural location	• Famine and food insecurity • Cardiovascular diseases • Respiratory diseases • Infections and parasitic diseases • Neonatal and maternal morbidity
Housing Quality	
• Aging or degraded housing stock • Lead and other contaminants • Heating, air conditioning, and appliances • Mold and mildew • Vermin infestations	• Injuries • Lead and carbon monoxide poisoning • Allergies • Asthma and respiratory illness • Cardiovascular diseases
Crime and Violence	
• Direct victimization • Witnessing crime and violence • Perceptions of unsafe neighborhood • Domestic violence	• Injuries and death • Mental trauma/post-traumatic stress • Behavioral disorders • Drug and alcohol abuse • Suicide • Sexual and reproductive disorders, including HIV/AIDS

(*continued*)

TABLE 9.2: Neighborhood and the Built Environment—Social Determinants of Health (*continued*)

Examples	Negative Health Outcomes
Access to Foods That Support Healthy Eating Patterns	
• Food deserts • Prevalence of convenience stores • Lack of healthy foods • High prices • Distance and lack of transportation	• Obesity • Cardiovascular diseases • Diabetes • High blood pressure • Cancer

ENVIRONMENTAL CONDITIONS

Some of the leading environmental elements that impact health include the overall climate in a particular region and the increasing impact of climate change worldwide, causing severe illness and death due to higher average temperatures as well as the increasing frequency and severity of cataclysmic storms such as hurricanes, typhoons, and monsoons, and the increasing frequency and severity of drought and desertification. According to the National Oceanic and Atmospheric Administration (NOAA; 2021), 2020 was the second hottest year on record since 1880, surpassed only by 2016; the 10 warmest years on record have all occurred since 2005. Extreme weather conditions and higher temperatures can cause heat-related disease and death, especially among children and older adults. Drought and floods caused by severe storms often lead to famine, contaminated water, insect infestations, and community displacement, all of which can cause disease and death. Because many impoverished people and racial and ethnic minorities live and work in areas susceptible to these extreme weather events, they are more at risk of climate-related disease and death.

The water, soil, and air quality in an area; availability or absence of parks, gardens, trees, grass, and other green spaces; and the accessibility of transportation alternatives, including public transportation, sidewalks, roads, and highways, also are all environmental conditions that have a major impact on health and healthcare, and can vary depending on the location. A significant geographical condition affecting health is whether the location is urban or rural. One of the most severe urban conditions that has been shown to have negative health impacts is air pollution, which can contribute to hypertension and high blood pressure; cardiovascular disease and stroke; lung diseases, including emphysema, asthma, chronic bronchitis, and chronic obstructive pulmonary disease (COPD); and cancer, leukemia, and non-Hodgkin lymphoma (National Institute of Environmental Health Sciences, 2021). A comprehensive literature review found that nearly nine out of 10 people living in urban areas worldwide suffer health issues caused by air pollution; the study also ranked air pollution as the ninth leading risk factor for cardiopulmonary mortality (Kurt et al., 2016). Excessive noise in the urban environment also has been linked to hypertension (Healthy People 2030; DHHS, ODPHP, n.d.-b) and cardiovascular disease (Münzel et al., 2018).

The rural environment has its own set of problems: air pollution sources in rural regions include factory farming and the spraying of insecticides/pesticides, and animal husbandry, where animal feed and waste can emit pollutants such as ammonia. Rural mining communities are subject to numerous air pollutants, leading to higher rates of respiratory illnesses and cancer (Hendryx et al., 2010; Shi et al., 2019). Rural residents also face higher rates of water contamination, due to a greater prevalence of wells as a primary water source, which can be impacted by contaminated groundwater and polluted runoff. An estimated one in three Americans get their drinking water from groundwater sources, which can be contaminated by agriculture chemicals and pesticides, landfill runoff, septic tanks, and leaking underground storage tanks containing hazardous materials, such as home heating oil (Healthy People 2030; DHHS, ODPHP, n.d.-b). A comprehensive study of public wells by the U.S.

Geological Survey found that 22% contained one or more chemical contaminants at levels above human-health benchmarks, and 80% contained one or more contaminants at concentrations greater than one-tenth of human-health benchmarks (Toccalino & Hopple, 2010). Follow-up studies by the U.S. Geological Survey found that an estimated 90% of 383 public supply wells across 35 states contained mixtures of two or more contaminants (Eberts et al., 2013).

Other toxic substances found in the natural environment in both urban and rural locations include lead, arsenic, asbestos, radon, and mercury, all of which cause negative health impacts in humans, including many forms of cancer; endocrine and reproductive system disruption; respiratory and lung diseases; neurological disorders, headaches, and dizziness; skin and eye irritation and allergic reactions; and glandular, hormonal, and DNA irregularities.

Minorities, people living in poverty, and those in economically disadvantaged communities are more likely to suffer adverse health outcomes due to environmental conditions (Evans & Kantrowitz, 2002). According to the U.S. Environmental Protection Agency (EPA), there are numerous currently identified relationships between exposure to environmental contaminants and disease, including radon and lung cancer, arsenic and cancer in several organs, lead and nervous system disorders, disease-causing bacteria (such as *Escherichia coli*) and gastrointestinal illness and death, and particulate matter and aggravation of cardiovascular and respiratory diseases (EPA, n.d.). It is therefore necessary for public and private nursing professionals to incorporate questions regarding environmental factors into routine health assessments and treatment plans to identify and target harmful environmental conditions that contribute to health disparities and poor patient outcomes.

QUALITY OF HOUSING

Aging or degraded housing stock is an additional environmental condition impacting health. Older houses and apartment buildings often lack modern heating and air conditioning systems to mitigate the effects of climate; may contain aging or damaged appliances and structural elements; are more susceptible to allergens such as mold and mildew; and may be subject to vermin infestations, including mice, rats, cockroaches, and other insects; these all lead to negative health consequences. Damaged, neglected, or inadequately vented appliances, for instance, can result in dangerous levels of carbon monoxide, which can lead to heart disease, neurological disorders, and death—according to the CDC, more than 50,000 people a year suffer from carbon monoxide poisoning (n.d.-b).

Several studies have attributed skyrocketing rates of childhood asthma and adult respiratory diseases to the conditions common to many low-income urban housing developments. One study found that 21.8% of children living in public housing had asthma, as compared to just 7% of children living in single-family homes (Northridge et al., 2010). The study also found 68.7% of public housing residents reported cockroaches, compared to 21% of residents in private homes. Similarly, a 2017 report from the nonprofit Urban Institute found that low-income renters receiving housing assistance suffered more from asthma than the general U.S. population; the report speculated that the higher prevalence of asthma was due to the renters' poor housing conditions, including dampness and mold, inadequate ventilation and temperature control, pest infestations, asbestos, and overcrowding (Ganesh et al., 2017).

Contaminants found in aging buildings can be harmful to human health. Lead poisoning, for example, is a huge health issue for children living in homes that were constructed prior to 1978, before lead was banned in residential paint. The CDC estimates that some 29 million housing units in the United States are contaminated with lead-based paint residue; aging or corroded plumbing also increases the risk of lead poisoning (CDC, n.d.-c).

Substandard or crumbling buildings can lead to injuries among older adults and young children; narrow hallways and buildings with steps can pose serious access issues for people with physical limitations; and old, brittle window glass and low windowsills can lead to severe cuts and falls.

Nurses and nurse leaders can and should play an important role in advocating for community-level interventions—including programs to replace aging plumbing, campaigns for better sidewalks and additional parks, and aesthetic improvements, such as better lighting and tree planting—to have a positive impact on population health.

CRIME AND VIOLENCE

Crime and violence can have significant and enduring consequences for both physical and mental health. Individuals may be directly victimized by violent acts; they may witness crime or violence against others or against property; or they may hear about crime and violence from others, creating a perception of an unsafe neighborhood. Domestic violence may directly impact individuals and create unsafe family and social situations.

Violence-related injuries kill 1.25 million people every year and millions more suffer from nonfatal injuries due to violence (WHO, 2021); violence is considered one of the world's leading causes of death for people aged between 15 and 44 years. Victims of violence may suffer immediate injury or premature death; survivors of violent crime often suffer from posttraumatic stress, mental trauma, and have higher rates of drug and alcohol abuse and suicide (WHO, 2010); individuals who are victims or exposed to violence in childhood can suffer from many long-term behavioral and mental health issues, including increased risk of social problems, anxiety, depression and aggression, as well as increased risk of mental illness, substance abuse, and suicide. These factors that are linked to violence in childhood can engender and prolong a cycle of violence in which traumatized victims of violence in childhood grow up to become perpetrators of violence as adults. Women who are victims of intimate partner violence (IPV) may suffer from multiple and severe injuries; sexual and reproductive health disorders, including sexually transmitted diseases, HIV/AIDS, and unintended pregnancy; and mental traumas leading to eating disorders, depression, anxiety, substance abuse, and suicide (Stockman et al., 2015). Victims of crime and violence also have higher rates of many chronic diseases, including heart disease, diabetes, and cancer (WHO, 2021).

Logically, therefore, nurses and other healthcare professionals should take crime and violence, and the perception of crime and violence, into account when considering how to improve community and local population health. Advocacy on behalf of vulnerable populations is an important part of the nursing toolbox when it comes to addressing this specific SDOH and is especially pertinent in the public health sphere.

ACCESS TO FOODS THAT SUPPORT HEALTHY EATING PATTERNS

Public health proponents have long decried the dearth of fresh food markets in urban locales, with some thought leaders calling cities "food wastelands" and "food deserts." Many low-income and minority communities are dominated by convenience stores and bodegas, which often charge a premium price for fruits, vegetables, and other healthy foods . . . if they carry these items at all. The paucity of full-service grocery stores, farmers' markets, and community gardens in urban areas make access to foods that support healthy eating patterns difficult, if not downright impossible. Instead, urban dwellers are faced with a seemingly limitless supply of processed convenience foods, many loaded with artery-clogging saturated and trans fats and packed with sodium and added sugars.

Rural communities also suffer barriers to access of healthy foods, most notably distance and lack of public transportation. People living in rural communities without convenient public transportation, those who do not have access to a personal vehicle, and those who are unable to drive due to age or disability face sharply limited choices in accessing healthy foods. A 2015 study conducted for the U.S. Department of Agriculture (USDA) found that the average distance from all U.S. households to the nearest supermarket that accepted Supplemental Nutrition Assistance Program (SNAP) benefits was 2.19 miles (Ver Ploeg et al., 2015).

Lack of access to healthy foods has been shown to have a suite of adverse health consequences, including obesity, cardiovascular disease, high blood pressure, diabetes, liver disease, and cancer. According to the USDA's *Dietary Guidelines for Americans 2020-2025*, 60% of adults have one or more chronic diseases that can be traced to dietary causes and more than 74% of American adults and 40% of children and youth are overweight or obese (USDA & DHHS, 2020). An earlier version of the Dietary Guidelines noted that chronic, diet-related diseases engender a high price tag, with $147 billion in estimated medical costs linked to obesity in 2008; and $245 billion in estimated medical costs linked to diagnosed cases of diabetes (DHHS & USDA, 2015).

Improving access to foods that support healthy eating patterns is vital to any effort to improve individual, community, and population health. Public health agencies, healthcare systems, governmental entities, and concerned individuals need public and private collaborative efforts to ascertain and implement programs to reduce reliance on processed convenience foods, curtail the proximity of fast-food restaurants to schools, and, overall, to address the scarcity of healthy food alternatives in both urban and rural environments. As the nursing profession has traditionally played a key role in educating patients and families about the importance of nutrition, healthy eating, and healthy food choices at every life stage, it is imperative that nurses and nurse leaders are active participants in programs designed to help lower the risk of chronic, diet-related diseases.

SOCIAL AND COMMUNITY CONTEXT

"Social and community context" covers the myriad ways in which individuals react to each other, both singly and in groups; and the ways in which individuals *and* groups react to institutions, beginning at the local municipal level and continuing up the governmental chain to the federal authorities and even global influences. This category of SDOH encompasses discrimination, including systemic and structural racism; entrenched sexism; and the social problems faced by the LGBTQ+ (lesbian, gay, bisexual, transgender, queer, plus) community, older adults, and disabled people. Related issues include incarceration and its impact on children, families, and communities; civic participation, including voting and trust or distrust of government and other authorities such as healthcare institutions; and social cohesion, including the psychological and sociological impacts and community health (Table 9.3).

Many social and community concerns are challenges that represent deep-rooted structural problems historically embedded in American society. Again, one need look no farther than contemporary news reports to find accounts of the deleterious effects, including the persistent discrimination and overt racism pervading community policing as evidenced by the 2020 killings of George Floyd, Breonna Taylor, and Ahmaud Arbery and the overly aggressive rates of incarceration among minority communities; the 2016 domestic terror incident targeting LGBTQ+ patrons at an Orlando nightclub that left 50 dead and more than 50 wounded; the 2021 mass murder of six Asian women in the Atlanta area; the prevailing sexist beliefs about women's "proper" roles and abilities that lead to persistent wage inequity and the "glass ceiling" effect; and the tsunami of voter suppression laws proposed in state and local governments to disenfranchise minority communities in the wake of the 2020 election.

These complicated and interdependent societal issues require a coordinated and collaborative response on the part of public and private institutions. The nursing profession is integral to any discussion within the social and community context, particularly because nurses are the most trusted profession in America. Nurses have ranked at the top of the Gallup Honesty and Ethics Poll for the past two decades, earning a record high/very high score of 89% in 2020, up 4 percentage points from the previous high score of 85% in 2019 (Saad, 2020). It is essential, therefore, that nurses and nurse leaders are well-informed and knowledgeable about these formidable societal problems in order to take an active role in interventions addressing the complex and multifaceted health impacts.

TABLE 9.3: Social and Community Context—Social Determinants of Health

Examples	Negative Health Outcomes
Discrimination	
• Systemic and structural racism • Sexism • LGBTQ+ social issues • Ageism • Disabled social issues	• Injuries and death • Mental and behavioral disorders • Drug and alcohol abuse • Suicide • Obesity • Cardiovascular diseases • Diabetes • Respiratory diseases • Infectious and parasitic-borne illnesses • Sexually transmitted diseases, including HIV/AIDS
Incarceration	
• Overpolicing of minority communities • Uneven legal and criminal justice • Broken homes and single parents • Poverty • Social support	• Mental and behavioral issues • Drug and alcohol abuse • High blood pressure • Tuberculosis • Hepatitis C • HIV/AIDS • Cervical cancer • Children with mental and behavioral problems
Civic Participation	
• Voting • Volunteerism • Church attendance • Community sporting and leisure activities	• Social isolation • Depression and anxiety • Mental and behavioral disorders • Distrust of authorities, including healthcare systems • Cardiovascular diseases
Social Cohesion	
• Interconnected relationships • Social networks • Mutual trust • Social support	• Isolation and depression • Anxiety • Cardiovascular diseases

DISCRIMINATION

Blatant, overt, and hostile instances of discrimination beleaguer minorities, women, and ethnic and social groups in the United States while insidious and subtle manifestations of discrimination result from implicit biases which many people may not even realize they possess. A 2011 study reported 31% of U.S. adults experienced at least one major occurrence of discrimination in their lifetimes, and nearly two-thirds (63%) reported facing discrimination every day (Luo et al., 2011).

With the advent of European colonization, many Native Americans perished from previously unknown diseases, including smallpox, measles, chicken pox, whooping cough, diphtheria, scarlet fever, trachoma, malaria, typhus fever, typhoid fever, influenza, cholera, and bubonic plague, leading to a massive population decline—historians estimate that the Native American population may have decreased an estimated 70% to 90%. Native Americans were forced to relocate to reservations; children were torn from their families and forced to go to assimilation boarding schools where they were prohibited from speaking their native languages or communicating with their families; many were abused and buried in unmarked graves, a practice that continued into the 1960s. Native Americans today suffer from higher rates of chronic liver disease and cirrhosis, diabetes mellitus, and chronic lower respiratory diseases, as well as deaths due to violence, injury, or suicide, leading to an average life expectancy that is 5.5 years less than the U.S. all-races average (Indian Health Service, 2019).

The experience of most Black Americans is a similarly grim one, as many of their ancestors were brought to the New World as slaves and endured horrific beatings, torture, rape, forced breeding programs, and murder. Black Americans have suffered from the effects of structural discrimination, including residential segregation, educational and employment inequities, and individual discrimination, including violence, threats, and harassment. Black Americans suffer disproportionately high rates of death from heart disease, stroke, high blood pressure, asthma, cancer, HIV/AIDS, influenza, pneumonia, diabetes, and kidney disease, leading to a projected average life expectancy of 76.2 years for Black Americans, versus an average life expectancy of 80 years for non-Hispanic White Americans (Medina et al., 2020).

The negative effects of discrimination also are felt by other racial and ethnic groups, leading to health disparities. Specific communities of Hispanics and Latinos in the border region between the United States and Mexico suffer from the highest rates of obesity and diabetes in the world, with obesity affecting 40% of adults and diabetes rates of more than 20% (Rosales et al., 2016). Mexican Americans living in the border region also face higher rates of tuberculosis, diabetes, hepatitis C, cervical cancer, and parasitic-borne illnesses such as Zika, dengue, chikungunya, rickettsial infections, West Nile, Rocky Mountain spotted fever, and Chagas disease; deaths by traffic accident and violence also are a recurring tragedy (Rural Health Information Hub, n.d.).

Asian Americans continue to be haunted by discrimination, including the harassment and violence endured by the early Chinese immigrants who came to the United States to build the transcontinental railway; the internment of Japanese Americans in concentration camps during World War II; the housing discrimination and denigration of Vietnamese immigrants as "boat people," and the more recent attacks against random Asian Americans fueled by politicians' misrepresentation of COVID-19 as the "Chinese virus" or "Kung Flu." According to the Office of Minority Health (2021), Asian Americans suffer from higher rates of COPD, hepatitis B, HIV/AIDS, and liver disease; Asian Americans also are most at risk from cancer, heart disease, stroke, and diabetes. Further, the CDC found that as of 2020 the rate of tuberculosis among Asian Americans was 33 times higher than that of non-Hispanic Whites (CDC, n.d.-d).

GENDER DISCRIMINATION

Gender discrimination, including pay and wage inequities, sexual harassment, and sexual assault, can affect both women and men, but is far more common against women. Studies published in 2017 by Pew Research Center found that 42% of working women have faced discrimination on the job and 25% say they have earned less than a man doing the same job (Parker & Funk, 2017).

Sexual harassment and sexual assault are some of the most egregious examples of gender discrimination, and many more instances have come to light in the wake of the #MeToo movement. A 2019 study found that 81% of American women reported sexual harassment and/or assault in their lifetime, with 38% of women reporting harassment at their workplace or school; 23% of women reported surviving sexual assault (Kearl et al., 2019).

LGBTQ+ DISCRIMINATION

LGBTQ+ individuals have the highest rates of tobacco, alcohol, and other drug use. LGBTQ+ youth are two to three times more likely to attempt suicide, and more likely to be homeless, due to social rejection, bullying, isolation, and verbal or physical abuse. Gay men and transgender individuals are at higher risk of HIV/AIDS and other sexually transmitted diseases, as well as mental health issues and suicide. The 2019 study found that 95% of lesbian and bisexual women reported being sexually harassed during their lifetime, and 47% reported sexual assault; 77% of gay or bisexual men reported a lifetime experience of sexual harassment and 21% reported sexual assault (Kearl et al., 2019).

AGE AND DISABILITY DISCRIMINATION

Aging adults are subject to many forms of discrimination and ageism, especially in the workplace. Indeed, instances of age discrimination reported to the Equal Employment Opportunity Commission (EEOC) average nearly 22,000 incidents a year (EEOC, n.d.-a). The health needs of older Americans may contribute to this workplace discrimination, as many employers may be reluctant to hire individuals who may require more sick leaves. At the same time, nonworking older adults face a host of other problems, including social isolation, depression, anxiety and loneliness, and the associated mental health issues.

Individuals with disabilities also face significant health inequities, including stigmatization, bullying, frequent institutionalization, and lack of access to healthcare services and healthcare facilities. The EEOC reports that instances of complaints filed under the 1990 Americans with Disabilities Act eclipse the number of charges filed in other categories, totaling 283,658 complaints from 2010 to 2020 (EEOC, n.d.-b).

According to the CDC, 61 million U.S. adults—or one in four—live with a disability, including issues with mobility, cognition, independent living, hearing, vision, and self-care activities. The problem is especially acute for older, disabled adults; the CDC reports that two in five adults aged 65 or older have a disability. An estimated 38% of disabled adults are obese, 28% of disabled adults smoke, 16% have diabetes, and 11.5% have heart disease (CDC, n.d.-e).

There is a compelling and urgent need for nurses and nurse leaders to advocate for proper and compassionate health service for the disabled, aged, LGBTQ+, and ethnic minorities who face discrimination, and it is incumbent upon healthcare systems and nurse leaders to create a workplace environment that fosters diversity and inclusion among frontline nurses and mentors a diverse demographic of future nurse leaders.

INCARCERATION

Overly aggressive policing of minority communities, uneven implementation of the criminal justice system, and massively inequitable incarceration rates are another form of structural discrimination contributing to health disparities in the United States. *The Future of Nursing 2020–2030* report calls mass incarceration "a public health crisis," with disproportionate impact on Black and Hispanic Americans, leading to greater incidence of chronic physical and mental health conditions (Wakefield et al., 2021). Incarcerated and formerly incarcerated individuals face substantially higher rates of both mental and physical problems, including infections and chronic diseases, hypertension and high blood pressure, asthma, arthritis, cervical cancer, and hepatitis (Binswanger et al., 2009; Cloud et al., 2014). Numerous studies have shown that incarcerated individuals also have high rates of tuberculosis, hepatitis C, and HIV/AIDS when compared to the general population (Restum, 2005), and many suffer from mental health problems and health concerns related to prior drug and alcohol abuse: in fact, an estimated 50% of incarcerated individuals have negative health outcomes due to drugs or alcohol; additionally, 16% of men and 31% of women who are incarcerated have serious psychiatric issues, compared with 5% of the general U.S. population (Cloud et al., 2014).

Beginning with the now-discredited federal "war on drugs" in the 1970s and continuing through to the present day, state and federal policies such as the "three strikes" laws, "stop and frisk" practices, "broken windows" policies, mandatory minimum sentences, racial profiling, and Draconian measures such as life without parole are taking a toll on minority populations. New research has found that these hardline policies have exacerbated health disparities among minorities. "Communities of color—particularly Black communities—are overexposed to these policing strategies and, by extension, the health harms they engender" (Esposito et al., 2021). One study found that the risk of being killed by a police officer is one of the leading causes of death for young men of color and reported that one in 1,000 Black men risk being killed by police, compared to the risk of one in 2,500 White males (Edwards et al., 2019).

The impacts of incarceration reach far beyond the prison walls, contributing to a pernicious cycle of broken homes, struggling single parents, and a life of poverty for many children, who in turn suffer negative health outcomes. Having an incarcerated parent has a negative impact on family income, increases a child's risk of being homeless, can have a deleterious effect on children's educational performance, and places children at greater risk of learning disabilities, developmental difficulties, behavioral problems, and attention disorders (Turney, 2014).

CIVIC PARTICIPATION

As previously noted, minority communities suffer from higher rates of discrimination, aggressive policing, and have higher percentages of incarcerated individuals; many minority communities also have higher crime rates, fewer parks and green spaces, and fewer recreational amenities. This can inhibit traditional forms of civic participation, such as voting, volunteerism, church attendance, and community activities, such as sporting and leisure pursuits, community gardening, adult education programs, and library visitation.

A wide variety of documented physical and mental health benefits of civic participation are noted. Voting, for example, allows individuals to have a say in local, state, and national government, which can enhance mental well-being. One international study of 44 countries found that people who voted and engaged in voluntary social activities reported better health than those who did not (S. Kim et al., 2015). Volunteerism provides a direct benefit to the community by weaving a stronger social fabric and creating shared bonds between members of that community. A 2015 study found that middle-aged and older adults who volunteer have lower rates of five common risk factors related to cardiovascular disease and metabolic syndrome (Burr et al., 2015) and a 2016 study found that "consistent civic engagement in old age is associated with lower risk of cognitive impairment" (Infurna et al., 2016).

Belonging to community groups can have benefits similar to volunteerism, promoting activity and social engagement and leading to better mental and physical health.

As the most trusted profession, nurses can play a major and important role in helping to integrate local healthcare establishments into community affairs, thereby minimizing or alleviating some of the inherent distrust among the patient population. Communities also can promote civic participation by starting early and getting children and young adults involved: one study found that adolescents who were involved in community activities were more likely to vote, participate in political campaigns, volunteer, donate blood, and be involved in service organizations as adults (Duke et al., 2009). A 2018 research project found that adolescents who form connections outside the family have a greater propensity for both political and nonpolitical civic engagement later in life (Hemer, 2018).

SOCIAL COHESION

Closely related to civic participation—in fact, sometimes causally linked to it—is the concept of social cohesion. Social cohesion as an SDOH is tied to the concept that the relationships we form with families, friends, neighbors, and even strangers in our

communities strongly contribute to our individual and collective health. One of the key components to social cohesion is social capital, which is the "value" that is accrued during positive interactions between various individuals and groups. This value takes many forms, including coordination and cooperation for mutual benefit, perceived fairness and perceived helpfulness between people and organizations, membership in a group and sharing group benefits, and trust between individuals and members of a group. Individuals access their social capital through interconnected relationships, which are often called social networks.

Another aspect of social cohesion is social control, a phrase that is typically used to describe a community's ability to develop mutual trust and exercise control and adherence to informal "norms," such as neighborhood standards for acceptable behavior, satisfactory housekeeping and landscaping, and maintenance of common areas.

The connection between social ties and health contributes to both physical and psychosocial well-being. Individuals with strong social cohesion and social support often self-report more positive health outcomes; some studies have backed up this self-reporting with actual outcomes: a 2014 study found that a higher rate of neighborhood social cohesion is associated with lower rates of myocardial infarction (E. S. Kim et al., 2014). Another study found that high levels of social support corresponded to lower atherosclerosis levels in women who were at high risk for heart disease (Knox et al., 2000, the most recent available). Other studies have found that social support and strong social networks can help alleviate isolation and depression for older people and can help mitigate some of the negative health outcomes of discrimination.

ECONOMIC STABILITY

The "economic stability" category is one of the most far-reaching categories to impact the SDOH. More than one in 10 people—37.2 million, the first increase in poverty after five consecutive annual declines—live in poverty in the United States, according to U.S. Census figures for 2020; this represents the first increase in poverty after five consecutive annual declines (Shrider et al., 2021). People who are mired in poverty often cannot afford many of the essentials that allow them to live a healthy life, including fresh and healthy foods, health insurance and access to preventive healthcare, and adequate and safe housing. Many people struggle to find and keep steady employment that will support themselves and their families. The income chasm in America continues to widen, with the top 20% of the population earning nearly 52%—and the top 5% earning 23%—of the entire nation's income, and the bottom 20% only earning 3.1% of all U.S. income, according to the Census.

This category of SDOH encompasses issues related to poverty, including stress, anxiety, and pressure; access to healthy food; availability of adequate and affordable housing; access to either personal or public transportation; and healthcare. Housing issues include the quality of housing stock, which in many cases may be aging and degraded, or infested with insects, rodents, and other vermin; and housing instability, leading to homelessness. Many of these issues are tied to the lack of employment, or lack of a fair minimum wage that can support the costs of living in America. Poverty and unemployment, or underemployment, also contribute to food insecurity, leading to hunger and inadequate nutrition, especially for children (Table 9.4).

While nurses and nurse leaders cannot be expected to redress the sociological structures relating to these broad-based economic stability issues, they can and should be prepared to deal with the health-related results of these social determinants. Nurses must be prepared, through educational initiatives during schooling and throughout subsequent employment, to identify and address health outcomes related to poverty, food insecurity, and housing instability. New nurses should be encouraged to pursue employment with public hospitals and other safety net healthcare systems to provide services to the most fragile and vulnerable members of America's population.

TABLE 9.4: Economic Stability—Social Determinants of Health

Examples	Negative Health Outcomes
Poverty	
• Lack of education • Unemployment and underemployment • Lack of access to healthy foods • Lack of health insurance/access to preventive care • Lack of access to transportation • Substandard, low-quality housing • Homelessness and food insecurity	• Cardiovascular diseases • Diabetes • COPD and respiratory illnesses • Obesity • Psychological distress • Lower life expectancy/higher mortality
Quality of Housing	
• Aging, degraded, substandard housing stock • Air and water pollution • Hazardous waste and toxic materials • Traffic congestion • Overcrowding • Lack of health resources • Vermin infestations	• Injury and death • Lead poisoning and other toxicities • Poor mental health/behavioral issues • Cardiovascular diseases • Asthma, allergies, and respiratory diseases • Infectious diseases • Cancer
Employment	
• Unemployment • Underemployment • Poverty • Food and housing insecurity • Exposure to toxic substances • Access to health insurance	• Anxiety, depression, and social isolation • Poor mental health/behavioral issues • Cardiovascular diseases • Substance abuse • Suicide
Food Insecurity	
• Hunger • Childhood food insecurity • Access to healthy foods • Access to transportation	• Nutritional problems • Obesity • Cardiovascular diseases • Developmental and behavioral issues • Diabetes • Birth defects/low birth rate • Cognitive difficulties
Housing Instability	
• Homelessness • Lack of affordable housing • Substandard housing • Overcrowding • Frequent moves/lack of social cohesion	• Injury and death • Depression/behavioral issues • Drug and alcohol abuse • Tuberculosis • HIV/AIDS • Diabetes • Lack of access to healthcare • Poor oral health

COPD, chronic obstructive pulmonary disease.

POVERTY

Poverty in America is an intractable tragedy that defies easy solutions. Poverty is more prevalent among minorities, children, and older adults. The poverty rate in 2020 for Blacks was 19.5%; for Hispanics, 17%, and for Asians, 8.1%, compared to the poverty rate for Whites of 8.2%. The poverty rate for children under the age of 18 was 16.1%; and for adults aged 65 and older, 9% (Shrider et al., 2021).

A multitude of studies have identified poverty as a critical public health issue, showing a strong correlation between socioeconomic status and health. People living in poverty tend to suffer from higher rates of illness; chronic diseases including heart disease, stroke, diabetes, hypertension, COPD, and certain types of cancer; higher mortality; and lower life expectancy. One study found that men in the bottom 1% of U.S. income distribution had an expected age of death 14.6 years less than men in the top 1% of income distribution; women in the bottom 1% of income had an average age of death of 10.1 years less than women in the top 1% of income (Chetty et al., 2016).

Many factors contribute to poverty, including education; employment, or lack thereof; marital status; access to resources; and geographic location. Poverty is often correlated with other demographic factors, including race and ethnicity: the wealth of a typical White family registers about eight times more than the wealth of a typical Black family and about five times more than the wealth of a typical Hispanic family (Bhutta et al., 2020). People living in poverty also are less likely to have health insurance and face greater barriers to medical care; low-income workers are less likely to receive health insurance benefits through their employers and many may postpone or eschew medical care due to cost concerns (Khullar & Chokshi, 2018).

Perhaps the cruelest impact of poverty is on children: nearly one in six children lived in poverty in 2018, and nearly 73% of poor children were children of color (Semega et al., 2019). Children living in poverty face greater risks of housing and food insecurity and suffer academically; children living in poverty also lack health insurance, with an estimated 4.3 million children under 19 uninsured in 2018. Poor children also face a greater risk of being abused, neglected, or being placed in foster care, with more than 673,000 children suffering abuse or neglect in 2018, and more than 435,000 children in foster care in 2018. Poor children experience greater rates of juvenile incarceration; and are at greater risk of dying from gun violence, which is the leading cause of death for Black children and teens, and the second leading cause of death for those under age 19 (Children's Defense Fund, 2020). Poor children are more likely to remain poor in adulthood, perpetuating an intergenerational cycle of poverty.

QUALITY OF HOUSING

Poor people are typically crowded into areas laden with substandard, inadequately maintained housing stock and often in areas where there are serious environmental issues, including air and water pollution, hazardous waste, and traffic congestion. Many of these neighborhoods lack resources, such as supermarkets, parks, and playgrounds; have underresourced schools; and often have higher rates of violence and crime. The buildings themselves may be aging and deteriorated, with inadequate insulation, heating, and air conditioning systems, and may be contaminated with toxic building materials, including lead, asbestos, formaldehyde, polychlorinated biphenyls (PCBs), and mercury. Deteriorated housing stock also may be contaminated with mold and mildew, or infested with vermin.

The quality of housing as a social determinant encompasses the physical structure of housing, as well as the overall environment where the housing is located, all of which affect the mental and physical well-being of the residents. A 2016 policy brief by the MacArthur Foundation found that poor housing conditions and overcrowded neighborhoods are linked to poor mental health outcomes, including depression, anxiety, and hostility (Chambers et al., 2016).

Negative physical outcomes from poor quality housing are myriad: lead poisoning in children can cause impaired speech and hearing, decreased verbal ability, decreased learning and memory capability, hyperactivity, attention deficit disorder, and other mental issues. Lead poisoning in adults can cause headaches, tremors, irritability, abdominal pains, myalgia, seizures, paralysis, coma, and death. Asbestos exposure can lead to a compromised respiratory system, wheezing and shortness of breath, mesothelioma, lung cancer, laryngeal cancer, and ovarian cancer. Exposure to insect infestations, rodent droppings, or bird droppings can cause asthma, allergies, plague, murine typhus, leptospirosis, rickettsialpox, salmonella, dysentery, cholera, and many other diseases.

Substandard housing also can cause injury and death due to structural problems and poorly maintained appliances. Carbon monoxide poisoning can cause heart damage, neurological issues, and death. Homes with stairs, narrow doorways and narrow hallways, balconies, and low windows can cause injuries or death from falls, especially for older people and disabled individuals.

EMPLOYMENT

Employment is a cornerstone of economic stability: a steady job at a living wage helps keep families secure and out of poverty. Unfortunately, many people are either unemployed or underemployed, and many more have difficulty finding and keeping a job, leading to poverty, food insecurity, and housing insecurity.

There are many negative health impacts from unemployment, including mental health issues such as stress, anxiety, depression, low self-esteem, substance abuse, and suicide (Dooley et al., 1996; Robert Wood Johnson Foundation, 2013). Studies also have found that people who are unemployed may suffer from higher rates of high blood pressure, heart disease, stroke, and arthritis (Robert Wood Johnson Foundation, 2013).

Additionally, people who are unemployed are less likely to have health insurance. In 2020, employment-based insurance was the most common subtype of health insurance, with 54.4% of people getting coverage through employers; 8.6%, or 28 million people, did not have health insurance in 2020 (Keisler-Starkey & Bunch, 2021).

Although negative health outcomes have been linked to unemployment, employment also can be a source of illness or injury. According to the Bureau of Labor Statistics (BLS; 2021a, 2021b), there were 4,764 fatal work injuries and 2.7 million nonfatal workplace injuries and illnesses in 2020; workers aged 55 and over accounted for 36.2% of workplace fatalities and Hispanic or Latino workers accounted for 22.5% of fatal workplace injuries. Workers also may be exposed to toxic or harmful chemicals such as lead, asbestos, or pesticides, which can have long-term negative health consequences.

FOOD INSECURITY

One appalling consequence of poverty and unemployment is hunger and the closely related concept known as "food insecurity," which the USDA defines as "a household-level economic and social condition of limited or uncertain access to adequate food" (USDA, 2020, "CNSTAT Review and Recommendations"). Hunger is the result of food insecurity and refers to the individual's condition of inadequate food intake to live a normal, active, and healthy life. More than 37 million Americans—or about one in nine—experienced food insecurity in 2018, including more than 11 million children (Coleman-Jensen et al., 2019). The COVID-19 global pandemic exacerbated the problem of food insecurity, with some estimating that more than 45 million people experienced food insecurity in 2020, including 15 million children (Feeding America, 2021a, 2021b).

Food insecurity impacts communities across the United States, including both urban and rural neighborhoods. According to Feeding America, rural communities have higher levels of food insecurity, with an estimated 2.2 million households in rural communities facing hunger; according to a USDA breakdown by county, rural communities represent 63% of U.S. counties but account for 87% of the counties with the highest rates of food insecurity (Coleman-Jensen et al., 2019).

Older Americans, children, Blacks, and Latinos also have higher rates of food insecurity, including an estimated 5.3 million senior citizens; 21.6% of the Black community, including one in four Black children; and one in six Latinos. The problem is especially acute for children because children experiencing food insecurity are more likely to experience developmental impairment in language and motor skills; are more likely to have to repeat a grade in elementary school; and have more reported social and behavioral problems (Feeding America, 2021a).

In rural areas, lack of transportation options and the physical distance to full-line supermarkets contribute to food insecurity, while in urban areas shopping options may be limited to convenience stores, which often offer less variety of healthy food and lower quality foods at higher prices. Food insecurity causes a variety of negative health outcomes in both adults and children, including obesity, diabetes, metabolic syndrome, cardiovascular disease, hypertension, stroke, cancer, hepatitis, asthma, arthritis, COPD, and kidney disease; negative psychological health outcomes include stress and depression (Gregory & Coleman-Jensen, 2017; Holben & Pheley, 2006; Laraia, 2013; Nagata et al., 2019). In adults, households reporting very low food security were 15.3 percentage points more likely to experience any of 10 major chronic illnesses than adults in households reporting high food security (Gregory & Coleman-Jensen, 2017). In children, food insecurity has been associated with birth defects and low birth weight, cognitive difficulties, anemia, aggression and behavioral problems, asthma, and poor oral health (Gundersen & Ziliak, 2015).

HOUSING INSTABILITY

At the most basic level, housing instability encompasses myriad ways in which individuals and families may have difficulty finding and keeping adequate shelter, including not being able to afford housing, spending the bulk of household income on housing, overcrowding, moving frequently, staying with relatives, and being forced to live in subpar segregated neighborhoods due to discrimination. At its most extreme, housing instability leads to homelessness, which affected more than 580,000 people in the United States in 2020 (U.S. Department of Housing and Urban Development [HUD], 2020). The problem is especially acute for single-parent families with children; children represent an estimated one in five homeless people (Children's Defense Fund, 2020).

Studies have found that people who experience homelessness are at increased risk for premature death, mental health issues, and many chronic diseases. One 2007 study of people newly experiencing homelessness in New York City found that 53% had a substance abuse disorder, 35% experienced depression, 17% had hypertension, 17% had asthma, and 6% had diabetes (Schanzer et al., 2007, the most recent study of the newly homeless). Other studies have found that homeless people have higher rates of tuberculosis and HIV/AIDS, and that "nearly one in three homeless deaths were due to causes amenable to timely and effective health care" (Aldridge et al., 2019, "Conclusion").

Housing instability also can take a toll on health outcomes even when it does not result in homelessness. Households that spent more than 30% of income on housing are defined as "cost-burdened"; those that spend more than 50% of income on housing are "severely cost-burdened." According to the Harvard Joint Center for Housing Studies (JCHS), nearly half of all renter households were cost-burdened (JCHS, 2021).

Cost-burdened households are more likely to have trouble keeping up with rent or mortgage payments, leading to eviction or foreclosure; they may move more frequently or experience overcrowding, with multiple families living in the same residence and more than one person per bedroom; they may be forced to live in substandard, poorly maintained, or vermin-infested housing; may be discriminated against due to racial or ethnic characteristics or previous record of incarceration; and may not form lasting connections within a neighborhood, leading to a loss of social cohesion. Children who move frequently and are part of cost-burdened households may suffer academically and may not have access to adequate healthcare.

Discrimination and segregation also contribute to housing instability. A 2021 analysis found that 81% of U.S. metropolitan regions with more than 200,000 residents were more segregated in 2019 than they were in 1990, and that neighborhood poverty rates were three times higher in segregated communities of color (21%) compared to segregated White neighborhoods (7%; Menendian et al., 2021).

EDUCATION ACCESS AND QUALITY

According to the *Healthy People 2030* initiative, education is strongly correlated with health and life expectancy (DHHS, ODPHP, n.d.-b). Conversely, lack of educational opportunities can have negative health effects, beginning in childhood and continuing into adulthood. Children from low-income families, those who live in neighborhoods with underresourced schools, children who do not have access to healthy foods, and those who suffer from food insecurity or housing instability often have substantially shorter life expectancy and are more at risk from chronic diseases including diabetes, circulatory diseases, liver diseases, and mental disorders; people with less than high school education "are 2.4 times as likely as high school graduates and 4.1 times as likely as those with postsecondary education to rate their health as poor" (Hahn & Truman, 2015, p. 7).

This category encompasses numerous concerns relating to education and educational achievement, including language and literacy, which is impacted by immigration status, primary spoken language versus English as a second language, and health literacy, including the accessibility and understandability of health information. Other major issues that fall under the education category include early childhood education and development, encompassing proper nutrition, exercise, and the role of stress in children; the high school graduation rate, which often has been shown to be a determining factor in poverty, unemployment, and future success; and enrollment in higher education, which is negatively impacted by teenage dropout rates and teenage pregnancy (Table 9.5).

TABLE 9.5: Education Access and Quality—Social Determinants of Health

Examples	Negative Health Outcomes
Language and Literacy	
• Speaking and language skills • Reading and writing comprehension • Understanding/working with numbers • Limited English proficiency	• Barrier to accessing health information • Problems following provider instructions • Difficulty following medication instructions • Diabetes • Cancer • Lack of preventive care
Early Childhood Education and Development	
• Proper nutrition • Brain development • Access to healthcare • Preventive care • Education • Physical activity	• Hunger/inadequate nutrition • Developmental delays/behavioral issues • Cognitive impairment • Smoking, drug, and alcohol abuse • Physical abuse • Obesity • Cardiovascular diseases • Diabetes • Lack of access to healthcare

(*continued*)

TABLE 9.5: Education Access and Quality—Social Determinants of Health (*continued*)

High School Graduation	
• Reading proficiency • Employment • Housing • Access to healthcare	• Unemployment/underemployment • Depression/behavioral issues • Drug and alcohol abuse • Cardiovascular diseases • Teen pregnancy/parenthood • Diabetes • Hepatitis
Enrollment in Higher Education	
• Employment/income • Adult success • Access to healthcare • Longer life expectancy	• Depression/behavioral issues • Drug and alcohol abuse • Shorter life expectancy • Poorer self-reported health • Cardiovascular diseases

One of the earliest opportunities for nursing intervention in education comes from school and public health nurses, who can play an important role in identifying these SDOH in children and help families access programs to alleviate health disparities. *The Future of Nursing 2020–2030* report calls school nurses "frontline health care providers, serving as a bridge between the healthcare and education systems and other sectors," and notes that school and public health nurses can have a huge impact on advancing health equity by helping identify and address food and housing insecurity, poverty, access to healthcare, safety issues, and other factors that impact childhood health (Wakefield et al., 2021). In some cases, school nurses may be the *only* healthcare provider that a child sees, heightening the importance of continuing training and education for this segment of the nursing profession.

LANGUAGE AND LITERACY

On the surface, language and literacy may not seem to be relevant to health outcomes but can be vitally important to helping people understand how to take care of themselves, how to access and follow provider instructions, and, in general, how to live healthier lives. Literacy in this context is different from but related to health literacy, which is categorized as part of the "health and healthcare access and quality" category. Low levels of literacy are associated with lower levels of educational attainment, leading to the associated negative health outcomes.

Immigrants and others who have limited English proficiency may not be able to adequately access, understand, or navigate the complicated healthcare landscape. According to the U.S. Census Bureau 2020 American Community Survey, more than 66 million U.S. residents—or 21.5% of the U.S. population—spoke a language other than English at home, a number which has doubled since 1990 and tripled since 1980 (U.S. Census Bureau, 2020a).

Studies have found that limited English proficiency can be a barrier to accessing proper healthcare, following provider instructions, and understanding health information; this information includes discussions between patients and healthcare providers, consent forms, instructions, proper medication use, health promotional literature, and many other forms of communication, all of which have negative health consequences and lead to more chronic conditions, including diabetes and cancer (Nielsen-Bohlman et al., 2004; Raynor, 2016).

Individuals with limited literacy and limited English proficiency also may have difficulty accessing mental healthcare services, due to the complexity of symptoms. A dearth of interpreter services and lack of cultural competency translate to overall lower quality of patient care.

EARLY CHILDHOOD EDUCATION AND DEVELOPMENT

The first years of a child's life are crucial in terms of brain development, yet far too many children lack proper nutrition, are born into poverty, and face a variety of stressors that have a negative impact on their physical and mental development, including developmental delays that persist into adulthood. These stressors can include food insecurity, housing instability, having one or more parents who are incarcerated, physical abuse, and unsafe neighborhoods with underresourced schools. Exposure to environmental health hazards—such as lead—has both immediate and long-term negative health consequences, including developmental delays, cognitive impairment, and behavioral and mental health issues.

Early child development and education has been shown to have long-range consequences for adult health. The Carolina Abecedarian Project, which tracked individuals from childhood to adulthood, revealed that those children who had access to early childhood healthcare, nutrition, and education had better health in adulthood, including lower rates of obesity, high blood pressure, elevated blood sugar, and high cholesterol, lowering their risk of heart disease (Muennig et al., 2011).

According to the *Healthy People 2030* initiative, "Early childhood programs are a critical outlet for fostering the mental and physical development of young children" (DHHS, ODPHP, n.d.-b), including federally funded programs like Head Start as well as state-based programs such as school breakfast and lunch, and full-day kindergarten. However, the Children's Defense Fund found that in 2018, the Early Head Start program served just 8% of eligible infants and toddlers, and the Head Start program served just 50% of eligible 3- and 4-year-olds. The Children's Defense Fund also asserted that "America's schools have slipped backwards into patterns of deep racial and socioeconomic segregation, perpetuating achievement gaps," including in reading and math, where 74% of low-income, 79% of Black, and 72% of Hispanic fourth and eighth grade public school students did not achieve reading or math proficiency in 2019 (Children's Defense Fund, 2020).

HIGH SCHOOL GRADUATION

Racial, ethnic, and income disparities continue to impact children as they move through the school system, setting up poor and minority students for failure in high school, and subsequent problems finding and maintaining employment in adulthood. The U.S. Census Bureau's American Community Survey for 2020 found that 24.1% of adults who did not graduate high school were living in poverty (U.S. Census Bureau, 2020b).

The Children's Defense Fund revealed that less than 81% of Black, Hispanic, and American Indian/Alaska Native public school students graduated on time during the 2016 to 2017 school year (Children's Defense Fund, 2020). The Save the Children Foundation estimates that the pandemic may cause as many as 1 million students to drop out of high school (Save the Children Foundation, 2021a, 2021b).

High school graduation has profound consequences for future adult employment, earnings, and health outcomes, as a high school diploma is considered a requirement for most jobs in America. According to the BLS (2019), workers without a high school diploma typically earn between 55% and 62% of the earnings of all workers, compared to the earnings of high school graduates, which range between 77% and 85% of the earnings of all workers.

Teen pregnancy and teen parenthood cause many young women to drop out of high school, resulting in adverse health outcomes throughout life. One study found that only 51% of teen mothers earned a high school diploma, versus 89% who did not give birth as teens (Steinka-Fry et al., 2013).

Students who drop out of high school are at risk of poverty, poor adult health, and premature death; many self-report suffering from at least one chronic health condition, including asthma, high blood pressure, heart disease, stroke, diabetes, and hepatitis as compared to high school graduates, indicating that improving the high school graduation rate has the potential to improve community and population health.

ENROLLMENT IN HIGHER EDUCATION

Just as a high school diploma is a strong predictor of future adult success and positive health outcomes, enrollment in higher education can lead to higher lifetime earnings potential and, in turn, contribute to better health and longer life expectancy. According to the BLS (2019), a worker with a bachelor's degree earned more than double what a worker without a high school diploma earned; and a worker with an advanced degree earned more than double what a high school graduate earned.

The term "higher education" encompasses any post-high-school formal educational programs, including advanced certificate programs, 2-year community colleges, 4-year colleges and universities, and graduate and professional programs. A 2018 study revealed that the lack of higher education among poor and minority communities is leading to greater health disparities, noting that "American youth have experienced increasingly unequal educational opportunities that depend on the schools they attend, the neighborhoods in which they live, the color of their skin, and families' financial resources" (Zajacova & Lawrence, 2018, p. 174).

Many underresourced high schools in poor or segregated neighborhoods lack the funding, assets, teachers, and guidance counselors to adequately prepare children for higher education; students from impoverished and minority families may not even be aware of the availability of scholarships and financial aid. Black and Hispanic students have lower college enrollment and college graduate rates than White students. A 2019 report by the American Council on Education found that 40.1% of all associate degrees and 31.5% of bachelor's degrees were earned by people of color (Espinosa et al., 2019).

Enrollment in higher education has been shown to have a positive benefit on self-reported health later in life. An international study published in 2020 found that individuals with higher education enjoyed longer life expectancy; lower levels of mortality, morbidity, and disability; and overall better physical and mental health than individuals with low educational attainment (Raghupathi & Raghupathi, 2020). Conversely, a lack of educational achievement is associated with shorter life expectancy and self-reported poorer health. Other researchers have found that individuals with higher educational attainment were more likely to engage in preventive health measures, such as exercise, avoiding alcohol and illegal drugs, and having regular health screening, leading to lower incidence of diabetes, heart disease, and high blood pressure, as well as fewer mental health issues, including depression and anxiety.

HEALTH AND HEALTHCARE ACCESS AND QUALITY

The United States spent more than $3.6 trillion on national health expenditures in 2018, representing 17.7% of the gross domestic product and $11,172 per capita (NCHS, 2019). This is about double what other developed nations spend—on average, other wealthy countries spend $5,697 per capita (Kamal et al., 2020). And yet, in spite of this outsized spending, average life expectancy dropped to 40th among developed nations in 2015 and is expected to drop to 43rd by 2060 (Medina et al., 2020). Why? The answer may be due to the issues raised in the "health and healthcare access and quality" category of SDOH.

According to the *Healthy People 2030* initiative, many Americans don't get the healthcare they need due to a combination of factors, including a lack of health insurance; the high cost of healthcare and medications; a lack of access to healthcare services due to location or inadequacy of transportation; a shortage in the numbers, availability, and access to primary care physicians (PCPs) and other healthcare professionals; distrust of the healthcare system; and

TABLE 9.6: Health and Healthcare Access and Quality—Social Determinants of Health

Examples	Negative Health Outcomes
Access to Healthcare	
• Health insurance • Cost of doctor visits, medications, equipment, tests • Transportation barriers • Lack of healthcare facilities • Shortages of physicians, providers	• Lack of preventive care • Cardiovascular disease • Diabetes • Cancer • Childhood immunizations • Dental care
Access to Primary Care	
• Preventive care • Health information • Screenings • Immunizations • Health insurance • Management of chronic conditions • Transportation • Cost • Lack of providers	• Cardiovascular disease • Diabetes • Asthma and respiratory illnesses • Lack of screenings • Lack of immunizations
Health Literacy	
• Access to health information • Reading and understanding health information • Comprehension of health information • Recognize/understand common medical conditions • Management of chronic conditions	• Poor compliance with provider instructions • Problems with medication management • Cardiovascular diseases • Diabetes • Lack of preventive healthcare • Lack of immunizations • Lower life expectancy

poor communication about the need for, importance of, and connection between preventive care and better health (Table 9.6). These factors are exacerbated by other SDOH, including discrimination, environmental and housing conditions, poverty, language and literacy, education, and other interrelated circumstances (DHHS, ODPHP, n.d.-b).

Massive income, racial, ethnic, and social disparities exist in the U.S. healthcare system, preventing a large swath of the population from getting necessary, timely, high-quality, and compassionate care. For instance, the 2019 National Healthcare Quality and Disparities Report by the Agency for Healthcare Research and Quality (AHRQ) found that Blacks, American Indians, and Alaska natives received worse care than Whites for 40% of quality measures; Hispanics and Native Hawaiians/Pacific Islanders received worse care than Whites for more than one-third of quality measures. Racial disparities were further illuminated by the COVID-19 pandemic, with disproportionately high numbers of Blacks and Hispanics across the country being struck down by the disease.

The "health and healthcare access and quality" category comprises issues related to access to healthcare, such as location, transportation, hospital and clinic availability and closures, and language barriers. A separate but connected grouping involves access to primary care, again addressing transportation issues, which can be especially applicable in rural areas and for older adults and disabled individuals, as well as a national shortfall in the number of physicians and other healthcare providers. Health literacy also comes into play in this

category, including establishing trust, providing patient education, and developing better communication strategies. Finally, although not technically part of the DHHS definition of SDOH, we examine the impact of the COVID-19 pandemic, including racial disparities in cases, hospitalizations and deaths, racial disparities in the definition of essential workers, and the racial disparities in vaccine hesitancy and vaccine access.

Nurses play an indispensable and growing role in addressing the issues in the healthcare category, and are requisite participants in any effort to alleviate health inequities in the United States. The *Future of Nursing* report noted, "The nation cannot achieve true health equity without nurses, which means it must do better for nurses" (Wakefield et al., 2021, pp. x–xi). Innovations in nursing modalities, including increasing the focus on screening for SDOH and forming collaborative partnerships within the practice setting as well as in the community, is a necessary evolution in the role of nurses in society, and a key component to eliminating or reducing health disparities.

ACCESS TO HEALTHCARE

Barriers preventing access to healthcare may prevent many people from getting the prevention and treatment they need to live longer, healthier lives. One of the biggest barriers is not having health insurance: in spite of the gains made since the passage of the ACA, some 28 million people in the United States did not have health insurance in 2020 (Keisler-Starkey & Bunch, 2021).

The high cost of doctor visits, medications, equipment, and screening tests and other procedures may cause many people to postpone or forego necessary healthcare. Even people who do have health insurance may find out-of-pocket costs to be prohibitive: according to a 2018 study, medical debt from chronic or adverse health conditions can push families into bankruptcy or cause them to do without necessities such as food, heat, or rent (Richard et al., 2018). People without health insurance, or those with inadequate health insurance, are less likely to have preventive care and health screenings, and therefore are at higher risk of cardiovascular disease, diabetes, and cancer; children without health insurance are less likely to receive well-child visits, dental care, and immunizations.

Lack of health insurance is not the only barrier to care. A major problem, especially for rural communities, older adults, and disabled people is inconvenient, unreliable, or erratic transportation alternatives. A 2018 study found that transportation barriers can cause patients to postpone care, miss or frequently reschedule appointments, and delay or skip medications; these problems were particularly acute for vulnerable, low-income populations and contribute to poorer management of chronic diseases (Syed et al., 2013).

Another barrier to healthcare access is a lack of healthcare facilities and shortages of physicians and other providers. The U.S. Government Accountability Office (GAO) found that more than 100 rural hospitals closed from January 2013 to February 2020, increasing the median distance for patients to travel to access general inpatient services by more than 20 miles—from 3.4 miles in 2012 to 23.9 miles (GAO, 2021).

Language difficulties and limited English proficiency, as detailed in the "Education Access and Quality" section of this chapter, also are barriers to care. Studies have found that speaking a language other than English at home can prevent individuals from accessing primary care and health screening programs. For instance, a study of women whose primary language was Spanish, Cantonese, or Japanese found that they were less likely to be screened for cervical cancer or breast cancer (Jacobs et al., 2005). A subsequent study found that Chinese Americans with limited English proficiency and limited health literacy were less likely to have requisite health screenings for colorectal and breast cancer, despite the fact that cancer is the leading cause of death among Asian Americans (Sentell et al., 2015). Similarly, a 2021 study found significant disparities in clinical trial screening and engagement, use of genetic counseling, and communication via electronic patient portals in breast cancer screenings between individuals with limited English proficiency compared to English-speaking patients; native Spanish speakers were the least likely to engage in an electronic patient portal among all

non-native English-speaking subgroups (Roy et al., 2021). Language barriers and limited English proficiency often prevent patients from understanding and following provider instructions, following guidelines for proper medication use, and understanding other forms of health information, all of which may contribute to poor health outcomes.

ACCESS TO PRIMARY CARE

A lack of or inadequate access to primary care can also be a significant barrier to proper healthcare, due to the fact that primary care is the main source of health information and preventive health services such as blood pressure screenings, cancer screenings, flu shots, and other immunizations, as well as early detection and treatment of disease and management of chronic health conditions such as cardiovascular disease, diabetes, and asthma.

There are a variety of barriers to primary care access, including a lack of or inadequate health insurance; cost of physician visits, screenings, and medications; location and transportation difficulties; language-related barriers; and limited provider hours.

Additionally, numerous reports have cited a shortage of PCPs in the United States. The Health Resources and Services Administration (n.d., 2022) notes that some 96 million people live in Health Professional Shortage Areas (HPSA) for primary care, and 154 million people live in HPSAs for mental health; as of June 2022, approximately 65.49% of primary care HPSAs were located in rural areas. In addition to shortages of PCPs, the United States can expect a shortage of nurses: a 2015 study predicted that more than 1 million registered nurses will retire before 2030, leading to shortages in most regions of the country, but particularly in rural communities (Auerbach et al., 2015).

Vulnerable populations such as older adults and individuals with disabilities have need of regular health screenings and management of chronic conditions yet may have significant obstacles to seeing a PCP. The CDC notes that one in three adults with disabilities aged 18 to 44 years do not have a usual healthcare provider; furthermore, one in four adults with disabilities aged 45 to 64 years old did not have a routine checkup in the past year; yet people with disabilities are more likely to smoke, be obese, have heart disease, and have diabetes than nondisabled individuals (CDC, n.d.-e).

Creative approaches, including implementing telehealth and artificial intelligence and utilizing more nurse practitioners, physician assistants, and other clinicians could be a solution, with some researchers suggesting this could be equivalent to adding 44,000 new PCPs (Kerns & Willis, 2020). However, physician and nursing shortages are likely to be a problem for the foreseeable future: The 2019 National Healthcare Quality and Disparities Report notes that, "[h]ealthcare access and quality can be affected by workforce shortages, which can be an issue especially in rural areas" (AHRQ, 2020, p. O8). Improving access to primary care is therefore of critical importance to reducing health disparities and improving overall population health.

HEALTH LITERACY

Health literacy is a separate issue from language and literacy, which is categorized under the "Education Access and Quality" category. It is nonetheless an important issue to consider. Health literacy is defined by the DHHS as being able to "obtain, process and understand basic health information needed to make appropriate health decisions" (DHHS, ODPHP, 2010, p. iii). The agency estimates that nearly nine out of 10 adults have difficulty using everyday health information (DHHS, ODPHP, 2010).

Examples of health literacy include being able to read and understand preventive health information, provider instructions, medication labels, consent forms, and other materials. Much of today's current medical and healthcare information requires some degree of both print literacy, including the ability to read, write, and comprehend written material; and oral literacy, including speaking and listening skills. Low levels of literacy are associated

with negative health outcomes; to complicate matters further, even individuals with high overall literacy can have low health literacy; especially as healthcare information becomes ever more complex and complicated.

A 2018 study found an estimated 80 million Americans have limited health literacy (Prince et al., 2018). This means that millions of Americans may not recognize the signs and symptoms of common medical conditions, such as heart disease or stroke; they may not know about, understand, or manage their medical conditions, such as high blood pressure and diabetes; they may not understand how or when to take their medications properly, or use medical devices correctly, such as asthma inhalers. Another 2018 study suggests that older adults, men, racial and ethnic minorities, and people of low socioeconomic status have the lowest levels of health literacy among all population subgroups, leading to higher morbidity and mortality (Hickey et al., 2018). Patients with lower health literacy also may seek care in the ED more frequently and be more likely to be hospitalized; children whose parents have low health literacy may not receive preventive care, immunizations, or well-child screenings.

Healthcare providers and systems can address health literacy and establish greater trust by embracing patient-centered care models, avoiding medical jargon, and developing better communication strategies.

One 2018 study recommends that patient education be tailored specifically to each patient's needs, limiting the focus of a visit to three key points, and providing printed material written at or below a sixth-grade reading level (Wittink & Oosterhaven, 2018). Other options include asking open-ended questions and asking patients to repeat information and instructions in their own words, to assess their level of understanding.

COVID-19 AND COVID-19 VACCINE HESITANCY

The devastating COVID-19 global pandemic revealed the cavernous fissures fracturing American society, as communities of color were devastated by the disease. The toll on Black and Hispanic populations brought into sharp relief the horrific health disparities plaguing American society. According to the CDC, racial and ethnic minorities are disproportionately represented among COVID-19 cases; Blacks and Hispanics of all age groups were hospitalized with COVID-19 at a rate 2.3 and 2.2 times higher than the White population, respectively. Hispanics were 1.8 times more likely to die of COVID-19, Blacks were 1.7 times more likely to die, and American Indian or Alaska Native, non-Hispanic people were 2.1 times more likely to die as Whites (CDC, 2022).

The pandemic also disproportionately affected dense urban neighborhoods, rural communities with lack of access to healthcare, and essential workers in frontline jobs, including nurses and other healthcare personnel. Undocumented immigrants and immigrants held in detention centers as well as incarcerated individuals also suffered higher rates of COVID-19 cases, hospitalizations, and deaths. The crisis exacted a huge toll on employment and income in communities of color, with higher rates of pandemic-related job losses among Blacks and Hispanics. Poor and minority children also were unduly impacted by the situation: Save the Children reported that the poorest families were 15 times more likely to struggle with hunger, four times more likely to lack internet access for remote education, and nine times more likely to have difficulty paying bills as wealthier families during the pandemic (Save the Children Foundation, 2021a, 2021b).

COVID-19 also exposed the disparities inherent in the workplace, where nurses and other healthcare practitioners struggled to secure enough personal protective equipment (PPE). Approximately 50 million U.S. workers—or 34.5% of all workers—are classified as frontline and essential workers, working in fields such as healthcare, transportation, emergency services, and certain retail establishments, including grocery stores and pharmacies. A 2021 health policy brief pointed out that "[w]omen, people of color, and those of lower socioeconomic status are the most likely among all workers to hold frontline positions that require in-person work and the least likely to have paid sick leave. These groups

have disproportionately experienced the negative health and economic consequences of COVID-19" (Wolfe et al., 2021, Key point #3).

The COVID-19 vaccination program also revealed cultural, racial, ethnic, and age disparities in terms of access and vaccine hesitancy. Initially, Blacks and Hispanics were among the population segments most likely to report vaccine hesitancy, and minority communities were the most likely to report difficulties in accessing COVID-19 vaccines. Many thought leaders attributed this vaccine hesitancy to a legacy of medical experimentation, medical injustices, and fear of an unknown, rapidly developed vaccine; many cited the now infamous and unethical "Tuskegee Study of Untreated Syphilis in the Negro Male" as a reason for vaccine hesitancy among Black Americans. By March of 2021, however, a survey by the Kaiser Family Foundation showed that Black adults who had either received a COVID-19 vaccine shot or wanted one as soon as possible rose to 55%, up from 41% in February. By May of 2021, vaccine hesitancy had shifted, to being less about race or ethnicity, and more about political affiliation and age. An analysis of polling by the Kaiser Family Foundation by *The New York Times* found that 29% of Republicans said they definitely would not get a COVID-19 vaccine, or only if required, compared to 8% of Democrats; the same analysis showed that 20% of Blacks, 19% of Whites, and 16% of Hispanics definitely would not get a COVID-19 vaccine, or only if required (Leonhardt, 2021).

The COVID-19 crisis clearly illustrated the vital role that nurses play in disaster response and emergency preparedness . . . and also illuminated many challenges for the future. *The Future of Nursing* report pointed out that future disasters, infectious disease outbreaks, and other public health emergencies will most likely create significant burdens for the nursing profession and have a major impact on individual, community, and population health (Wakefield et al., 2021). However, the report stated that the nursing profession is woefully unprepared to meet these challenges, calling for "a bold and expansive effort, executed across multiple platforms," including nursing education, practice policy, and research.

WHAT EVERY NURSE MANAGER NEEDS TO KNOW ABOUT POPULATION HEALTH

Nurse managers have a unique opportunity to witness the impact of SDOH of patients firsthand in clinical settings. Nurse managers need to understand the respective elements of SDOH resulting in hospital readmissions and the impact on discharge plans. Nurse managers can assess the underlying factors contributing to hospital admissions, medication, and chronic disease management. Nurse managers can influence the care patients receive by advocating for resources, ensuring adequate patient education, and assisting with health literacy (Carlson et al., 2016).

Nurse managers are able to educate frontline staff of the importance of gaining comprehensive knowledge of their patients' social status, where patients live, whether they have access to food, and the social support available to ensure success in their communities (National Advisory Council on Nurse Education and Practice, 2019).

WHAT EVERY NURSE MANAGER NEEDS TO KNOW

- Nurse managers need to know the elements of SDOH impacting patients in their settings.
- Nurse managers can have an impact on discharge plans by collaborating with members of the team and training frontline nurses to advocate for resources within the patient's community.
- SDOH can impact the lives of patients in a significant manner overriding the care provided in the clinical setting.
- Addressing SDOH is critical to ensuring population health.

WHAT EVERY NURSE EXECUTIVE NEEDS TO KNOW ABOUT POPULATION HEALTH

Nurse executives can create the systems that can help hospitals and healthcare organizations address SDOH, thereby creating opportunities to improve population health through community-based initiatives (Sullivan, 2019). Nurse executives can ensure nurse leaders and nurses participate in forums to address SDOH by establishing the infrastructure to learn and recommend resources. Nurse executives also play a key role in assessing and applying for grants to assist organizations in addressing the SDOH; many international, national, and state philanthropic institutions—including the Robert Wood Johnson Foundation, Rose Community Foundation, Humana Foundation, Kresge Foundation, Michael and Susan Dell Foundation, Conrad N. Hilton Foundation, New York Community Trust, and General Mills Foundation, among others—offer grants specifically tailored to address SDOH, such as food insecurity and housing instability (Health Affairs, 2019).

As senior members of executive teams, nurse executives can advocate for health systems to take a risk to care for disadvantaged (i.e., uninsured, undomiciled, and foster care) patients. Nurse executives have the financial acumen to address the impact on caring for the underserved and the impact it has financially on organizations, as well as how current and future methods of paying providers can incentivize addressing the SDOH as part of an overall healthcare delivery strategy (NASEM, 2019). Nurse executives can provide insight on the impact of not caring for these patients by assessing the financial ramifications on hospital readmissions, which have been shown to lead to decreased profitability over time (Upadhyay et al., 2019). A 2020 report by the Centers for Medicare & Medicaid Services (CMS) states that hospital readmissions account for billions of dollars in annual Medicare spending and notes that hospital readmissions often are considered a key indicator of quality of care, with significant impact on overall health outcomes. The report also reveals that vulnerable populations face an increased risk of hospital readmissions, known as "readmission disparity," pointing out that racial and ethnic minorities account for a disproportionate percentage of hospital readmissions (CMS Office of Minority Health, 2020).

WHAT EVERY NURSE EXECUTIVE NEEDS TO KNOW

- The nurse executive should create systems to ensure frontline staff are learning about SDOH.
- The nurse executive can demonstrate the need to care for patients impacted by SDOH.
- Financial acumen of hospital readmissions and risk of not caring for patients impacted by SDOH can be shared to other executives of the team by nurse executives.

CASE SCENARIO

EVALUATION OF HEAD TRAUMA

SITUATION

DR is a 56-year-old patient admitted via ambulance to a 120-bed community care hospital. DR was brought in by ambulance for evaluation of head trauma due to a fall in a local subway station. Upon evaluation, DR is transferred to the neurological intensive care unit for evacuation of a subdural hematoma. The RN in charge of the night shift, NJ, assigns DR to a second-year nurse,

SJ. Nurse SJ takes DR to CT scan upon arrival to the unit. Post-CT scan, Nurse SJ gets DR settled and begins administering a presurgical checklist for a planned procedure in the morning. Nurse SJ gives report to the operating room (OR) and prepares for handoff to the day nurse, MW. Day Nurse MW attempts to complete the 24-hour admission note post-procedure. DR is responsive and expresses they have been undomiciled for the past 10 years due to alcohol dependency; DR is unemployed and has no insurance.

During interdisciplinary rounds, Nurse MW expresses the need for housing, treatment, and insurance for DR. Medical Resident Dr. JM reads the patient's past medical notes and mentions during interdisciplinary rounds that DR is known to the hospital and frequently visits the ED. Social Worker RT mentions the need to ensure a safe discharge plan to prevent readmission.

APPROACH

Interdisciplinary rounds act as a forum that allows members of the team to discuss critical aspects of patient care. Communication allowed during interdisciplinary rounds is instrumental to learning best practice for various members of the team. Interdisciplinary teams can have a fundamental impact on safe, effective, and efficient patient care, and many healthcare organizations are formalizing the team approach to enhance care management, including adding care coordinators or care navigators to facilitate the process (Mosher et al., 2014).

In this scenario, all members of the team are instrumental in facilitating discharge planning at the interdisciplinary rounds. The medical team can focus on health progression by ensuring surgical healing and addressing alcohol abuse and physical therapy. Nurses during rounds can provide insight on patient concerns regarding discharge. Case management and social workers can provide context to determine the resources required and means to ensure a safe discharge. Patient involvement in interdisciplinary rounds is an opportunity to ensure the patients are aware of discharge plans.

OUTCOME

DISCHARGE PLANNING

A lack of interdisciplinary collaboration and inadequate communication can have adverse consequences for patients, including increased length of stay, medical errors, hospital-acquired infections, post-discharge adverse medication episodes, and readmission (Ryan et al., 2017).

A report from the AHRQ found that nearly 20% of patients experience an undesirable outcome within 30 days of discharge and noted that an estimated three-quarters of these adverse events could have been prevented or ameliorated (AHRQ, n.d.).

To assist healthcare systems with discharge planning, the AHRQ developed the IDEAL tool for teams to use during the process. The main components are:

(I) Include the patient and family as full partners in the process.

(D) Discuss five key areas to prevent post-discharge problems:

1. What life at home will be like
2. Medication review
3. Warning signs and problems
4. Review and explain test results
5. Make follow-up appointments

(E) Educate the patient and family about the condition and steps to follow.

(A) Assess and use teach-back techniques to determine how well doctors and nurses explain the diagnosis, condition, and next steps in the patient's care to the patient and family.

(L) Listen to and honor the patient's and family's goals, preferences, observations, and concerns.

Discharge planning beginning at the patient's admission allows for appropriate preparation for a safe discharge. Physicians, nurses, physical and occupational therapists, social workers, and case managers all contribute their respective patient knowledge and expertise to ensure patients are

discharged appropriately. Communication with members of the team, including the patient and family members, is key to minimize readmissions. The creation of a discharge checklist can ensure factors such as transportation, patient belongings, insurance, and post-discharge placement are all addressed prior to discharge and bottlenecks are prevented.

DISCUSSION QUESTIONS

1. Upon arrival to the ED, what are some potential resources to consider due to SDOH?
2. What discharge planning resources should be considered during admission?
3. What aspects of the plan of care should be considered for DR?

CASE SCENARIO

REDUCING AVOIDABLE EMERGENCY VISITS

SITUATION

Hospital K is a 400-bed trauma level one academic medical center providing care to the community for more than 30 years. The level of ED visits has led administrators to investigate other mechanisms to ensure appropriate utilization of the ED. Hospital K has decided to open up an express care clinic to provide patients the mechanism of receiving care expeditiously.

PB, a 73-year-old patient, has recently been admitted due to fainting at home. PB admits to avoiding the ED because of fear of contracting COVID-19 during the global pandemic. Upon arrival, Dr. RJ assesses PB's neurological, urinary, and endocrine systems. PB reports taking water pills without appropriate follow-up care and experiencing periods of confusion and abdomen pain. Dr. RJ plans to admit PB with a diagnosis of acute kidney failure.

APPROACH

COVID-19 led to patients becoming ill at home and not seeking medical help. A study by the CDC comparing March 31 to April 27, 2019, prior to the pandemic, to the similar 4-week period March 29 to April 25, 2020, during the early phase of the pandemic, found that U.S. ED visits were 42% lower in 2020, indicating that some people were delaying care for potentially serious conditions, including nonspecific chest pain and acute myocardial infarction (Hartnett et al., 2020).

As COVID-19 numbers decline across the country, health systems saw the number of patients visiting the ED trend resume to pre-COVID numbers. An August 2021 survey by global management consulting firm McKinsey & Company reported that ED and inpatient volumes had returned to 2019 levels and projected that volumes would rise 5% to 6% higher in 2022 (Berlin et al., 2021). Minority patients across the country tend to visit EDs versus going to see a PCP. Studies have found that the use of EDs is particularly high among Black and Hispanic patients and women, as well as Medicare and Medicaid beneficiaries (Hanchate et al., 2019; Marcozzi et al., 2018). The increase of ambulatory clinics has emerged as a result of patients needing access to reduce ED utilization.

Patient education regarding the mechanisms to access care is integral to improving SDOH. Because there are myriad socioeconomic and racial disparities that create barriers to healthcare access, vulnerable populations often turn to EDs for non-emergency care (Marcozzi et al., 2018). Educational efforts focused on these vulnerable populations can help patients understand that there are other avenues to attain the care they need in a timely fashion, without having to resort to EDs. The American Academy of Family Physicians (AAFP) recommends a team-based approach to addressing the SDOH, urging physicians and medical practices to ask patients about their circumstances, identify resources within their communities to assist them, and act to connect patients with those resources, thereby helping to educate patients about their options (AAFP, 2018).

The establishment of ambulatory clinics necessitates the need to educate patients about the mechanisms by which they can obtain care. A comprehensive marketing plan is necessary to ensure patients understand the new service and methods to begin receiving care.

INTERPRETATION

A March 2021 report to Congress by the Office of the Assistant Secretary for Planning and Evaluation, DHHS, found that there are many issues surrounding the perceived overuse or inappropriate use of EDs, including a lack of understanding on the part of patients about what constitutes an actual emergency, a lack of access or long wait times for PCPs or other alternative avenues for care, and a lack of insurance coverage and concerns about ability to pay (DHHS, 2021). The same report pointed out that over-utilization of EDs creates many challenges for the U.S. healthcare system, including the significantly higher cost for emergency care as compared to ambulatory or other care settings, as well as other factors, such as overcrowding, long wait times, a lack of continuity of care, and a deficit in preventive care services, all of which can lead to higher patient mortality (DHHS, 2021). It is therefore incumbent upon healthcare providers to study and understand the factors driving patient usage of EDs and develop plans to educate and inform those patients about care alternatives.

ACCESS TO CARE

The SDOH have major implications on patients' access to care and preventive screenings, which can be especially troubling when it comes to serious illnesses such as cardiovascular disease, respiratory disease, and cancer, where lack of preventive and follow-up care can lead to significantly higher mortality rates. Despite this fact, many healthcare organizations are not addressing SDOH in their patient assessment process. A 2021 study from researchers at New York-Presbyterian and Weill Cornell Medicine pointed out that only 15.6% of U.S. physician practices and 24.4% of U.S. hospital systems screen patients for multiple SDOH, including food insecurity, housing instability, utility needs, transportation needs, and interpersonal violence; the study reported that the top barriers in access to care reported by cancer patients were economic instability, education and low health literacy, and community and social context, including bias, stigma, and cultural misconceptions (Jou et al., 2021).

OUTCOME

Stakeholders should work to determine a business plan and communication plan. The business plan should include assessment of ED utilization and readmissions. The communication plan should focus on internal and external success.

DISCUSSION QUESTIONS

1. What activities and considerations would you include in communicating new primary care clinics at your organization to the community?
2. What factors should leadership take into account to determine whether express care clinics can be beneficial for their patient population?
3. What are some key elements to be used by the patient upon discharge?

KEY POINTS

- Nurses and nurse leaders are essential to achieving broad population and community health goals. The history of the nursing profession is based on a commitment to community health and wellness, as well as actions and advocacy to promote social justice and alleviate health disparities.
- It is vitally important for nurses and nurse leaders to understand and address the SDOH when implementing evidence-based professional practice, as well as providing quality and compassionate patient care.
- Decades of research has shown that economic, environmental, educational, community and social context, and healthcare conditions are the primary drivers of disease and health for individuals, communities, and the human population as a whole.
- The SDOH are organized into five key areas: neighborhood and built environment, social and community context, economic stability, education access and quality, and health and healthcare access and quality. Each of these categories presents a unique set of situations and circumstances that can affect individual, community, and population health, reflecting the key issues and problems that can contribute to diseases, chronic illnesses, infections, maternal mortality and morbidity, situational emergencies and accidents, and domestic violence.
- Nurses and nurse leaders are a critical link in the chain connecting healthcare organizations and the patient populations they serve. As the most trusted profession, nurses are uniquely positioned to address the SDOH and thereby help promote health equity and enhance overall community and population health.

SUMMARY

Nurses occupy a unique role within the healthcare landscape, spending more time with patients than any other healthcare professionals. A 2018 study of patient care times using motion and location sensors found that nurses accounted for more than 86% of patient care times, compared to 9.9% of physicians and 8.14% of critical support staff such as respiratory therapists and pharmacists (Butler et al., 2018). It is therefore incumbent upon nurses and nurse leaders to be fully conversant with the concepts of population health, community health, and the SDOH in order to effectively and competently treat their individual patients and contribute constructively to the health of the community and overall population health.

Nurses are exceptionally well-positioned to use their expertise and judgment to advocate for patient-centered care policies to positively impact the larger healthcare ecosystem. Today and in the future, nurses and nurse leaders must be knowledgeable and practiced in the art of gathering and interpreting both individual patient and overall community healthcare trends and information. Additionally, nurses need to use their clinical skills and practical experience to analyze and utilize this data to help promote continuity of care, health screenings, and wellness and disease prevention programs within the community, thereby positively impacting overall population health.

Nurse managers and nurse executives have an even greater responsibility to raise their voices and advocate for policies that empower frontline nurses and thereby shape the way healthcare systems approach individual, community, and population health. Nurse leaders formulate organizational policies that facilitate and inspire collaboration, communication, mentorship programs, shared governance, interprofessional teamwork, quality management, and continuous care improvements using evidence-based professional practice models. Nurses and nurse leaders are indispensable to improving, outlining, and creating new policies to ensure that healthcare systems achieve the mission of providing culturally competent, responsive, high-quality patient care.

In the final analysis, nurses need to be better prepared, in both education and clinical practice settings, to identify, address, and mitigate the impact of the SDOH in order to alleviate health disparities, achieve better health equity, and collectively impact the health of individuals, communities, and the overall population. Nurses are the engine propelling population health progress forward into the future.

END-OF-CHAPTER RESOURCES

DISCUSSION QUESTIONS

1. What are the primary SDOH, and how do these factors impact individual, community, and population health?
2. What role do nurses and nurse leaders play in addressing the SDOH? Why are nurses and nurse leaders ideally suited to this role?
3. How important are nursing advocacy, community action, and policy campaigns in addressing the SDOH? How can nurses and nurse leaders promote better population and community health through these activities?

ADDITIONAL RESOURCES

- *Healthy People 2030* Launch—August 18, 2020, U.S. Department of Health and Human Services (DHHS): https://www.youtube.com/watch?v=atDcD86ChC8

  This decade, *Healthy People 2030* continues its focus on health data, SDOH, and health equity with a new set of 355 measurable health objectives with 10-year targets.

- Dr. Koh Presents at *Healthy People 2020* Launch—July 17, 2012, Office of Disease Prevention and Health Promotion (ODPHP): https://www.youtube.com/watch?v=qAx8nyaeT9g

  Dr. Howard Koh, assistant secretary for health, discusses the *Healthy People 2020* initiative and how it hopes to improve the health of all Americans in the next decade. *Healthy People* provides science-based, 10-year national objectives for improving the health of all Americans.

- *Healthy People 2020*: Determinants of Health (ODPHP)—February 8, 2012, IQ Solutions: https://www.youtube.com/watch?v=5Yb3B75eqbo

- Creating a Better Normal: Improving Population Health for Everyone—October 15, 2020, University of Washington: https://www.youtube.com/watch?v=6Vv8I9Naw3g

  The pandemic has highlighted the racial, social, and economic inequities that shape the health and well-being of all people in the United States and throughout the world. As we look forward to a post-COVID-19 world, how can we create a future in which we are all healthier—as individuals and entire populations? How do we enhance the resilience of the environment we rely on? And how do we address the factors perpetuating the inequities that harm so many? Join the University of Washington for a discussion with leaders who are envisioning how we will improve population health for everyone. Featuring panelists Cecilia Bitz, Renee Cheng, Pamela Collins, Julio Frenk, and Toni Hoover, it is moderated by Hanson Hosein.

- Population Health Management: Improving Health Where We Live, Work, and Play—June 29, 2015, Centers for Disease Control and Prevention (CDC): https://www.youtube.com/watch?v=1sJDit8zsPI

  Healthcare costs continue to soar, taking large portions of business, government, and consumer budgets. While costs are rising, health and well-being are declining. Dr. Ron Loeppke and Dr. Jeanette May help participants recognize the social, economic, and

physical factors that contribute to health and learn how employers and communities can work together to control healthcare spending and improve health using a population health management approach.

- What Is Population Health?—August 24, 2018, Mount Sinai Health System: https://www.youtube.com/watch?v=f9JbT0eK81g

  Learn more about population health by following our patient Joe on his healthcare journey in our "What Is Population Health?" video. Joe's experience should feel familiar as he faces the same barriers many patients encounter in New York City and across the United States. This video tells the story of Joe's experience in the current healthcare system and provides insight into how a population health approach can improve his experience and outcomes. This video is meant to support staff in the transition to population health and value-based payments.

- Population Health: Crash Course Sociology #43—February 5, 2018, Crash Course: https://www.youtube.com/watch?v=D9SWRByzDSo

  We are continuing our unit on health with a discussion of some of the indicators that help us measure health for different populations. We will also explore three contributors to health disparities: individual factors like genetics, physical factors like pollution, and social factors like stress.

- Understanding Public Health as Community Health—October 15, 2018, Littlefield Lecture Series, School of Nursing, University of Wisconsin–Madison: https://www.youtube.com/watch?v=KYZ9qP8m0X8

  Deputy Surgeon General Rear Admiral Sylvia Trent-Adams, PhD, RN, FAAN, challenges us to shift our thinking and our reality to move from a healthcare system to a system of health for all. As deputy surgeon general, RADM Trent-Adams advises and supports the surgeon general in communicating the best available scientific information to advance the health of the nation. Throughout her career, RADM Trent-Adams has worked to improve access to care for poor and underserved communities. She spent over 25 years working within the federal government, including 3 years as chief nursing officer for the U.S. Public Health Service Commissioned Corps.

- Community Health, Population Health and Public Health: Understanding the Differences—May 12, 2017, Renown Health: https://www.youtube.com/watch?v=_ag3g_iHzuM

  Many people use the terms "population health," "public health," and "community health" interchangeably, even though these words speak to unique concepts. Dr. Anthony Slonim, CEO and president of Renown Health, describes the differences between these three important healthcare concepts.

- Social Determinants of Health: Claire Pomeroy at TEDxUCDavis—July 12, 2012: https://www.youtube.com/watch?v=qykD-2AXKIU

  Claire Pomeroy is the president and chief executive officer of the Albert and Mary Lasker Foundation. She is a professor emeritus at the University of California Davis. During her academic career, her research focused on HIV/AIDS.

- Taking Health Care to the Streets: Dr. Cheryl Whitaker at TEDxNashvilleSalon—December 4, 2017: https://www.youtube.com/watch?v=cfNPHQRvBb4

  Healthcare in underserved communities has poor results due to lack of access and engagement. To succeed, it is necessary to innovate. What works? Borrowing a page from the community organizer's playbook and hitting the streets, the answer is using care consultants who are from the community. They understand the conditions and the lifestyles that pertain to their community's residents and are armed with mobile technology and know-how that can make a difference. How do you assess a patient's neighborhood? None of the 81 measures health plans use to measure performance

do, yet studies show that social determinants are up to 50% of what impacts health, and the care patients receive. Cheryl Whitaker, MD, co-founded NextLevel Health (NLH) in 2014 because government-funded healthcare programs often fail to reach their intended beneficiaries. This innovative for-profit health insurance company helps the underserved access and manage Medicaid services by borrowing a page from the community organizer's playbook. NLH provides extensive patient services with a geographically based Care Management Team model. Cheryl is a Washington University- and Stanford-trained physician with a Harvard MPH. After practicing medicine, consulting for the government and NGOs, and founding NLH, she has a 360° view of the healthcare system as a patient, provider, and now payor. This informs her conviction that payors need a new model of patient-centric engagement. This talk was given at a TEDx event using the TED conference format but was independently organized by a local community.

- The Social Determinants of Health: Dr. Thomas Ward at TEDxSpringHillCollege—November 14, 2018: https://www.youtube.com/watch?v=tuYRY0XKw9c

  In *The Social Determinants of Health*, Historian Dr. Tom Ward identifies the factors that led to social inequalities in the Deep South during the Civil Rights era. Poverty had a tremendous impact on an individual's health, then and now. Thomas J. Ward, Jr., is professor and chair of the history department at Spring Hill College in Mobile, Alabama, where he teaches a variety of courses in American history. A native of Annapolis, Maryland, Dr. Ward received his BA at Hampden-Sydney College, his MA at Clemson University, and his doctorate at the University of Southern Mississippi. Before coming to Spring Hill College in 2007, Dr. Ward taught at Rockhurst University in Kansas City, Missouri. Dr. Ward has written numerous articles on African American history and the history of medicine in the American South. In 2003, the University of Arkansas Press published his first book, *Black Physicians in the Jim Crow South*. His most recent work, *Out in the Rural: A Mississippi Health Center and Its War on Poverty*, was released by Oxford University Press in 2017. Dr. Ward is currently working on a book project on African American prisoners of war. He lives in Spanish Fort, Alabama, with his wife and three sons. This talk was given at a TEDx event using the TED conference format but was independently organized by a local community.

A robust set of instructor resources designed to supplement this text is available. Qualifying instructors may request access by emailing textbook@springerpub.com.

REFERENCES

Agency for Healthcare Research and Quality. (n.d.). *IDEAL discharge planning overview, process, and checklist*. Retrieved September 27, 2021, from https://www.ahrq.gov/sites/default/files/wysiwyg/professionals/systems/hospital/engagingfamilies/strategy4/Strat4_Tool_1_IDEAL_chklst_508.pdf

Agency for Healthcare Research and Quality. (2020, December). *2019 National healthcare quality and disparities report*. AHRQ Pub. No. 20(21)-0045-EF. https://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/nhqrdr/2019qdr-cx061021.pdf

Aldridge, R. W., Menezes, D., Lewer, D., Cornes, M., Evans, H., Blackburn, R. M., Byng, R., Clark, M., Denaxas, S., Fuller, J., Hewett, N., Kilmister, A., Luchenski, S., Manthorpe, J., McKee, M., Neale, J., Story, A., Tinbelli, M., Whiteford, M., Wurie, F., & Hayward, A. (2019). Causes of death among homeless people: A population-based cross-sectional study of linked hospitalisation and mortality data in England. *Wellcome Open Research, 4*, 49. https://doi.org/10.12688/wellcomeopenres.15151.1

American Academy of Family Physicians. (2018). *Addressing social determinants of health in primary care: Team-based approach for advancing health equity*. https://www.aafp.org/dam/AAFP/documents/patient_care/everyone_project/team-based-approach.pdf

American Organization of Nurse Executives & American Organization for Nursing Leadership. (2015). *AONL nurse executive competencies*. https://www.aonl.org/system/files/media/file/2019/06/nec.pdf

Auerbach, D. I., Buerhaus, P. I., & Staiger, D. O. (2015, October). Will the RN workforce weather the retirement of the Baby Boomers? *Medical Care, 53*(10), 850–856. https://doi.org/10.1097/MLR.0000000000000415

Berlin, G., Bueno, D., Gibler, K., Schulz, J., & Wexler, J. (2021, August 12). *Survey: US hospital patient volumes move back towards 2019 levels*. McKinsey & Company. https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/survey-us-hospital-patient-volumes-move-back-towards-2019-levels

Bhutta, N., Chang, A. C., Dettling, L. J., & Hsu, J. W. (2020, September 28). *Disparities in wealth by race and ethnicity in the 2019 survey of consumer finances*. FEDS Notes. Board of Governors of the Federal Reserve System. https://doi.org/10.17016/2380-7172.2797

Binswanger, I. A., Krueger, P. M., & Steiner, J. F. (2009, November). Prevalence of chronic medical conditions among jail and prison inmates in the United States compared with the general population. *Journal of Epidemiology and Community Health, 63*(11), 912–919. https://doi.org/10.1136/jech.2009.090662

Burr, J. A., Han, S. H., & Tavares, J. L. (2015, April 15). Volunteering and cardiovascular disease risk: Does helping others get "under the skin"? *Gerontologist, 56*(5), 937–947. https://doi.org/10.1093/geront/gnv032

Butler, R., Monsalve, M., Thomas, G. W., Herman, T., Segre, A. M., Polgreen, P. M., & Suneja, M. (2018). Estimating time physicians and other health care workers spend with patients in an intensive care unit using a sensor network. *The American Journal of Medicine, 131*(8), 972.e9–972.e15. https://doi.org/10.1016/j.amjmed.2018.03.015

Carlson, E., Kline, M., & Zangerle, C. M. (2016, April). AONE competencies: Preparing nurse executives to lead population health. *Nurse Leader, 14*(2), 108–112. https://doi.org/10.1016/j.mnl.2016.01.004

Centers for Disease Control and Prevention. (n.d.-a). *Social determinants of health: Know what affects health*. Retrieved June 6, 2022, from https://www.cdc.gov/socialdeterminants/index.htm

Centers for Disease Control and Prevention. (n.d.-b). *Carbon monoxide poisoning (CO)*. Retrieved April 22, 2021, from https://www.cdc.gov/dotw/carbonmonoxide/index.html

Centers for Disease Control and Prevention. (n.d.-c). *Childhood lead poisoning prevention: Lead in paint*. Retrieved June 6, 2022, from https://www.cdc.gov/nceh/lead/prevention/sources/paint.htm

Centers for Disease Control and Prevention (n.d.-d). Tuberculosis: TB and Asian persons. Retrieved June 6, 2022, from https://www.cdc.gov/tb/topic/populations/tbinasians/default.htm

Centers for Disease Control and Prevention. (n.d.-e). *Disability impacts all of us*. https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html

Centers for Disease Control and Prevention. (2022, June 2). *Risk for COVID-19 infection, hospitalization, and death by race/ethnicity*. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

Centers for Medicare & Medicaid Services Office of Minority Health. (2020, September). *Impact of hospital readmissions reduction initiatives on vulnerable populations*. Centers for Medicare & Medicaid Services; U.S. Department of Health and Human Services. https://www.cms.gov/files/document/impact-readmissions-reduction-initiatives-report.pdf

Chambers, E., Fuster, D., Suglia, S. A., & Rosenbaum, E. (2016). *The link between housing, neighborhood, and mental health*. MacArthur Foundation, How Housing Matters to Families and Communities Research Initiative, John D. and Catherine T. MacArthur Foundation. https://www.macfound.org/media/files/hhm_brief_-_reverse_mortgages.pdf

Chetty, R., Stepner, M., Abraham, S., Lin, S., Scuderi, B., Turner, N., Bergeron, A., & Cutler, D. (2016, April 26). The association between income and life expectancy in the United States, 2001–2014. *Journal of the American Medical Association, 315*(16), 1750–1766. https://doi.org/10.1001/jama.2016.4226

Children's Defense Fund. (2020, February). *The State of America's Children® 2020*. https://www.childrensdefense.org/wp-content/uploads/2020/02/The-State-Of-Americas-Children-2020.pdf

Cloud, D. H., Parsons, J., & Delany-Brumsey, A. (2014, February 12). Addressing mass incarceration: A clarion call for public health. *American Journal of Public Health, 104*, 389–391. https://doi.org/10.2105/AJPH.2013.301741

Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2019, September). *Household food security in the United States in 2018*. ERR-270, U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf?v=963.1

Dooley, D., Fielding, J., & Levi, L. (1996). Health and unemployment. *Annual Review of Public Health, 17*, 449–465. https://doi.org/10.1146/annurev.pu.17.050196.002313

Duke, N. N., Skay, C. L., Pettingell, S. L., & Borowsky, I. W. (2009, February). From adolescent connections to social capital: Predictors of civic engagement in young adulthood. *Journal of Adolescent Health, 44*(2), 161–168. https://doi.org/10.1016/j.jadohealth.2008.07.007

Eberts, S. M., Thomas, M. A., & Jagucki, M. L. (2013). *The quality of our nation's waters—Factors affecting public-supply-well vulnerability to contamination—Understanding observed water quality and anticipating future water quality*. U.S. Geological Survey Circular 1385. http://pubs.usgs.gov/circ/1385/

Edwards, F., Lee, H., & Esposito, M. (2019, August 20). Risk of being killed by police use of force in the United States by age, race–ethnicity, and sex. *Proceedings of the National Academy of Sciences, 116*(34), 16793–16798; first published August 5, 2019. https://doi.org/10.1073/pnas.1821204116

Environmental Working Group. (2021, August). *PFAS chemicals*. Retrieved July 20, 2022, from https://www.ewg.org/areas-focus/toxic-chemicals/pfas-chemicals

Espinosa, L. L., Turk, J. M., Taylor, M., & Chessman, H. M. (2019). *Race and ethnicity in higher education: A status report*. American Council on Education. https://1xfsu31b52d33idlp13twtos-wpengine.netdna-ssl.com/wp-content/uploads/2019/02/Race-and-Ethnicity-in-Higher-Education.pdf

Esposito, M., Larimore, S., & Lee, H. L. (2021, April 30). *Aggressive policing, health, and health equity*. Health Affairs, Health Policy Brief, Culture of Health. https://www.healthaffairs.org/do/10.1377/hpb20210412.997570/full

Evans, G. W., & Kantrowitz, E. (2002, May). Socioeconomic status and health: The potential role of environmental risk exposure. *Annual Review of Public Health, 23*(1), 303–331. https://doi.org/10.1146/annurev.publhealth.23.112001.112349

Feeding America. (2021a). *The impact of the coronavirus on food insecurity in 2020 and 2021*. https://www.feedingamerica.org/sites/default/files/2021-03/National%20Projections%20Brief_3.9.2021_0.pdf

Feeding America. (2021b). *The impact of the coronavirus on food insecurity in 2020 and 2021*. https://www.feedingamerica.org/sites/default/files/2021-03/Local%20Projections%20Brief_3.31.2021.pdf

Ganesh, B., Scally, C. P., Skopec, L., & Zhu, J. (2017, October). The relationship between housing and asthma among school-age children: Analysis of the 2015 American Housing Survey. *The Urban Institute Research Report*. https://www.urban.org/sites/default/files/publication/93881/the-relationshi-between-housing-and-asthma_1.pdf

Gregory, C. A., & Coleman-Jensen, A. (2017, July). *Food insecurity, chronic disease, and health among working-age adults*. ERR-235. U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/84467/err-235.pdf?v=9837.9

Gundersen, C., & Ziliak, J. P. (2015, November). Food insecurity and health outcomes. *Health Affairs, 34*(11), 1830–1839. https://doi.org/10.1377/hlthaff.2015.0645

Hahn, R. A., & Truman, B. I. (2015, May 19). Education improves public health and promotes health equity. *International Journal of Health Services: Planning, Administration, Evaluation, 45*(4), 657–678. https://doi.org/10.1177/0020731415585986

Hanchate, A. D., Dyer, K. S., Paasche-Orlow, M. K., Banerjee, S., Baker, W. E., Lin, M., Xue, W. D., & Feldman, J. (2019, March). Disparities in emergency department visits among collocated racial/ethnic Medicare enrollees. *Annals of Emergency Medicine, 73*(3), 225–235. https://doi.org/10.1016/j.annemergmed.2018.09.007

Hartnett, K. P., Kite-Powell, A., DeVies, J., Coletta, M. A., Boehmer, T. K., Adjemian, J., & Gundlapalli, A. V., & National Syndromic Surveillance Program Community of Practice. (2020, June 12). Impact of the COVID-19 pandemic on emergency department visits—United States, January 1, 2019–May 30, 2020. *Morbidity and Mortality Weekly Report, 69*, 699–704. https://doi.org/10.15585/mmwr.mm6923e1

Harvard Joint Center for Housing Studies. (2021). *The state of the nation's housing 2021*. Harvard University Graduate School of Design, Harvard Kennedy School. https://www.jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_State_Nations_Housing_2021.pdf

Health Affairs. (2019, September). Grant watch: Funding to improve social determinants of health. *Health Affairs, 38*(9), 1589–1590. https://doi.org/10.1377/hlthaff.2019.01013

Health Promotion International. (1986, May). A discussion document on the concept and principles of health promotion. *Health Promotion International, 1*(1), 73–76. https://doi.org/10.1093/heapro/1.1.73

Health Resources & Services Administration. (n.d.). *Shortage areas: Explore HPSAs*. Retrieved July 20, 2022, from https://data.hrsa.gov/topics/health-workforce/shortage-areas

Health Resources & Services Administration. (2022, August 8). Designated health professional shortage areas statistics: *Third quarter of fiscal year 2022 designated HPSA quarterly summary*. Retrieved July 20, 2022, from https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport

Hemer, K. M. (2018). *Civic engagement in young adulthood: Social capital and the mediating effects of postsecondary educational attainment*. Graduate Theses and Dissertations. 16591. https://lib.dr.iastate.edu/etd/1659

Hendryx, M., Fedorko, E., & Halverson, J. (2010, July 6). Pollution sources and mortality rates across rural-urban areas in the United States. *The Journal of Rural Health, 26*(4), 383–391. https://doi.org/10.1111/j.1748-0361.2010.00305.x

Hickey, K. T., Masterson Creber, R. M., Reading, M., Sciacca, R. R., Riga, T. C., Frulla, A. P., & Casida, J. M. (2018, August). Low health literacy: Implications for managing cardiac patients in practice. *The Nurse Practitioner, 43*(8), 49–55. https://doi.org/10.1097/01.NPR.0000541468.54290.49

Holben, D. H., & Pheley, A. M. (2006, July). Diabetes risk and obesity in food-insecure households in rural Appalachian Ohio. *Preventing Chronic Disease, 3*(3). http://www.cdc.gov/pcd/issues/2006/jul/05_0127.htm

Indian Health Service, U.S. Department of Health and Human Services. (2019, October). *Indian health disparities fact sheet*. https://www.ihs.gov/newsroom/factsheets/disparities

Infurna, F. J., Okun, M. A., & Grimm, K. J. (2016, October 3). Volunteering is associated with lower risk of cognitive impairment. *Journal of the American Geriatrics Society, 64*(11), 2263–2269. https://doi.org/10.1111/jgs.14398

Jacobs, E. A., Karavolos, K., Rathouz, P. J., Ferris, T. G., & Powell, L. H. (2005). Limited English proficiency and breast and cervical cancer screening in a multiethnic population. *American Journal of Public Health, 95*(8), 1410–1416. https://doi.org/10.2105/AJPH.2004.041418

Jou, K., Sterling, M. R., Ramos, R., Antoine, F., Nanus, D. M., & Phillips, E. (2021). Eliciting the social determinants of cancer prevention and control in the catchment of an urban cancer center. *Ethnicity & Disease, 31*(1), 23–30. https://doi.org/10.18865/ed.31.1.23

Kamal, R., Ramirez, G., & Cox, C. (2020, December 23). *How does health spending in the U.S. compare to other countries?* The Peterson Center on Healthcare and KFF (Kaiser Family Foundation). https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/#item-start

Kearl, H., Johns, N. E., & Raj, A. (2019, April). *Measuring #MeToo: A national study on sexual harassment and assault*. University of California San Diego Center on Gender Equity and Health, Stop Street Harassment, Promundo, and California Coalition Against Sexual Assault. https://gehweb.ucsd.edu/wp-content/uploads/2019/05/2019-metoo-national-sexual-harassment-and-assault-report.pdf

Keisler-Starkey, K., & Bunch, L. N. (2021, September). *Health insurance coverage in the United States: 2020*. U.S. Census Bureau Current Population Reports. P60-274. U.S. Government Publishing Office, Washington, DC. https://www.census.gov/library/publications/2021/demo/p60-274.html

Kerns, C., & Willis, D. (2020, March 16). The problem with U.S. health care isn't a shortage of doctors. *Harvard Business Review*. https://hbr.org/2020/03/the-problem-with-u-s-health-care-isnt-a-shortage-of-doctors

Khullar, D., & Chokshi, D. A. (2018, October 4). Health, income, and poverty: Where we are and what could help. *Health Affairs Health Policy Brief*. https://doi.org/10.1377/hpb20180817.901935

Kim, E. S., Hawes, A. M., & Smith, J. (2014). Perceived neighbourhood social cohesion and myocardial infarction. *Journal of Epidemiology & Community Health, 68*, 1020–1026. https://doi.org/10.1136/jech-2014-204009

Kim, S., Kim, C.-Y., & You, M. S. (2015, January 27). Civic participation and self-rated health: A cross-national multi-level analysis using the world value survey. *Journal Preventive Medicine & Public Health, 48*(1):18–27. https://doi.org/10.3961/jpmph.14.031

Knox, S. S., Adelman, A., Ellison, C. R., Arnett, D. K., Siegmund, K. D., Weidner, G., & Province, M. A. (2000, November 15). Hostility, social support, and carotid artery atherosclerosis in the National Heart, Lung, and Blood Institute Family Heart Study. *American Journal of Cardiology, 86*(10), 1086–1089. https://doi.org/10.1016/S0002-9149(00)01164-4

Kurt, O. K., Zhang, J., & Pinkerton, K. E. (2016, March). Pulmonary health effects of air pollution. *Current Opinion in Pulmonary Medicine, 22*(2), 138–143. https://doi.org/10.1097/mcp.0000000000000248

Laraia, B. A. (2013, March). Food insecurity and chronic disease. *Advances in Nutrition, 4*(2), 203–212. https://doi.org/10.3945/an.112.003277

Leonhardt, D. (2021, May 24). The vaccine class gap. *The New York Times*. https://www.nytimes.com/2021/05/24/briefing/vaccination-class-gap-us.html

Luo, Y., Xu, J., Granberg, E., & Wentworth, W. M. (2011, December 14). A longitudinal study of social status, perceived discrimination, and physical and emotional health among older adults. *Research on Aging, 34*, 275–301. https://doi.org/10.1177/0164027511426151

Marcozzi, D., Carr, B., Liferidge, A., Baehr, N., & Browne, B. (2018). Trends in the contribution of emergency departments to the provision of health care in the USA. *International Journal of Health Services, 48*(2), 267–288. https://doi.org/10.1177/0020731417734498

Medina, L., Sabo, S., & Vespa, J. (2020, February). *Living longer: Historical and projected life expectancy in the United States, 1960 to 2060, population estimates and projections*. U.S. Census Bureau, U.S. Department of Commerce. https://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1145.pdf

Menendian, S., Gambhir, S., & Gailes, A. (2021). *The Roots of Structural Racism Project*. Othering and Belonging Institute. https://belonging.berkeley.edu/roots-structural-racism

Moody's Analytics. (2017, December 14). *The health of America report: Understanding health conditions across the U.S.* BlueCross BlueShield Association. https://www.bcbs.com/the-health-of-america/reports/understanding-health-conditions-across-the-us

Mosher, H., Lose, D., Leslie, R., & Kaboli, P. (2014, May). *Interdisciplinary rounding toolkit: A guide to optimizing interdisciplinary rounds on inpatient medical services*. VA Quality Scholars (VAQS) Fellowship Program, Center for Comprehensive Access and Delivery Research and Evaluation (CADRE), Iowa City VA Healthcare System, U.S. Department of Veterans Affairs. https://www.cadre.research.va.gov/docs/IDR_Toolkit_Final.pdf

Muennig, P., Robertson, D., Johnson, G., Campbell, F., Pungello, E., & Neidell, M. (2011, March). The effect of an early education program on adult health: The Carolina Abecedarian Project Randomized Controlled Trial. *American Journal of Public Health, 101*, 512–516. https://doi.org/10.2105/AJPH.2010.200063

Münzel, T., Sørensen, M., Schmidt, F., Schmidt, E., Steven, S., Kröller-Schön, S., & Daiber, A. (2018). The adverse effects of environmental noise exposure on oxidative stress and cardiovascular risk. *Antioxidants & Redox Signaling, 28*(9), 873–908. https://doi.org/10.1089/ars.2017.7118

Nagata, J. M., Palar, K., Gooding, H. C., Garber, A. K., Bibbins-Domingo, K., & Weiser, S. D. (2019). Food insecurity and chronic disease in US young adults: Findings from the national longitudinal study of adolescent to adult health. *Journal of General Internal Medicine, 34*, 2756–2762. https://doi.org/10.1007/s11606-019-05317-8

National Academies of Sciences, Engineering, and Medicine. (2019). *Integrating social care into the delivery of health care: Moving upstream to improve the nation's health*. National Academies Press. https://doi.org/10.17226/25467

National Advisory Council on Nurse Education and Practice. (2019). *Integration of social determinants of health in nursing education, practice, and research. 16th report to the secretary of health and human services and the U.S. Congress*. Health Resources and Services Administration. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/nursing/reports/nacnep-2019-sixteenthreport.pdf

National Center for Health Statistics. (2019). *Table 44. Gross domestic product, national health expenditures, per capita amounts,% distribution, and average annual% change: United States, selected years 1960–2018.* https://www.cdc.gov/nchs/data/hus/2019/044-508.pdf

National Institute of Environmental Health Sciences, National Institutes of Health. (2021). *Air pollution and your health*. https://www.niehs.nih.gov/health/topics/agents/air-pollution/index.cfm

National Oceanic and Atmospheric Administration National Centers for Environmental Information. (2021, January). *State of the climate: Global climate report for annual 2020*. https://www.ncdc.noaa.gov/sotc/global/202013

Natural Resources Defense Council. (2018, November 8). *Flint water crisis: Everything you need to know*. https://www.nrdc.org/stories/flint-water-crisis-everything-you-need-know#sec-summary

Nielsen-Bohlman, L., Panzer, A. M., & Kindig, D. A. (Eds.). (2004). *Health literacy: A prescription to end confusion*. National Academies Press. https://pubmed.ncbi.nlm.nih.gov/25009856

Northridge, J., Ramirez, O., Stingone, J., & Claudio, L. (2010, January 9). The role of housing type and housing quality in urban children with asthma. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 87*, 211–224. https://doi.org/10.1007/s11524-009-9404-1

Office of Minority Health, U.S. Department of Health and Human Services. (2021, October 12). *Profile: Asian Americans*. https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=63

Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services. (2021). *Report to Congress: Trends in the utilization of emergency department services, 2009–2018*. https://aspe.hhs.gov/pdf-report/utilization-emergency-department-services

Parker, K., & Funk, C. (2017, December 14). Gender discrimination comes in many forms for today's working women. *Pew Research Center*. https://www.pewresearch.org/fact-tank/2017/12/14/gender-discrimination-comes-in-many-forms-for-todays-working-women

Prince, L. Y., Schmidtke, C., Beck, J. K., & Hadden, K. B. (2018, April/June). An assessment of organizational health literacy practices at an academic health center. *Quality Management in Health Care, 27*(2), 93–97. https://doi.org/10.1097/QMH.0000000000000162

Public Health Accreditation Board. (2012). *Acronyms and glossary of terms* (Version 1.0). https://www.phaboard.org/wp-content/uploads/PHAB-Acronyms-and-Glossary-of-Terms-Version-1.02.pdf

Raghupathi, V., & Raghupathi, W. (2020, December). The influence of education on health: An empirical assessment of OECD countries for the period 1995–2015. *Archives of Public Health, 78*, 20. https://doi.org/10.1186/s13690-020-00402-5

Raynor, E. M. (2016, February). Factors affecting care in non-English-speaking patients and families. *Clinical Pediatrics, 55*(2), 145–149. https://doi.org/10.1177/0009922815586052

Restum, Z. G. (2005, April 26). Public health implications of substandard correctional health care. *American Journal of Public Health, 95*(10), 1689–1691. https://doi.org/10.2105/AJPH.2004.055053

Richard, P., Walker, R., & Alexandre, P. (2018, June 25). The burden of out of pocket costs and medical debt faced by households with chronic health conditions in the United States. *PLOS One*, *13*(6), e0199598. https://doi.org/10.1371/journal.pone.0199598

Robert Wood Johnson Foundation. (2013, March). How does employment—Or unemployment—Affect health? *Health Policy Snapshot 2013*. http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2013/rwjf403360

Robert Wood Johnson Foundation. (2019, February 1). *Medicaid's role in addressing social determinants of health*. https://www.rwjf.org/en/library/research/2019/02/medicaid-s-role-in-addressing-social-determinants-of-health.html

Rosales, C. B., Carvajal, S. C., & De Zapien, J. E. G. (2016). Emergent public health issues in the US–Mexico border region. *Lausanne: Frontiers Media*. https://doi.org/10.3389/978-2-88945-047-3

Roy, M., Purington, N., Liu, M., Blayney, D. W., Kurian, A. W., & Schapira, L. (2021). Limited English proficiency and disparities in health care engagement among patients with breast cancer. *JCO Oncology Practice*, *17*(12), e1837–e1845. https://doi.org/10.1200/OP.20.01093

Rural Health Information Hub. (n.d.). *Rural border health*. Retrieved May 28, 2021, from https://www.ruralhealthinfo.org/topics/border-health

Ryan, L., Scott, S., & Fields, W. (2017, October/December). Implementation of interdisciplinary rapid rounds in observation units. *Journal of Nursing Care Quality, 32*(4), 348–353. https://doi.org/10.1097/NCQ.0000000000000250

Saad, L. (2020, December 22). *U.S. ethics ratings rise for medical workers and teachers*. Gallup. https://news.gallup.com/poll/328136/ethics-ratings-rise-medical-workers-teachers.aspx

Save the Children Foundation. (2021a). *Childhood in the time of COVID: U.S. complement to the global childhood report 2021*. https://www.savethechildren.org/content/dam/usa/reports/advocacy/2021-us-childhood-report.pdf

Save the Children Foundation. (2021b). *When high school—and childhood—is cut short in America*. https://www.savethechildren.org/us/charity-stories/high-school-drop-out-rate-in-america

Schanzer, B., Dominguez, B., Shrout, P. E., & Caton, C. L. (2007, January 31). Homelessness, health status, and health care use. *American Journal of Public Health, 97*(3), 464–469. https://doi.org/10.2105/AJPH.2005.076190

Semega, J., Kollar, M., Creamer, J., & Mohanty, A. (2019). *Income and poverty in the United States* [U.S. Census Bureau Current Population Reports, P60-266(RV). U.S. Government Printing Office. https://www.census.gov/content/dam/Census/library/publications/2019/demo/p60-266.pdf

Sentell, T. L., Tsoh, J. Y., Davis, T., Davis, J., & Braun, K. L. (2015). Low health literacy and cancer screening among Chinese Americans in California: A cross-sectional analysis. *BMJ Open, 5*(1), e006104. https://doi.org/10.1136/bmjopen-2014-006104

Shi, R., Meacham, S., Davis, G. C., You, W., Sun, Y., & Goessl, C. (2019, November 8). Factors influencing high respiratory mortality in coal-mining counties: A repeated cross-sectional study. *BMC Public Health, 19*, 1484. https://doi.org/10.1186/s12889-019-7858-y

Shrider, E. A., Kollar, M., Chen, F., & Semega, J. (2021). *Income and poverty in the United States: 2020.* U.S. Census Bureau Current Population Reports, P60-273(RV). U.S. Government Printing Office. https://www.census.gov/content/dam/Census/library/publications/2021/demo/p60-273.pdf

Steinka-Fry, K. T., Wilson, S. J., & Tanner-Smith, E. E. (2013, December 31). Effects of school dropout prevention programs for pregnant and parenting adolescents: A meta-analytic review. *Journal of the Society for Social Work and Research, 4*(4), 373–379. https://doi.org/10.5243/jsswr.2013.23

Stockman, J. K., Hayashi, H., & Campbell, J. C. (2015). Intimate partner violence and its health impact on ethnic minority women [corrected]. *Journal of Women's Health, 24*(1), 62–79. https://doi.org/10.1089/jwh.2014.4879

Stoto, M. A. (2013, February 21). *Population health in the Affordable Care Act era*. Academy Health. https://www.academyhealth.org/files/AH2013pophealth.pdf

Sullivan, H. R. (2019, March). HEALTH LAW: Hospitals' obligations to address social determinants of health. *AMA Journal of Ethics, 21*(3), E248–E258. https://journalofethics.ama-assn.org/sites/journalofethics.ama-assn.org/files/2019-02/hlaw1-1903.pdf

Syed, S. T., Gerber, B. S., & Sharp, L. K. (2013, October). Traveling towards disease: Transportation barriers to health care access. *Journal of Community Health, 38*(5), 976–993. https://doi.org/10.1007/s10900-013-9681-1

Toccalino, P. L., & Hopple, J. A. (2010). *The quality of our nation's waters: Quality of water from public-supply wells in the United States, 1993–2007: Overview of major findings* [U.S. Geological Survey Circular 1346]. https://pubs.usgs.gov/circ/1346/pdf/circ1346.pdf

Turney, K. (2014). Stress proliferation across generations? Examining the relationship between parental incarceration and childhood health. *Journal of Health and Social Behavior, 55*(3), 302–319. https://doi.org/10.1177/0022146514544173

Upadhyay, S., Stephenson, A. L., & Smith, D. G. (2019, January–December). Readmission rates and their impact on hospital financial performance: A study of Washington hospitals. *Inquiry: A Journal of Medical Care Organization, Provision and Financing*. https://doi.org/10.1177/0046958019860386

U.S. Bureau of Labor Statistics. (2019, October 21). *Median weekly earnings $606 for high school dropouts, $1,559 for advanced degree holders*. The Economics Daily. https://www.bls.gov/opub/ted/2019/median-weekly-earnings-606-for-high-school-dropouts-1559-for-advanced-degree-holders.htm

U.S. Bureau of Labor Statitics. (2021a). *Census of fatal occupational injuries (CFOI) – Current*. Retrieved June 7, 2022, from https://www.bls.gov/iif/oshcfoi1.htm

U.S. Bureau of Labor Statitics. (2021b). Survey of occupational injuries and illness data. Retrieved June 7, 2022, from https://www.bls.gov/iif/soii-data.htm

U.S. Census Bureau. (2020a). *American Community Survey*: *Characteristics of people by language spoken at home [2018: ACS 1-year estimates subject tables]*. https://data.census.gov/cedsci/table?q=language%20spoken%20at%20home&tid=ACSST5Y2020.S1603

U.S. Census Bureau. (2020b). *American Community Survey: Educational attainment [2019: ACS 1-year estimates subject tables]*. https://data.census.gov/cedsci/table?q=high%20school%20graduation,%20poverty

U.S. Department of Agriculture, Economic Research Service. (2020). *Definitions of food security*. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx

U.S. Department of Agriculture, & U.S. Department of Health and Human Services. (2020, December). *Dietary guidelines for Americans, 2020–2025* (9th ed.). https://www.dietaryguidelines.gov/sites/default/files/2021-03/Dietary_Guidelines_for_Americans-2020-2025.pdf

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (n.d.-a). *Healthy People 2020: Social determinants of health*. https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (n.d.-b). *Healthy People 2030: Social determinants of health*. https://health.gov/healthypeople/objectives-and-data/social-determinants-health

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). *National action plan to improve health literacy*. Author. https://origin.health.gov/sites/default/files/2019-09/Health_Literacy_Action_Plan.pdf

U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. (2021, March 2). Trends in the utilization of emergency department services, 2009-2018. Author. https://aspe.hhs.gov/sites/default/files/migrated_legacy_files/199046/ED-report-to-Congress.pdf

U.S. Department of Health and Human Services & U.S. Department of Agriculture. (2015, December). *Dietary guidelines for Americans 2015–2020* (8th ed.). https://health.gov/sites/default/files/2019-09/2015-2020_Dietary_Guidelines.pdf

U.S. Department of Housing and Urban Development. (2020, December 15). *HUD 2020 continuum of care homeless assistance programs homeless populations and subpopulation*. Homelessness Data Exchange (HDX), Versions 1.0 and 2.0. https://files.hudexchange.info/reports/published/CoC_PopSub_NatlTerrDC_2020.pdf

U.S. Environmental Protection Agency. (n.d.). Connection between environmental exposure and health outcomes. Retrieved September 2, 2021, from https://www.epa.gov/report-environment/connection-between-environmental-exposure-and-health-outcomes

U.S. Equal Opportunity Employment Commission. (n.d.-a). *Age Discrimination in Employment Act (charges filed with EEOC) (includes concurrent charges with Title VII, ADA, EPA, and GINA) FY 1997–FY 2020*. Retrieved May 12, 2021, from https://www.eeoc.gov/statistics/age-discrimination-employment-act-charges-filed-eeoc-includes-concurrent-charges-title

U.S. Equal Opportunity Employment Commission. (n.d.-b). *Americans with Disabilities Act of 1990 (ADA) charges (charges filed with EEOC) (includes concurrent charges with Title VII, ADEA, EPA, and GINA) FY 1997–FY 2020*. Retrieved May 12, 2021, from https://www.eeoc.gov/statistics/americans-disabilities-act-1990-ada-charges-charges-filed-eeoc-includes-concurrent

U.S. Government Accountability Office. (2021, January 21). *Rural hospital closures: Affected residents had reduced access to health care services*. GAO-21-93. https://www.gao.gov/products/gao-21-93

Ver Ploeg, M., Mancino, L., Todd, J. E., Clay, D. M., & Scharadin, B. (2015, March). *Where do Americans usually shop for food and how do they travel to get there? Initial findings from the National Household Food Acquisition and Purchase Survey, Economic Information Bulletin-138.* U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/webdocs/publications/43953/eib138_errata.pdf?v=9776.2

Wakefield, M. K., Williams, D. R., Le Menestrel, S., & Flaubert, J. L. (Eds.). (2021). *The future of nursing 2020–2030: Charting a path to achieve health equity*. National Academies Press. https://doi.org/10.17226/25982

Wilson, M. L. (2019). Incorporating social determinants of health into patient care. *Nursing Management (Springhouse), 50*(12), 13–15. https://doi.org/10.1097/01.numa.0000605188.82349.3c

Wittink, H., & Oosterhaven, J. (2018). Patient education and health literacy. *Musculoskeletal Science & Practice, 38*, 120–127. https://doi.org/10.1016/j.msksp.2018.06.004

Wolfe, R., Harknett, K., & Schneider, D. (2021, June 4). Inequalities at work and the toll of COVID-19. *Health Affairs: Health Policy Brief*. https://doi.org/10.1377/hpb20210428.863621

World Health Organization. (1946). *Constitution of the World Health Organization*. https://apps.who.int/gb/bd/PDF/bd47/EN/constitution-en.pdf?ua=1

World Health Organization. (2010, January 12). *Violence prevention: The evidence*. https://www.who.int/publications/i/item/violence-prevention-the-evidence

World Health Organization. (2021, March 19). *Injuries and violence*. https://www.who.int/news-room/fact-sheets/detail/injuries-and-violence

Zajacova, A., & Lawrence, E. M. (2018, April 1). The relationship between education and health: Reducing disparities through a contextual approach. *Annual Review of Public Health, 39*, 273–289. https://doi.org/10.1146/annurev-publhealth-031816-044628