HEALTH CARE COST INSTITUTE

Healthy Marketplace Index

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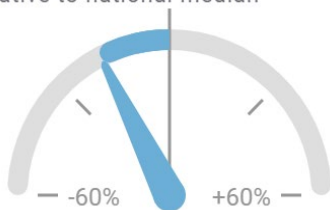
A Closer Look at Baltimore, MD

Baltimore, MD

Baltimore-Columbia-Towson, MD

Overall Spending

-18%
relative to national median

— -60%   +60% —

Price	-9%
Use	+15%
Service Mix	-22%

Below Median   Above Median

Hospital Market Concentration   1,463 HHI

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—Baltimore, Maryland—including social determinants of health, prevalence of disease, health care providers, health care markets, and Maryland's global budget initiative. The HMI shows that health care spending in Baltimore was 18% lower than the national median in 2020, with lower prices and a lower cost mix of services provided, but higher use. Spending in Baltimore grew at roughly the same rate as the national median—about 7%—from 2016-2020. Although Baltimore's HMI includes the broader Baltimore-Columbia-Towson metro area, this case study focuses on Baltimore City.

Overall Spending

+7%

Change in per person spending since 2016



Baltimore, MD   ··· National Median
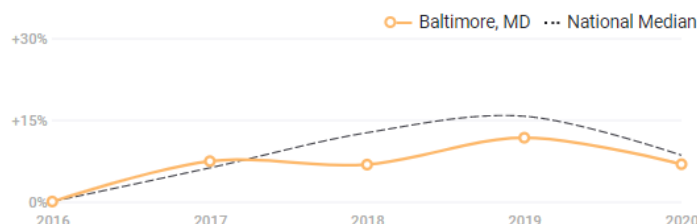
Baltimore City, which separated from Baltimore County in 1851, is home to nearly 600,000 people.[1] It is the most populous city in the state of Maryland and is home to the Johns Hopkins Hospital, one of the premier teaching and research hospital facilities in the U.S.

As shown in Table 1, the racial and ethnic makeup of Baltimore's population is quite different than the U.S. Nearly two-thirds of the city's residents are Black (62%), more than four times the national share, 14%. Only 30% of the city's population is White, compared to 76% nationally. As we discuss throughout this report, there are substantial disparities between Black and White populations in Baltimore, likely reflecting the lasting effects of policies from throughout the 20th century. These policies include redlining, in which neighborhoods that were majority Black were labeled as hazardous,

impacting generations by establishing racially segregated neighborhoods and disparities in housing quality and access to credit (Figure 1). Additionally, nearly 90% of Baltimore residents throughout the 1950s and 1960s were displaced due to the construction of new highways and buildings, leading to further upheaval for the city's majority Black population.[2]

The median household income in Baltimore ($52,000) was $12,000 (20%) below the national median, and the poverty rate was nearly twice as high. There are slightly more people with health insurance in Baltimore than in the U.S. This includes slightly more people who get insurance through work, which is particularly important for HMI because the data underlying HMI is representative of people with employer-sponsored insurance.

Figure 1. Racial/Ethnic Prevalence in Baltimore by Zip Code, 2020
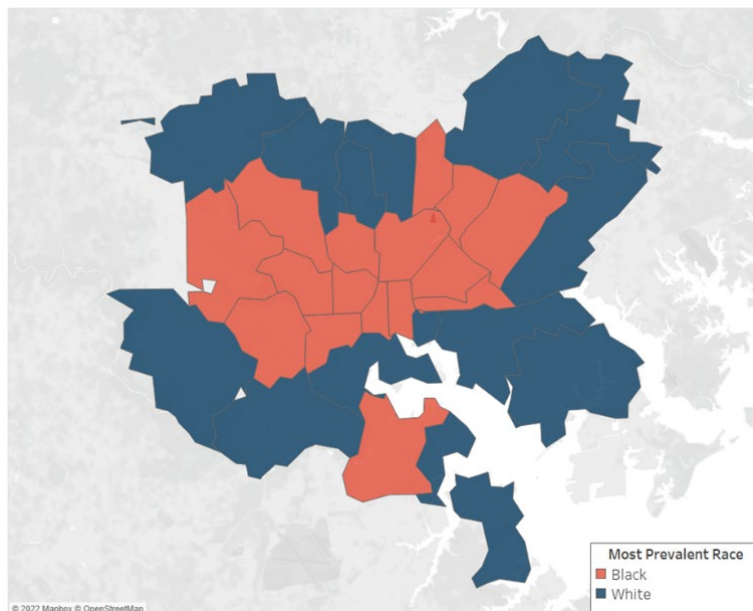
Notes: Map was created using five-year estimates from the 2020 U.S. Census American Community Survey Database. All zip codes that are partially within the city's boundaries are included.

Table 1. Demographic Characteristics of the Population in Baltimore, 2020

	Baltimore	U.S.
Total Population	576,498	331,893,745
Race/Ethnicity		
Black/African American	62%	14%
White	30%	76%
Hispanic or Latino	5%	19%
Asian	3%	6%
American Indian/Alaska Native	Less Than 1%	Less Than 1%
Female	53%	51%
Age		
Under 18 Years	21%	22%
Over 65 Years	14%	17%
Education*		
High School Graduate or Higher	86%	89%
Bachelor's Degree or Higher	33%	33%
Employment^		
In Civilian Labor Force	62%	63%
Unemployment Rate	8%	8%
Median Household Income	$52,164	$64,994
Poverty	20%	11%
Health Insurance		
Uninsured	7%	9%
Employer-Sponsored Insurance	53%	50%
Medicare	18%	14%
Medicaid	19%	20%

Notes: All measures are five-year estimates from the 2020 U.S. Census American Community Survey Database.[3]
*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.[4] Therefore, understanding these conditions is important for understanding health spending, though the interaction between them and spending is complex and may 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.[5] Table 1 provides some insight into how people in Baltimore 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. More than 20% of Baltimore City residents experienced severe housing problems in 2019, including overcrowding, high housing costs, lack of kitchen facilities, and lack of plumbing facilities.[6] Further, 20% of the city's residents spent 50% or more of their income on housing, compared to 14% of in Maryland residents and people across the country.[7] In 2019, 16% of Baltimore City residents experienced food insecurity, higher than the U.S. share, 11%.[8]

Prevalence of Disease, Life Expectancy, and Health Status

On average, more people living in Baltimore have a chronic disease than the general U.S. population. As shown in Figure 2, 38% of adults in Baltimore were obese and 13% had diagnosed diabetes in 2019 (compared to 31% and 10% in the U.S., respectively). Rates of high blood pressure, asthma, and depression in Baltimore were also higher than the national average.[9]

Consistent with a higher prevalence of chronic and mental health conditions, 16% of people in Baltimore report 14 or more days of poor mental health in the past month and 13% report 14 or more days of poor physical health in the past month, slightly higher than the general U.S. population (14% and 12%, respectively).[10]

Life expectancy in Baltimore for someone born today is 73 years old compared to 79 years nationally. Life expectancy within the Black population is lower (71 years old) than among the White population (76 years old) and the Latino population (87 years old) (Figure 3).[11]

Figure 2. Prevalence of Disease in Baltimore, 2020
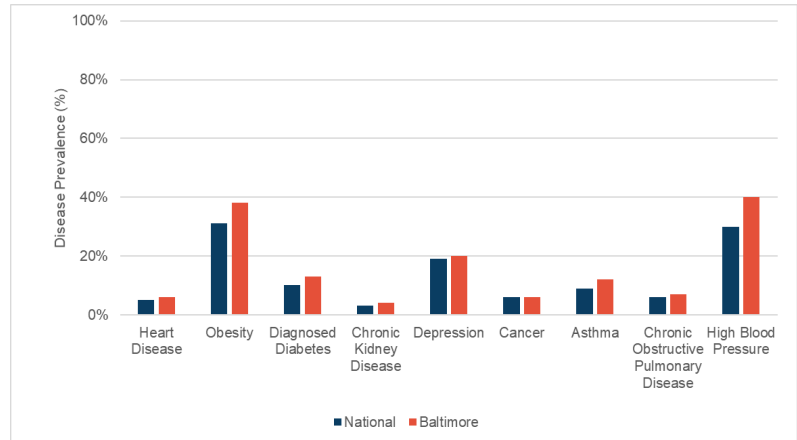
Notes: All measures are from the Centers for Disease Control and Prevention's PLACES 2020 Database at the county level.

Figure 3. Life Expectancy in Baltimore by Race/Ethnicity, 2020
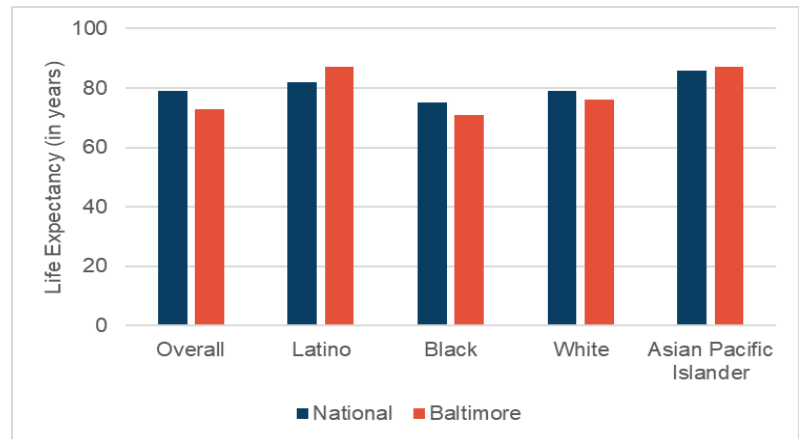
Notes: All measures are from the Institute for Health Metrics and Evaluation 2021 Life Expectancy Database at the county level.

Health Care Providers in Baltimore

Baltimore City has a relatively high rate of physicians per capita, 11 total physicians per 1,000 population, compared to just over 8 per 1,000 in Washington, D.C. and just under 6 per 1,000 in Philadelphia.[12]

Baltimore also has a relatively high number of hospitals (20, including Veterans Administration, children's, and specialty hospitals) and use of hospital services (333 admissions per 1000 population in 2019) compared to, for example, 14 hospitals and a rate of 188 admissions per 1000 people in Washington, D.C.[13] High hospital use reflects in part, the fact that close to 90% of hospital care among area residents occurred in a Baltimore hospital, as we show in the main HMI report. In comparison, in other parts of Maryland such as Salisbury and Hagerstown, a greater percentage of hospital care was provided outside the local area (with Baltimore being a primary destination). Baltimore hospitals are also a primary destination for the 20% of hospital care among Washington, D.C. residents that occurs outside of D.C.

As can be seen in Figure 4, Baltimore's hospitals are relatively evenly distributed across the city's zip codes.

At the same time, Baltimore has fewer Federally Qualified Health Centers and fewer community health centers than Washington, D.C., which likely contribute to disparities in health outcomes and access among Baltimore residents.

Figure 4. Number of Hospitals in Baltimore by Zip Code, 2020
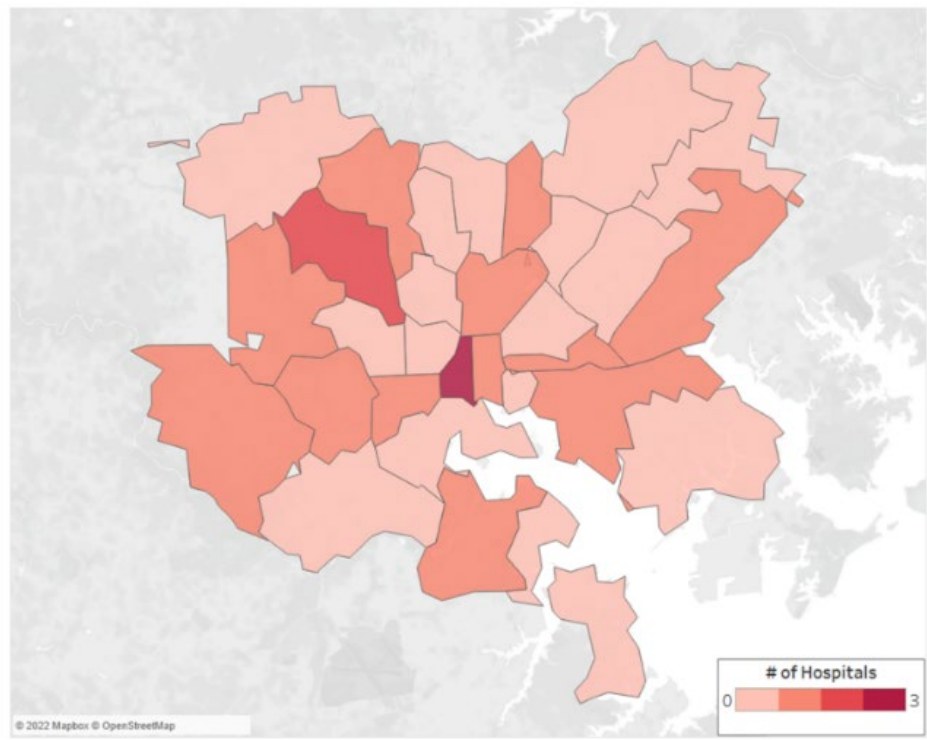
Notes: Data from the 2020 American Hospital Association Survey. All zip codes that are partially within the city's boundaries are included.

## Maryland's All-Payer Global Budget Payment System for Hospitals

A unique feature of the hospital market in Baltimore is Maryland's all-payer global budget payment model.[14] In 1971, the Maryland legislature passed a law to contain health care spending by regulating commercial payment rates to hospitals. Six years later, this law was expanded to include Medicare and Medicaid reimbursement rates. Together, these provisions led to the development of an "all-payer rate setting system," under which Maryland hospitals receive the same payment for the same service from all insurers.

In continuation of these efforts, Maryland state alongside the Centers for Medicare and Medicaid Services (CMS) launched the All-Payer Model, which incorporated global budgets, in 2014. This initiative presented an opportunity to evaluate whether an all-payer system for hospital payments—under which hospitals are accountable for the total cost of care on a per capita basis—is effective for advancing better care at a reduced cost. This system led to quality improvement within a hospital setting; however, evidence suggests that it has not improved coordination across the full health care system.[15]

In 2019, the state of Maryland transitioned from the APM to the Total Cost of Care Model to address cost containment and quality improvement beyond the hospital setting. The Total Cost of Care model sets a per capita limit on Medicare total cost of care in Maryland. This is the first payment system to hold a state fully at risk for the total cost of care among people insured by Medicare. An integral part of this initiative is the Maryland Primary Care Program, a voluntary initiative open to all primary care practices and Federally Qualified Health Centers in the state, that offers funding and support for enhanced prevention and management of chronic diseases. Currently, 50 primary care practices and three FQHCs in Baltimore participate in the program.

Figure 5. Implementation of All-Payer Hospital Rate Setting and the Global Budget Hospital Payment System in MD
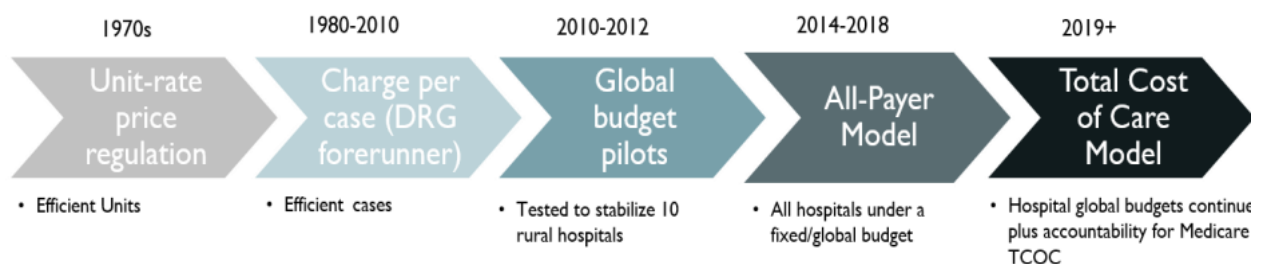
Notes: Figure was obtained from the "Maryland Total Cost of Care Model: Statewide Alignment and Success" presentation by the Maryland Department of Health, Health Services Cost Review Commission, and Maryland Hospital Association on 1/22/2019.

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, higher premiums or lower plan quality for consumers, or lower payments to providers can result. 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.

In Baltimore, the hospital market is unconcentrated, with an HHI of 1,463 in 2020, reflecting the distribution of admissions across the city's 15 general acute care hospitals. The HHI has not changed meaningfully in Baltimore over the past five years. The insurance market in Baltimore is relatively more concentrated, with an HHI of 3,168. CareFirst covers about half of the Baltimore population with commercial insurance.[16]

Health Care Prices

According to HMI, health care prices in Baltimore were 9% below the national median in 2020. The major factor in Baltimore's relatively low health care prices is the state's unique all-payer rate setting and global budgeting system for hospitals.

As of January 1, 2021, hospitals are required to make public prices for a variety of services, including prices for patients with and without health insurance. Our analysis suggests that few Baltimore hospitals are complying fully with the new law, however we were able to identify cash prices at several hospitals for a specific service—a first trimester ultrasound. Cash prices vary substantially across hospitals, as shown in Table 2. Where insurance-based prices are reported, they are much more similar to each other within a hospital, likely related to the state's all-payer system.

Table 2. Price for an Ultrasound in the First Trimester of Pregnancy in Select Baltimore Hospitals

Hospital	Cash Price	Hospital	Cash Price
Johns Hopkins Hospital	$756	Howard County General Hospital	$1,056
Greater Baltimore Medical Center	$422	MedStar Union Memorial	$608

Notes: Prices for Johns Hopkins Hospital from Turquoise Health (12/28/22), prices for other hospitals obtained from hospital-specific websites. MedStar reported "price" is the charge across all payers as reported by the hospital.

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.[17] In Baltimore City, 17% of residents had medical debt in collections compared to 13% in the U.S. overall.[18] Rates among communities of color in Baltimore City were even higher (20% compared to 8% in White communities).[19] 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.[20] 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

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