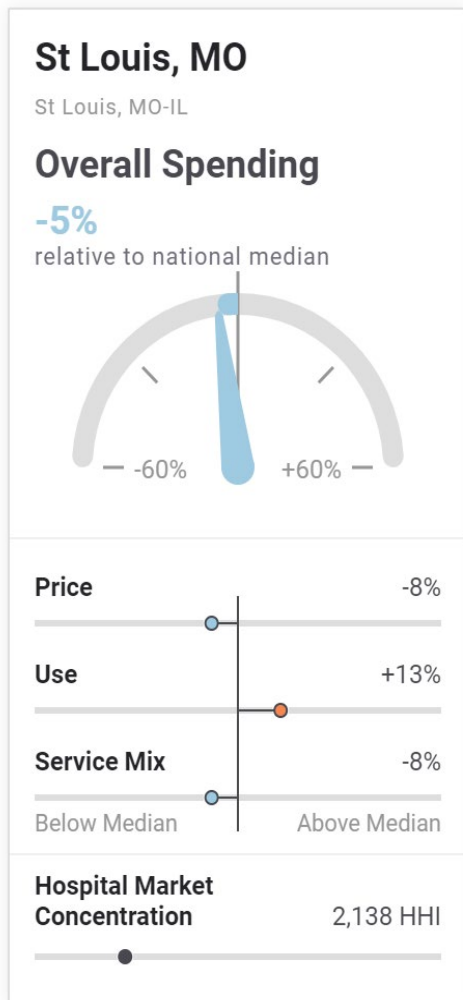




Healthy Marketplace Index

January 2023

A Closer Look at St. Louis, MO



Each year, HCCI creates the Healthy Marketplace Index (HMI) to measure how health care spending varies across the United States. The HMI shows local health care spending, prices, and use compared to the national median. By describing how health care spending varies geographically, HMI is a starting point in understanding what is causing high and rising health care costs in a particular metropolitan area. Across the country, a range of factors drive health care spending. High spending on health care, in turn, forces families, businesses, and governments to make difficult tradeoffs between needed care and other priorities such as housing, education, and food.

This case study begins to broaden HMI’s exploration of health care spending in specific areas by describing some of the factors contributing to spending, use, and prices in one area—St. Louis, Missouri—including social determinants of health, prevalence of disease, health care providers, and health care markets. The HMI shows that health care spending in St. Louis was 5% lower than the national median in 2020 with lower prices and a lower cost mix of services provided, but higher use. Spending in St. Louis grew at a higher rate than the national median—about 36%—from 2016-2020. Although St. Louis’s HMI includes the greater St. Louis metro area, this case study focuses on the city of St. Louis.



Established in 1823, St. Louis City is home to nearly 300,000 residents.¹ It is the second most populous city in the state of Missouri. The Mississippi River passes through the eastern border of the city, separating it from Illinois. St. Louis is home to Barnes Jewish Hospital and the Washington University School of Medicine, two of the nation's most highly ranked medical facilities.

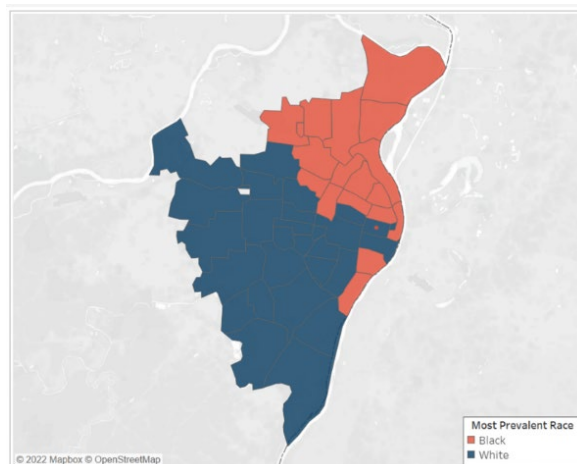
As shown in Table 1, just under half of the population is Black and an equal share (46%) is White. A smaller share of the St. Louis population is Hispanic (4%) compared to the share of the population nationally (19%). As we discuss throughout this report, there are substantial disparities across Black and White populations in St. Louis City, likely reflecting the lasting effects of policies enforced throughout the 20th century. In 1916, the city's residents voted on an ordinance that would prevent anyone from buying a home if the neighborhood was occupied by more than 75% of another race.² While this ordinance was later overturned, policies such as redlining contributed to low housing rates in many

Black neighborhoods and racial segregation across the city (Figure 1).

Today, this racial divide is evident on either side of Delmar Boulevard, which runs east to west across the city. To the north of Delmar Boulevard, over 95% of the population is Black, while to the South of the divide more than 60% of the population is White.³ Discriminatory policies have disproportionately affected communities north of the Delmar Divide, threatening access to resources and ultimately impacting health outcomes.

The median household income in St. Louis City (\$45,000) is nearly \$20,000 below the U.S. median and the percentage of families in poverty (20%) was nearly double the U.S. rate overall (11%). The share of the population without health insurance is higher than the uninsured share nationally—12% in St. Louis, three percentage points above the national rate. Over half of city residents receive health insurance through work, which is particularly important for HMI as it the data underlying HMI are representative of people with employer-sponsored insurance.

Figure 1. Racial/Ethnic Prevalence in St. Louis by Zip Code, 2020



Notes: Map was created using five-year estimates from the 2020 U.S. Census American Community Survey Database. All zip codes that are partially within the city's boundaries are included.

Table 1. Demographic Characteristics of the Population in St. Louis, 2020

	St. Louis	U.S.
Total Population	293,310	331,893,745
Race/Ethnicity		
Black/African American	46%	14%
White	46%	76%
Hispanic or Latino	4%	19%
Asian	3%	6%
American Indian/Alaska Native	Less Than 1%	Less Than 1%
Female	52%	51%
Age		
Under 18 Years	19%	22%
Over 65 Years	14%	17%
Education*		
High School Graduate or Higher	89%	89%
Bachelor's Degree or Higher	37%	33%
Employment [^]		
In Civilian Labor Force	66%	63%
Unemployment Rate	8%	8%
Median Household Income	\$45,782	\$64,994
Poverty	20%	11%
Health Insurance		
Uninsured	12%	9%
Employer-Sponsored Insurance	54%	50%
Medicare	17%	14%
Medicaid	17%	20%

Notes: All measures are five-year estimates from the 2020 U.S. Census American Community Survey Database.⁴

*Includes persons of age 25 and older. ^ Includes civilians of age 16 and older.

Social Determinants of Health

It is well established that the conditions in which people live, play, grow, and work affect health outcomes.⁵ Therefore, understanding these conditions is important for understanding health spending, though the interaction between them and spending is complex and could be influenced by a range of local and systemic factors.

The CDC identified five key areas of social determinants of health: health care access and quality; education access and quality; social and community context; economic stability; and neighborhood and built environment.⁶ Table 1 provides some insight into how people in St. Louis

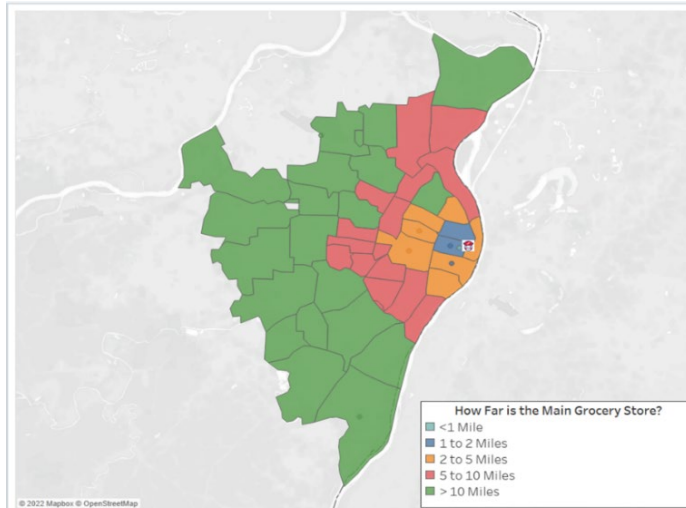
experience many of these social determinants, including economic stability, education, and health care access.

Food security and housing stability have received increasing attention in recent years due to their impact on people's health. Just over 21% of St. Louis residents experienced severe housing problems in 2019, including overcrowding, high housing costs, lack of kitchen facilities, and lack of plumbing.⁷ Further, 18% of the city's residents spent 50% or more of their income on housing, compared to 14% of people across the country.⁸ In 2019, 16% of St. Louis residents experienced food insecurity, greater than

the U.S. share of 11%. St. Louis residents from Missouri Healthcare for All noted that many locals rely on a single grocery store in the city to access healthy foods.⁹ The store, however, is not easily accessible for many individuals in the city, leading them to resort

to quick access fast-food and corner stores (Figure 2). A lack of transportation options and other neighborhood conditions may further exacerbate challenges in accessing high-quality, nutritious food.

Figure 2. Distance to St. Louis's Primary Grocery Store



Notes: The distance shown is the number of miles from each zip code to Schnucks, located in downtown St. Louis. We identified Schnucks as the primary grocery store based on interviews with Missouri Healthcare for All.

Prevalence of Disease, Life Expectancy, and Health Status

People living in St. Louis have a higher prevalence of chronic and mental health disease than the general U.S. population. As shown in Figure 3, 36% of adults in St. Louis were obese and 12% had diagnosed diabetes in 2019 (compared to 31% and 10% in the U.S., respectively).¹⁰ Rates of depression and asthma were also higher in St. Louis than nationally.

Although a greater proportion of the adult population in St. Louis had high blood pressure compared to the U.S. population (34% vs. 30%, respectively), people in St. Louis were more adherent to their blood

pressure medication than the national average (63% vs. 56%, respectively).¹¹

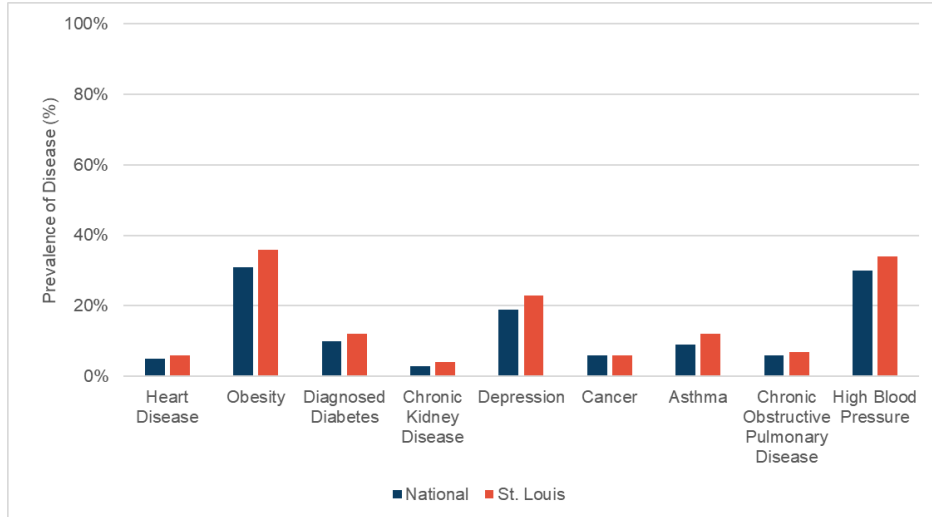
Consistent with a higher prevalence of chronic and mental health disease, a greater share of people in St. Louis report being in fair or poor health than among the general U.S. population (23% in St. Louis compared to 18% nationally).¹²

For someone born in St. Louis today, life expectancy is 75 years old, below the national average of 79. This disparity is larger for the Black population; Black people in St. Louis are expected to live until age 70 compared to 75 for the Black population

nationally. In contrast, life expectancy among the White population in St. Louis is

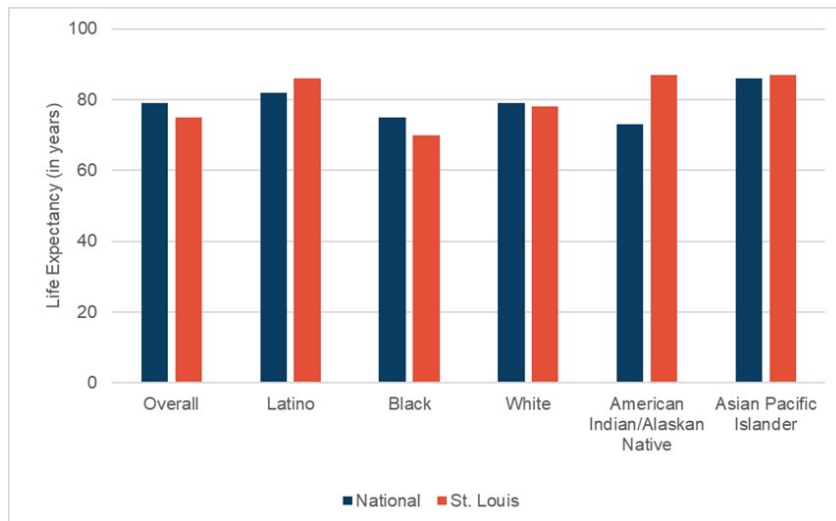
similar to the general U.S. population (78 vs. 79 years old, respectively) (Figure 4).¹³

Figure 3. Prevalence of Disease in St. Louis, 2020



Notes: All measures are from the Centers for Disease Control and Prevention’s PLACES 2020 Database at the county level.

Figure 4. Life Expectancy in St. Louis by Race/Ethnicity, 2020



Notes: All measures are from the Institute for Health Metrics and Evaluation 2021 Life Expectancy Database at the county level.

Health Care Providers in St. Louis

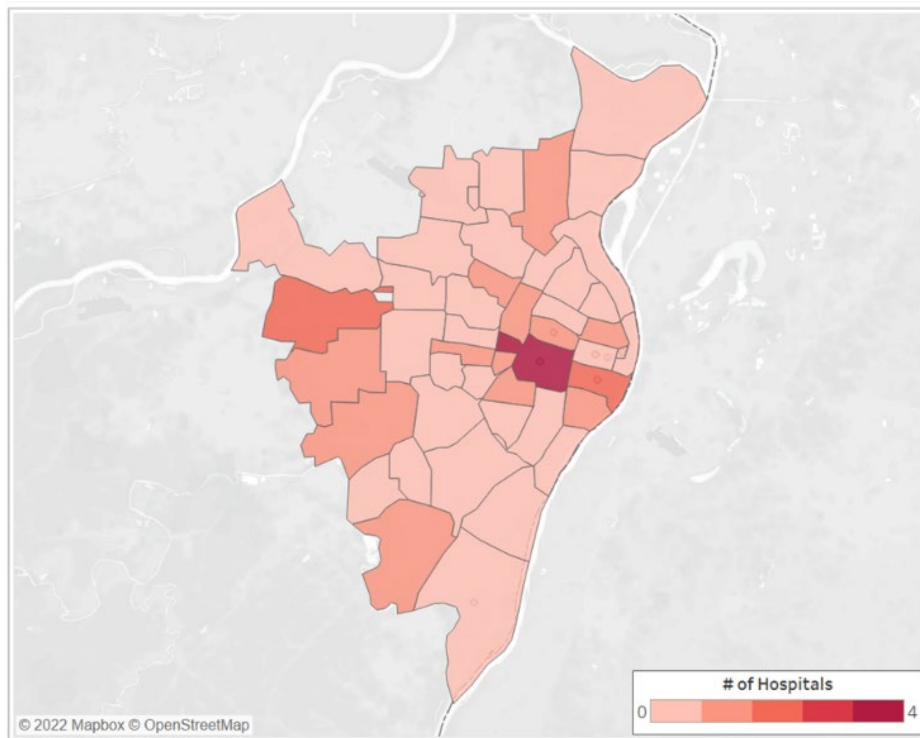
The St. Louis area has 11 hospitals and a relatively high number of hospital beds per capita (11 beds per 1,000 people), compared to just over 3 beds per 1,000 people in Cook County, IL (where Chicago is located) and just under 5 per 1,000 in Marion County, IN (where Indianapolis is located).¹⁴ As can be seen in the map in Figure 5, the city's hospitals are located primarily in the middle and on the western border of the city.¹⁵

Consistent with the number of beds and hospitals, St. Louis has a higher rate of hospital admissions (341 admissions per 1,000 people) than comparable areas, for example 177 in Jackson County, Missouri, where Kansas City is located, and 170 in

Fulton County, Georgia, where Atlanta is located.¹⁶ A relatively high rate of admissions is consistent with inpatient health care use being 5% higher than the national median, as reported in our main HMI report.

About two-thirds of hospital admissions among St. Louis residents occur within St. Louis, with other major destinations for hospital care being Salt Lake City and Chicago, as shown in our main HMI report. St. Louis also has a similar number of physicians per capita as Chicago (about 11 per 1,000 population), but fewer Federally Qualified Health Centers and Community Health Centers.

Figure 5. Number of Hospitals in St. Louis by Zip Code, 2020



Notes: Map created using the 2020 American Hospital Association Survey. All zip codes that are partially within the city's boundaries are included.

Health Care Infrastructure and Market

Health care prices in commercial insurance markets are the result of negotiations between insurance companies and health care providers, including hospitals and physicians. These negotiations are influenced by how much market power each side has. For example, if a hospital is the only or dominant provider of a certain type of care (e.g., cancer care) in an area, that hospital may have leverage in negotiations because the insurers in the area need to have that hospital in their provider network to attract enrollees.

When insurance companies exercise market power, it can result in higher premiums or lower plan quality for consumers, or lower payments to providers. On the other hand, when hospitals and other providers exercise market power, it generally results in higher prices which make health care services less affordable and accessible for people who live in the area.

The standard measure of market concentration is the Herfindahl-Hirschman Index (HHI). This measure captures the relative sizes of firms in a market and ranges from 0 (perfectly competitive, i.e., many firms of relatively equal size) to 10,000 (a monopoly, where one firm captures the whole market). Above a certain threshold (2,500), federal regulators consider a market to be highly

concentrated. Above this level, there is significant concern that market power may distort price negotiations.

The hospital market in St. Louis is moderately concentrated with an HHI of 2,138 in 2020. The HHI has not changed meaningfully in St. Louis over the past five years. The insurance market in the St. Louis metro area is also relatively concentrated, with an HHI of 2,279, driven by United HealthGroup’s coverage of nearly one-third of the commercial insurance market. (Anthem covers another 29%).¹⁷

Health Care Prices

Moderate concentration in both the hospital and insurance markets contribute to health care prices in St. Louis which were 8% below national median prices in 2020.

To look more closely at hospital prices in the St. Louis area, we examined data submitted in response to the federal requirement that, as of January 1, 2021, hospitals make public prices for a variety of services, including prices for patients with and without health insurance. Below, we show cash and private insurer prices (the minimum and maximum rates reported) for a diagnostic colonoscopy in three hospitals in St. Louis. As can be seen, prices varied considerably despite being in the same metro area for the same service.

Table 2. Variation in Prices for a Diagnostic Colonoscopy across Selected St. Louis Hospitals

Hospital	Cash Price	Minimum Reported Negotiated Rate	Maximum Reported Negotiated Rate
Missouri Baptist Medical Center	\$1,234	\$829	\$2,152
Barnes Jewish Hospital	\$2,244	\$1,335	\$3,446
Christian Hospital Northeast	\$1,234	\$829	\$2,152

Notes: All price data from Turquoise Health.

Conclusion

Across the country, health care costs are high, growing, and increasingly unaffordable for businesses, government, and families.

The burden of health care costs has tangible effects. For example, 30% of adults nationally reported problems paying a medical bill and 15% reported needing to change their way of life to pay their medical bills.¹⁸ In St. Louis City, 22% of all residents have some share of medical debt in collections compared to residents of the overall state of Missouri (16%) and the national rate (13%).¹⁹ Rates of medical debt in collections were twice as high among communities of color in St. Louis City than in White communities (31% compared to 15%).²⁰ The burdens and stress of paying medical bills often mean that people delay or forego care that is needed.

High spending on health care for individuals with health insurance through their job also raises costs for employers, who cover, on average, over 70% of the premium associated with health care coverage for

their workers.²¹ In turn, higher spending on health insurance often means that wages and other forms of compensation are less generous. For state governments, rising health care spending threatens health care access for their residents, increases costs for businesses, and burdens state budgets.

HCCI's Healthy Marketplace Index highlights how health care costs uniquely present themselves in metro areas throughout the United States. This case study begins to add dimension to HMI with the goal of increasing understanding of what drives spending locally and nationally. Understanding the range of factors that result in an area's health care spending, and the mix of use, price, and composition of health care services that drives spending, is important for any efforts to lower prices or improve the value of spending. In turn, public and private decisionmakers can identify potential policy interventions to control and optimize health care spending that are most appropriate to the local area.

About the Healthy Marketplace Index

HCCI created the [Healthy Marketplace Index \(HMI\)](#) by analyzing more than 4.2 billion claims for people with employer-sponsored insurance between 2016 and 2020. We computed health care spending, prices, and use [indices](#) for 186 [metro areas](#) across 44 states. The HMI is calculated for spending overall, and separately for hospital inpatient, outpatient, and physician services. See our [technical documentation](#) and [downloadable data](#) for more information on HMI.

Endnotes

¹ University of Wisconsin Population Health Institute. How Healthy is your County? | County Health Rankings. County Health Rankings & Roadmaps. Published 2021. Accessed January 4, 2023. <https://www.countyhealthrankings.org/>

² Cooperman J. The story of segregation in St. Louis. www.stlmag.com. Published October 17, 2014. Accessed January 4, 2023. <https://www.stlmag.com/news/the-color-line-race-in-st-louis/>

³ Harlan C. Delmar Boulevard cuts east-west through St. Louis. It also marks a line between races and perspectives. *Washington Post*. August 22, 2014. Accessed January 4, 2023. https://www.washingtonpost.com/national/in-st-louis-delmar-boulevard-is-the-line-that-divides-a-city-by-race-and-perspective/2014/08/22/de692962-a2ba-4f53-8bc3-54f88f848fdb_story.html

⁴ US Census Bureau. American Community Survey (ACS). census.gov. Published 2020. <https://www.census.gov/programs-surveys/acs>

⁵ Social Determinants of Health. Centers for Disease Control and Prevention. Published October 13, 2022. Accessed January 4, 2023. <https://www.cdc.gov/about/sdoh/index.html>

⁶ Social Determinants of Health. Centers for Disease Control and Prevention. Published October 13, 2022. Accessed January 4, 2023. <https://www.cdc.gov/about/sdoh/index.html>

⁷ University of Wisconsin Population Health Institute. How Healthy is your County? | County Health Rankings. County Health Rankings & Roadmaps. Published 2021. Accessed January 4, 2023. <https://www.countyhealthrankings.org/>

⁸ University of Wisconsin Population Health Institute. How Healthy is your County? | County Health Rankings. County Health Rankings & Roadmaps. Published 2021. Accessed January 4, 2023. <https://www.countyhealthrankings.org/>

⁹ Missouri Health Care for All. | Missouri Health Care for All. www.missourihealthcareforall.org.

¹⁰ PLACES: Local Data for Better Health, County Data 2022 release | Chronic Disease and Health Promotion Data & Indicators. Centers for Disease Control and Prevention. chronicdata.cdc.gov. Updated December 6, 2022. Accessed January 4, 2023. <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb>

¹¹ PLACES: Local Data for Better Health, County Data 2022 release | Chronic Disease and Health Promotion Data & Indicators. Centers for Disease Control and Prevention. chronicdata.cdc.gov. Updated

December 6, 2022. Accessed January 4, 2023. <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb>

¹² PLACES: Local Data for Better Health, County Data 2022 release | Chronic Disease and Health Promotion Data & Indicators. Centers for Disease Control and Prevention. chronicdata.cdc.gov. Updated December 6, 2022. Accessed January 4, 2023. <https://chronicdata.cdc.gov/500-Cities-Places/PLACES-Local-Data-for-Better-Health-County-Data-20/swc5-untb>

¹³ US Health Map | IHME Viz Hub. Healthdata.org. Published 2021. Accessed January 4, 2023. <https://vizhub.healthdata.org/subnational/usa>

¹⁴ Health Resources and Services Administration. Area Health Resources File. Updated 2021. Accessed January 4, 2023. <https://data.hrsa.gov/data/download>.

¹⁵ American Hospital Association. AHA Annual Survey Database. 2020.

¹⁶ American Hospital Association. AHA Annual Survey Database. 2020.

¹⁷ American Medical Association. Competition in Health Insurance: A comprehensive study of U.S. markets. 2021. Accessed January 4, 2023. <https://www.ama-assn.org/system/files/competition-health-insurance-us-markets.pdf>.

¹⁸ Collins S, Haynes L, Masitha R. The State of U.S. Health Insurance in 2022. www.commonwealthfund.org. Published September 29, 2022. Accessed January 4, 2023. <https://www.commonwealthfund.org/publications/issue-briefs/2022/sep/state-us-health-insurance-2022-biennial-survey>

¹⁹ Urban Institute. Debt in America: An Interactive Map. Updated June 23, 2022. Accessed January 4, 2023. <https://apps.urban.org/features/debt-interactive-map/?type=medical&variable=medcoll>

²⁰ Urban Institute. Debt in America: An Interactive Map. Updated June 23, 2022. Accessed January 4, 2023. <https://apps.urban.org/features/debt-interactive-map/?type=medical&variable=medcoll>

²¹ Kaiser Family Foundation. 2022 Employer Health Benefits Survey - Summary of Findings. KFF. Published October 27, 2022. Accessed January 4, 2023. <https://www.kff.org/report-section/ehbs-2022-summary-of-findings/>