Maryland Health Care Expenditures Report

Report Purpose and Goals

The Maryland Health Care Commission (MHCC) provides policymakers, purchasers, providers, and the public with state health care expenditures data to promote informed decision-making. In 2023, MHCC continues to support this mission in light of the state's continuing commitment to the Maryland Total Cost of Care Model's savings targets and goals to advance population health, quality, and health equity from 2024 to 2026.

This report provides estimates of health care expenditures for Maryland residents from calendar years 2017 to 2020, including funding to support health care provider organizations during the COVID-19 pandemic provided by the federal government via the Coronavirus Aid, Relief, and Economic Security (CARES) Act and the Paycheck Protection Program and Health Care Enhancement Act. Data on health care expenditures, derived from credible state and national sources, are attributed to specific groups in the state, including data on a per capita basis and trends in their spending. The expenditures data includes those with private health insurance, Medicare, Medicaid/CHIP, Department of Defense Health Program spending, additional veterans' spending, spending by other third party payers and programs and the uninsured. Data is also included by provider services, which separates hospital services and non-hospital and other services, including physician and clinical services, other professional services, dental, home health care, nursing home care, prescription drugs, non-durable medical products, durable medical equipment, and other health residential and personal care.

Data Sources and Estimating Expenditures

MHCC appreciates that this report is the first of its kind on Maryland health care expenditures in nearly a decade and looks forward to discussing how to augment estimates of expenditures. The team made extensive efforts to align and normalize data from different sources. MHCC used multiple data sources to develop the expenditure estimates for this report, including data from the Centers for Medicare and Medicaid Services' National Health Expenditure Accounts (NHE) to document and estimate total and per capita expenditures from 2017 to 2020 for all Maryland residents. Expenditures exclude the net cost of private health insurance, including administrative expenses, taxes and fees, changes in reserves, contributions to reserves, etc. Data was a) obtained directly from the NHE (Estimates by State of Residence) or b) acquired from publicly reported national sources.

a. The NHE includes Maryland-specific data on private health insurance (fully-insured, self-insured, and federal employee health benefit plans) Medicare (Medicare fee-for-service and Medicare Advantage), Medicaid/CHIP (Medicaid fee-for-service and Medicaid Managed Care Organizations), US Department of Defense Health Plans (Defense), veterans and Other Third Party Payers and Programs (worksite health care, other private revenues, Indian Health Services, workers' compensation, general assistance, maternal/child health, vocational rehabilitation, other federal programs Substance Abuse and Mental Health Services Administration (SAMHSA) programs, other state and local programs and school health). In this report, estimated expenditures for each of these groups were pulled from the following NHE categories:
    i. Private, Medicare, Medicaid/CHIP - Per capita and total expenditures are included from NHE exhibits on personal healthcare, enrollment and per enrollee expenses.

ii. Defense, Veterans – Total expenditures are included from the NHE exhibits on personal healthcare.
iii. Other Third Party Payers and Programs - Total expenditure estimates are calculated based on total expenditures in NHE exhibits and based on the distribution of health care expenditures in Maryland across private, Medicare and Medicaid payers.
iv. Provider Services - Annual expenditures and per capita estimates by provider services are included from NHE exhibits on all payers by provider services.

b. The NHE does not separate data estimates on uninsured personal healthcare estimates or COVID-19 expenditures. Expenditure estimates for the uninsured and COVID-19 federal expenditures were calculated as follows:
   i. Uninsured - Maryland data on the number of uninsured residents for 2017 to 2020 were obtained from the Kaiser Family Foundation's (KFF) State Health Facts. KFF relies on data from the US Census Bureau's American Community Survey (ACS). As comprehensive sources of data for health care expenditures on uninsured residents are not easily available, MHCC estimated expenditures on the uninsured population using the National Academy for State Health Policy (NASHP) Hospital Cost Tool. The NASHP Hospital Cost Tool includes hospital expenditures on charity care and uninsured and bad debt, which can largely be attributed to the uninsured population. Note data in the Hospital Cost Tool is reported on a state fiscal year by hospitals, yet a portion of outpatient care occurs outside the hospital setting and some physicians provide additional charity care outside of the hospital. The fiscal year expenditure estimates were normalized to calendar year estimates using the Maryland Health Services Cost Review Commission (HSCRC) Annual Case Mix Data.
   ii. Expenditures on COVID-19 in 2020 - COVID-19 expenditure data was obtained from the Committee for a Responsible Federal Budget, including the allocated funds for health care expenditures and the Paycheck Protection Program (PPP) in the CARES Act, and the PPP and Health Care Enhancement Act. The CARES Act included funding from Health and Human Services (HHS) grants and funding for PPP loans. Grants include funds for health providers, HSRA Health Centers, vaccines and treatments, and the Administration for Community Living. In addition, MHCC included Small Business Administration (SBA) PPP loans to health care businesses with under 500 employees funded through the CARES Act. The PPP and Health Care Enhancement Act included funding from HHS grants and funding for PPP loans as well. Grants include funds for health providers, testing, monitoring, research and development, and HSRA Health Centers. MHCC included Small Business Administration (SBA) PPP loans to health care businesses with under 500 employees funded through the PPP and Health Care Enhancement Act.

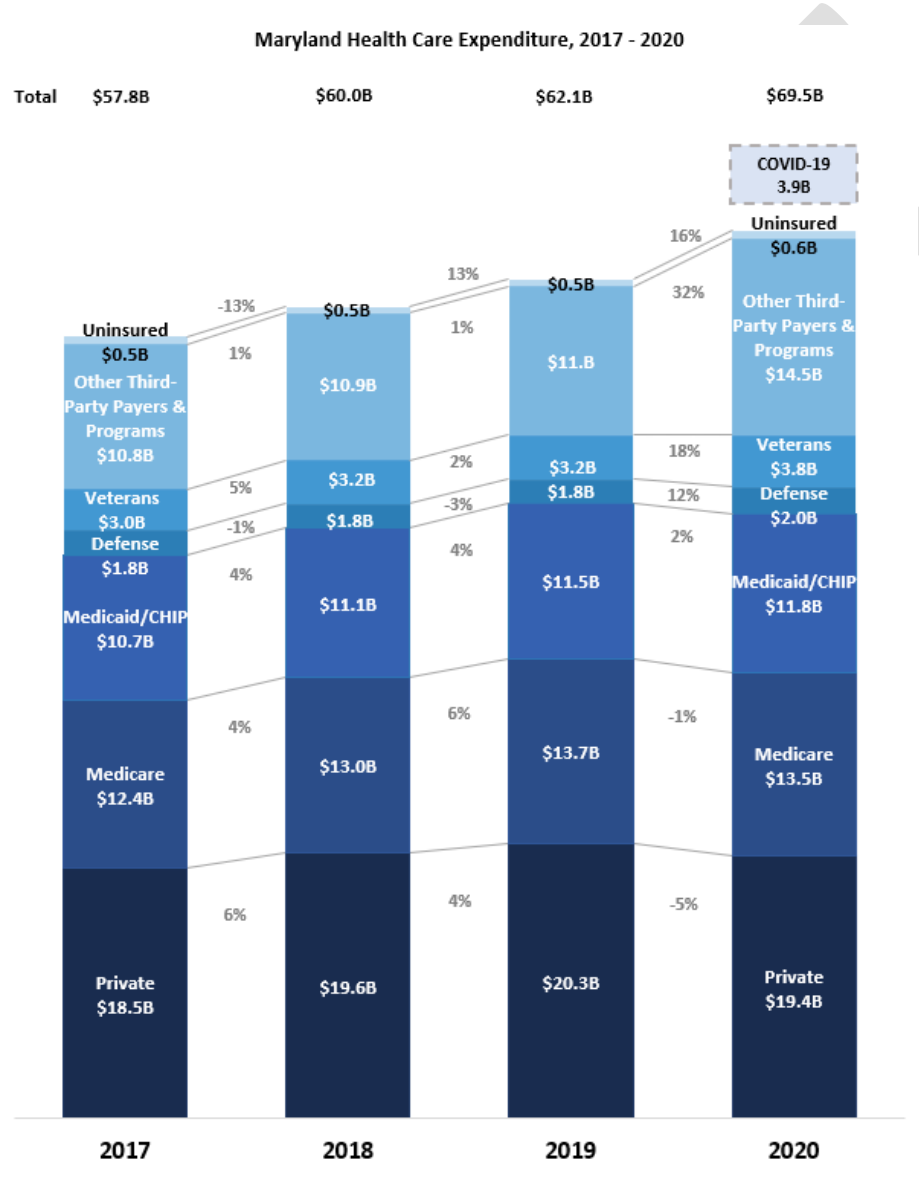
Overview of Findings

To estimate healthcare expenditures for Maryland residents, MHCC leveraged the NHE in conjunction with a review of data sources across state and federal agencies to capture spending across private and public payers and the uninsured. According to these estimates, in 2020 Maryland health care expenditures totaled around $69.5 billion, about $11,482 per capita. MHCC recognizes that estimates for expenditures included in other third party payers and programs may vary with other sources. MHCC looks forward to discussions to strengthen estimates on healthcare expenditures for all Maryland residents.

Maryland Health Care Expenditures

Exhibit 1 outlines total expenditures and year over year trend in Maryland for calendar year 2017 to 2020 for the private, Medicare, Medicaid/CHIP, Defense, Veterans and other third party payers and programs, and uninsured populations. In 2020, the federal government allocated approximately $3.9B in CARES Act and the PPP and Health Care Enhancement Act to support Maryland health providers and health care business; these funds are included in the total expenditures for 2020.

Exhibit 1: Maryland FFY Health Care Expenditures, 2017-2020



Data Sources: CMS National Health Expenditure Accounts. National Academy for State Health Plans Hospital Cost Tool. Committee for a Responsible Federal Budget.

As shown in Exhibit 2, private and Medicare expenditures in Maryland increased in 2019, but decreased in 2020. In contrast, Medicaid/CHIP and veterans' expenditures continued to increase across the three years, while uninsured expenditures decreased only in 2018. Defense expenditures decreased in 2018 and 2019 and then increased in 2020, potentially signaling an adverse impact of the COVID-19 pandemic on this population.

The NHE includes state Gross Domestic Product (GDP) and population estimates. NHE reports that the Maryland GDP decreased by about 3% from 2019 to 2020 while total health care expenditures grew by 12%. Expenditures for other third party payers and programs increased more than other payers and accounted for a 2% increase in health care expenditures as a percentage of GDP.

Exhibit 2: Maryland Healthcare Expenditures by Payer Type (Millions $$), 2017-2020

Payer Type	2017	2018	2019	2020
Private	$18,534	$19,630	$20,345	$19,416
Medicare	$12,411	$12,952	$13,685	$13,532
Medicaid/CHIP	$10,709	$11,086	$11,511	$11,773
Defense	$1,839	$1,817	$1,757	$1,969
Veterans	$3,028	$3,193	$3,249	$3,840
Other Third-Party Payers & Programs	$10,769	$10,876	$10,976	$14,500
Uninsured	$535	$468	$527	$611
COVID-19 (CARES Act, PPP)				$3,892
Total Expenditure	$57,825	$60,021	$62,050	$69,533
Year to Year Change in Total Expenditure	3.3%	3.8%	3.4%	12.1%
GDP	$400,406	$411,100	$421,610	$410,675
Year to Year Change in GDP	3.3%	2.7%	2.5%	-2.6%
Expenditure as a % of GDP	**14.4%**	**14.6%**	**14.7%**	**16.9%**

As shown in Exhibit 3, health care expenditures for both hospital and non-hospital and other services increased each year from 2017 to 2020. All categories of non-hospital and other services saw an increase in spending from 2017 to 2020 except for durable medical equipment and dental. The Maryland HSCRC, which tracks allocations of federal COVID-19 relief funds identified that approximate 34% of relief funds have been distributed for hospital services, therefore this report estimates the remainder will be distributed for non-hospital and other services.

Exhibit 3: Maryland Healthcare Expenditures by Provider Services (Millions $$), 2018-2020

Provider Service	2017	2018	2019	2020		
				Expenditures w/o COVID-19	COVID-19 (Cares Act, PPP)	Total
Hospital Services	**$20,614**	**$21,120**	**$21,619**	**$23,500**	**$1,310**	**$24,810**
Non-Hospital and Other Services:	**$37,211**	**$38,901**	**$40,431**	**$42,141**	**$2,582**	**$44,723**
Physician and Clinical Services	$15,681	$16,630	$17,373	$17,991		$17,991
Other Professional Services	$2,074	$2,240	$2,352	$2,450		$2,450
Dental	$2,560	$2,695	$2,776	$2,713		$2,713
Home Health Care	$1,359	$1,422	$1,502	$1,649		$1,649
Nursing Home Care	$3,882	$3,972	$4,047	$4,345		$4,345
Prescription Drugs	$5,567	$5,622	$5,779	$5,878		$5,878
Non-Durable Medical Products	$1,591	$1,629	$1,696	$1,792		$1,792
Durable Medical Equipment	$851	$890	$930	$900		$900
Other Health Residential and Personal Care	$3,646	$3,801	$3,976	$4,423		$4,423
Total Expenditure	**$57,825**	**$60,021**	**$62,050**	**$65,641**	**$3,892**	**$69,533**
GDP	**$400,406**	**$411,100**	**$421,610**			**$410,675**
Expenditure as a % of GDP	**14.4%**	**14.6%**	**14.7%**	**16.0%**	**0.9%**	**16.9%**

Maryland Health Care Per Member, Per Year Expenditures

Recognizing that the COVID-19 pandemic decreased utilization of healthcare services in 2020 and impacted expenditures, MHCC considered expenditures on a per capita basis. Given that estimated expenditures in this report do not include all spending for all Marylanders, review of per capita expenditures by payer type provides useful context.

Exhibit 4 shows that as total expenditures for the private market decreased in 2020, the per capita expenditure increased slightly, which can be attributed to decreasing number of covered lives. The impact of the COVID-19 pandemic is further highlighted in the per capita decreases across Medicare and Medicaid/CHIP groups. Total expenditure change for these groups was relatively small between 2019 and 2020. Notably, membership in each group increased over the two years, resulting in higher rates of decrease in per capita expenditures. The 35% per capita increase for the uninsured in 2020 was associated with a 26% decrease in uninsured individuals in Maryland, likely due to additional coverage through Medicaid/CHIP during the public health emergency. Increased expenditures for the uninsured population may largely be driven by COVID-19 related hospital expenditures for those without insurance.

Exhibit 4: Maryland Health Care Expenditures Per Capita and Changes by Payer Type, 2018-2020

Payer Type	2017	2018	2017-2018	2019	2018 – 2019	2020	2019 – 2020
Private	$4486	$4,850	8%	$5,024	4%	$5,045	0%
Medicare	$12,625	$12,820	2%	$13,206	3%	$12,805	-3%
Medicaid/CHIP	$7,667	$7,956	4%	$8,201	3%	$7,838	-4%
Uninsured	$1,476	$1,336	-9%	$1,518	14%	$2,050	35%
Average Per Capita	**$9,593**	**$9,934**	**4%**	**$10,248**	**3%**	**$10,841**	**6%**

In addition, MHCC reviewed per capita expenditures by provider services, as displayed in Exhibit 5. Hospital services, home health care, nursing home care and other health residential and personal care services had the highest trend increases between 2019 and 2020. In contrast, dental services and durable medical equipment are the only areas where the trend decreased in those years. These impacts highlight both deferred care (e.g., dental) and higher acute and long-term care expenditures for individuals affected by COVID-19.

Exhibit 5: Maryland Health Care Expenditures Per Capita and Changes by Provider Services, 2017-2020

Provider Service	2017	2018	2017-2018	2019	2018 – 2019	2020	2019 – 2020
Hospital Services	**$3,420**	**$3,495**	**2%**	**$3,571**	**2%**	**$3,881**	**9%**
Non-Hospital and Other Services:	**$6,172**	**$6,437**	**4%**	**$6,678**	**4%**	**$6,960**	**4%**
Physician and Clinical Services	$2,601	$2,752	6%	$2,869	4%	$2,971	4%
Other Professional Services	$344	$371	8%	$388	5%	$405	4%
Dental	$425	$446	5%	$459	3%	$448	-2%
Home Health Care	$225	$235	4%	$248	6%	$272	10%
Nursing Home Care	$644	$657	2%	$668	2%	$718	7%
Prescription Drugs & Non-Durable Medical Products	$1,187	$1,200	1%	$1,235	3%	$1,267	3%
Durable Medical Equipment	$141	$147	4%	$154	5%	$149	-3%
Other Health Residential and Personal Care	$605	$629	4%	$657	4%	$730	11%
Average Per Capita	**$9,592**	**$9,932**	**4%**	**$10,249**	**3%**	**$10,841**	**6%**

About Exhibits 1, 2, 3, 4 and 5

Data Sources: National private health insurance, Medicare and Medicaid/CHIP data was obtained from CMS National Health Expenditure Accounts.

* All per capita data is on a CY basis.

** Private health insurance includes fully-insured, self-insured, and federal employee health benefit plans, Medicare includes Medicare fee-for-service and Medicare Advantage, Medicaid/CHIP includes Medicaid fee-for-service and Medicaid Managed Care Organizations, and Other Third Party Payers and Programs includes worksite health care, other private revenues, Indian Health Services, workers' compensation, general assistance, maternal/child health, vocational rehabilitation, other federal programs Substance Abuse and Mental Health Services Administration (SAMHSA) programs, other state and local programs and school health.

[+]Maryland average per capita expenditure was obtained by adding together the NHE total expenditures divided by the population of Maryland each year based on NHE exhibits. Note Exhibits 4 and 5 average per capita spending differ due to rounding.

Note expenditures for the following populations may not be comparable to alternative sources for the following reasons:

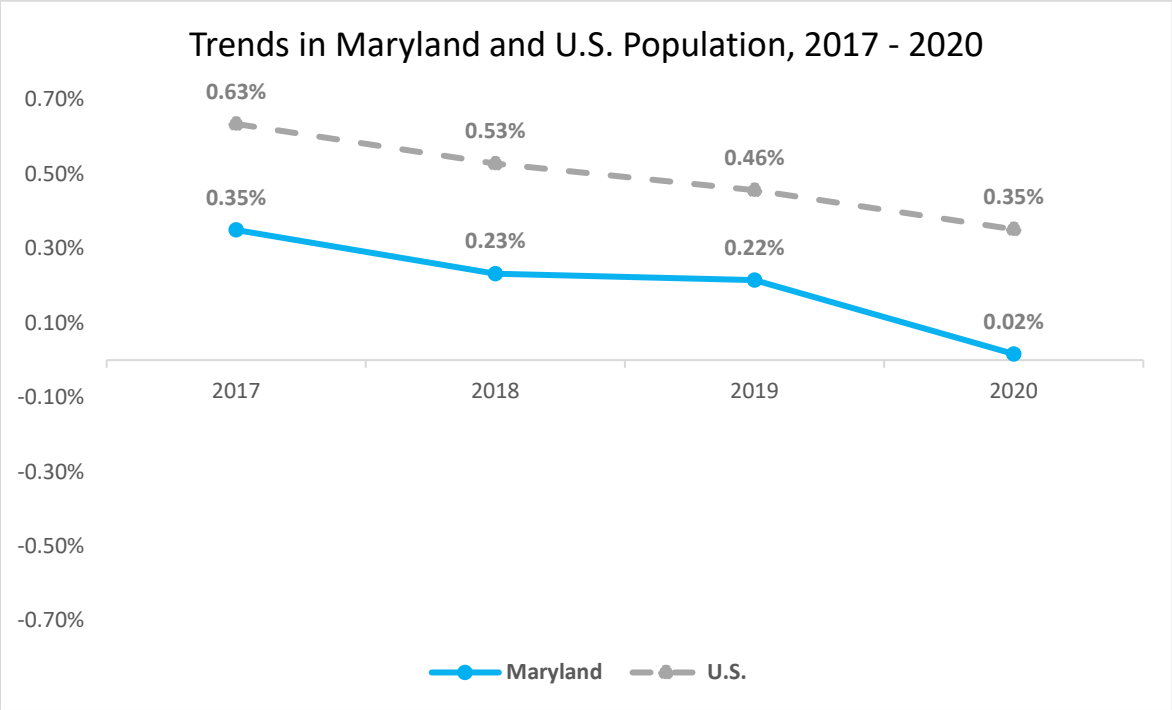
- Certain data included in the NHE are not available at the same level of granularity as private, Medicare, and Medicaid data, such as other third-party payers and programs, which does not include breakouts of worksite health care, private revenues, Indian Health Services, workers' compensation, state and local programs regarding maternal/child health, vocational rehabilitation, school health, etc.

National and Maryland Trend Comparison

Exhibit 6 shows changes in Maryland and U.S. population trends to help contextualize the changes in total expenditures. Between 2017 to 2020, Maryland's population grew more slowly than the U.S.

overall. In 2020, Maryland's rate of population growth slowed relative to that of the U.S. and contributes to the differences between Maryland's total expenditures and trends noted in Exhibits 1 through 5 and U.S. total expenditures, particularly the sharp rise in health expenditures as a percentage of state GDP.

Exhibit 6: Trends in Maryland and U.S. Population Growth, 2017-2020

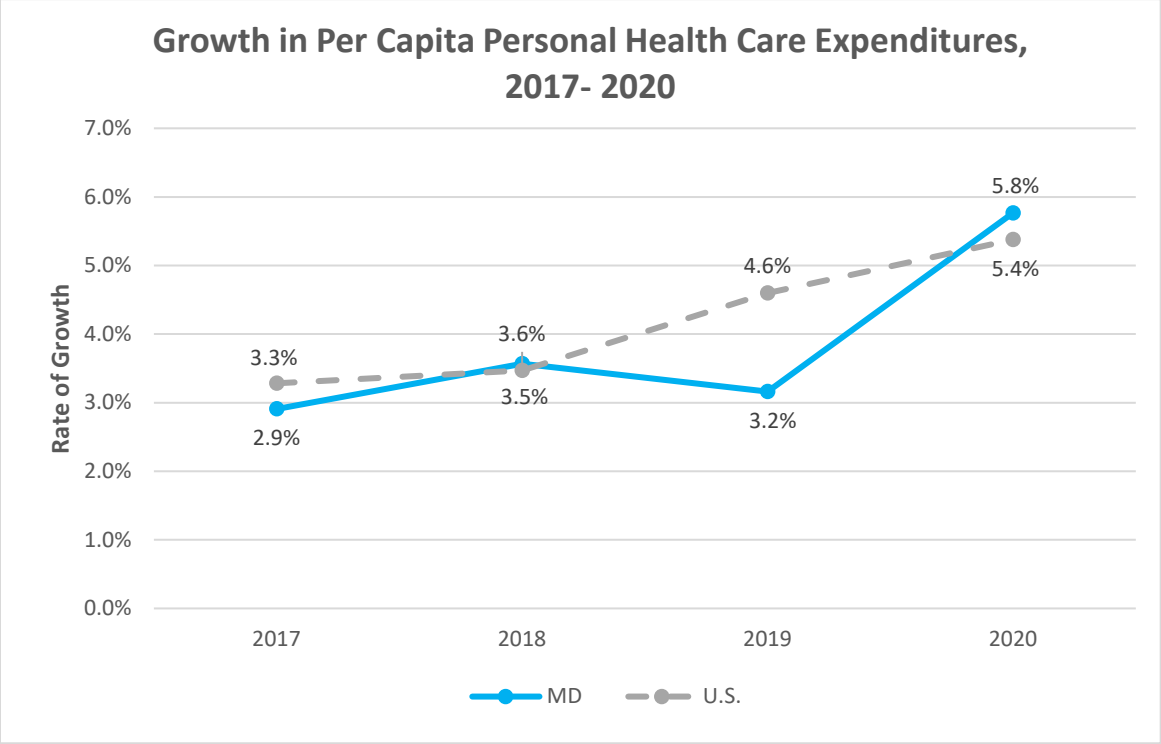


Data Sources: National and Maryland population data was obtained from the CMS National Health Expenditure Accounts.

To further contextualize the estimated health care expenditures in Maryland, MHCC compared per capita results from this report with national trends reported in the NHE. Exhibits 7, 8 and 9 display national and Maryland health care per capita trends from 2017 to 2020 on a calendar year basis.

Exhibit 7 shows trend for all Marylanders' per capita personal health expenditures compared to the US from 2017 to 2020. In these years, the ratio of Maryland per capita expenditures to U.S. per capita expenditures ranged between 106% to 107%.

Exhibit 7: Growth in Per Capita Personal Health Care Expenditures, 2017-2020



Year	2017	2018	2019	2020
Ratio MD to US Per Capita Expenditure	107.3%	107.4%	106.0%	106.4%

Exhibits 8 and 9 show per capita expenditures trends by payer for Maryland and the US. Compared to the US, Maryland per capita private health insurance spending increased more quickly in 2017-18, increasing at a similar rate in 2019, and decreasing less in 2020. Decreases in 2019-2020 for Maryland's Medicare and Medicaid/CHIP per capita trend are more pronounced than for the US.

Exhibit 8: National Health Care Per Capita Trends, 2017-2020

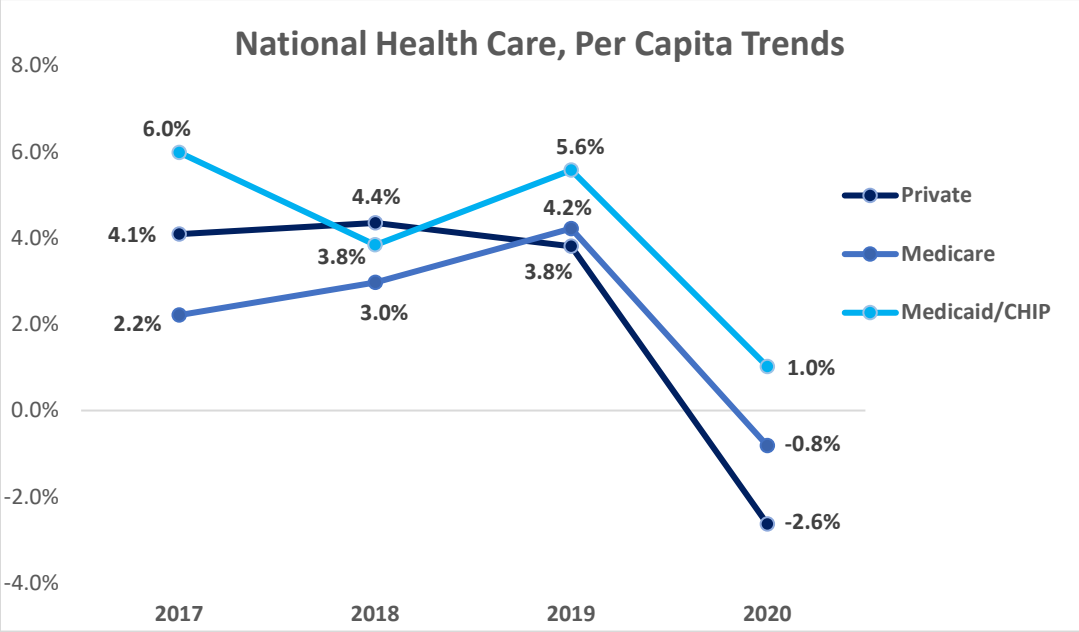
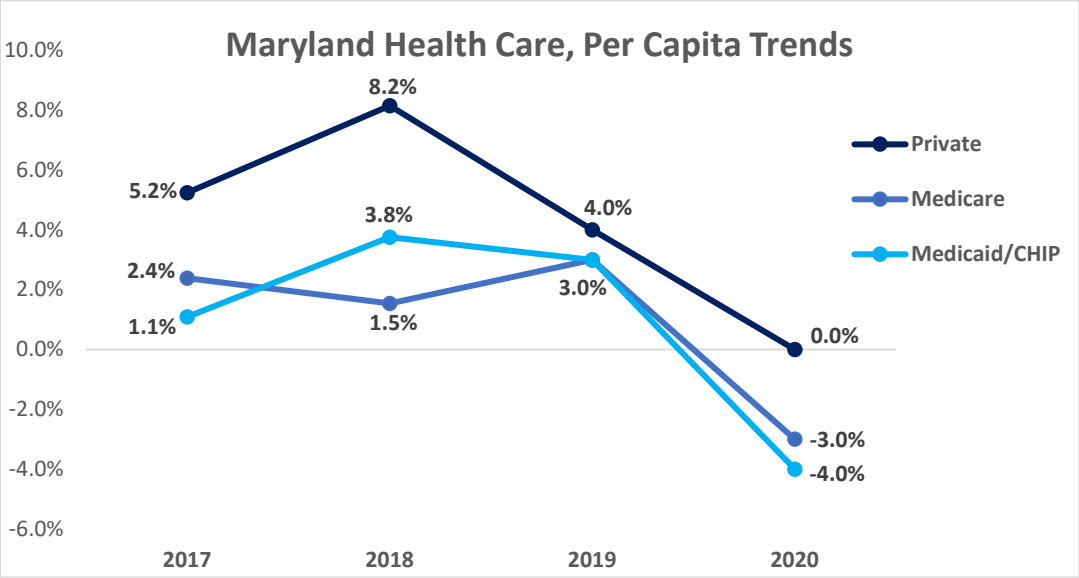


Exhibit 9: Maryland Health Care Per Capita Trends, 2017-2020



About Exhibit 7, 8 and 9

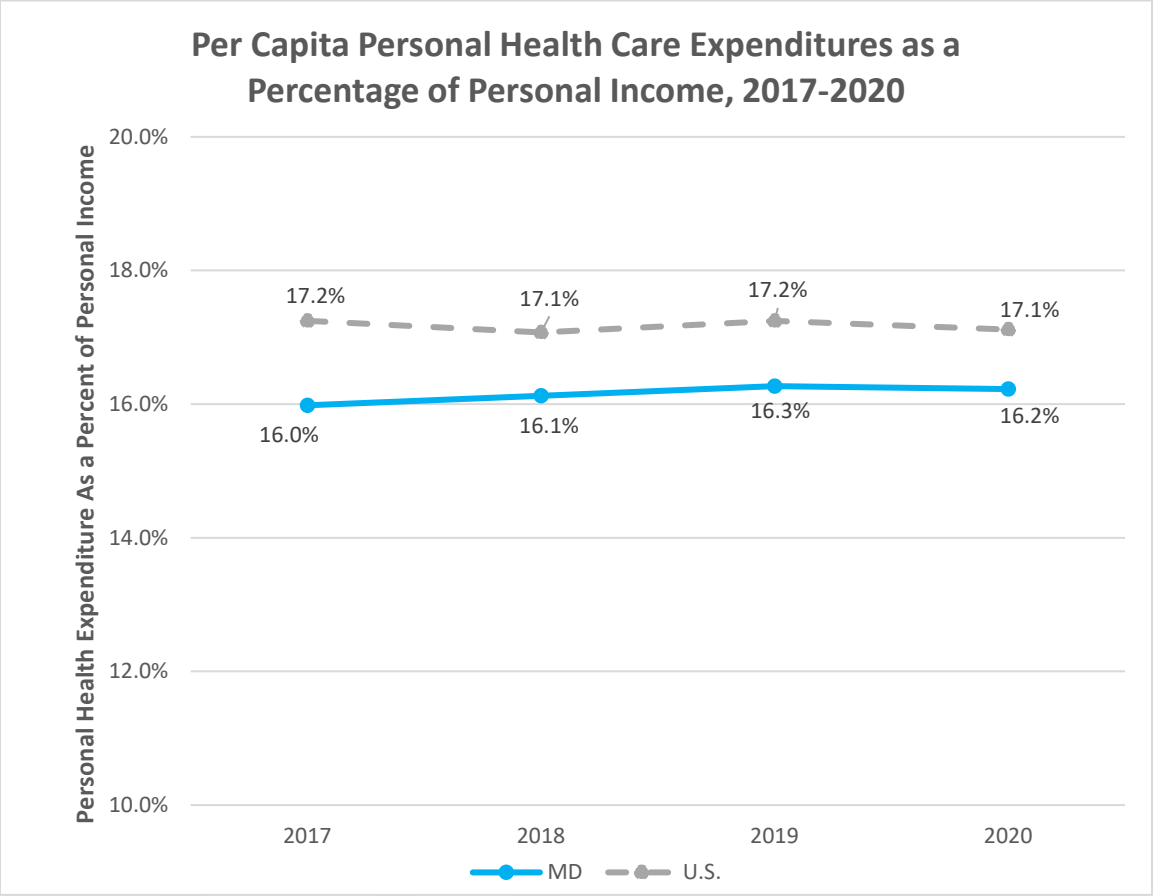
Data Sources: National private health insurance, Medicare, Medicaid/CHIP and total personal healthcare data was obtained from CMS National Health Expenditure Accounts.

* All data is on a calendar year basis.

** Private Health Insurance per capita includes Fully Insured (FI), Self-Insured (SI), and Federal Employees. Medicare per capita includes Medicare Advantage and Medicare Fee-for-Service (FFS). Medicaid/CHIP per capita includes Medicaid Fee-for-Service (FFS) and Medicaid Managed Care Organization (MCO).

MHCC then reviewed Maryland and national personal income data to understand the burden personal health care expenditures have on individuals' finances. Exhibit 10 confirms that Maryland residents paid a lower percentage of their income, approximately 16%, compared to the average American, who paid 17% during 2017-2020. As Maryland continues to develop policy initiatives to support high value health care delivery, evaluating these metrics will support monitoring access to care.

Exhibit 10: Per Capita Personal Health Care Expenditures as a Percent of Personal Income, 2017 – 2020



Looking Ahead to Address Data Limitations

This report relies on data within the NHE and readily available public data within Maryland and through federal organizations, such as the Veterans' Administration. In the future, MHCC hopes to collaborate with other Maryland state agencies to further enhance estimates developed and capture additional expenditure on health care.

Enhancing Expenditure Estimations by Population

Data on the private insurance market could be portioned into fully-insured, self-insured and federal employee health benefit plan expenditures through further conversations with the NHE team. In addition, these conversations could support an understanding of the division of Medicare expenditures to Medicare FFS and Medicare Advantage.

MHCC appreciates that data on Medicaid/CHIP expenditures may be able to be split into Medicaid FFS and MCO expenditures and seeks to align with Maryland Department of Health (MDH) reporting on Medicaid/CHIP expenditures in Maryland. This year, MHCC reviewed categories of additional spending for the Medicaid/CHIP population that is not attributable to an individual or population, such as program spending. MHCC was not able to obtain granular data on Medical Care Program spending for school-based services, major information technology development projects and other administrative costs or on MDH public health service and program spending, such as SUD prevention and surveillance, population health improvement and laboratory expenses to identify potential health care expenditures. MHCC looks forward to continuing discussions with Medicaid and MDH on how to apportion NHE data in future reports on health care expenditures.

MHCC appreciates that there are few data sources that capture health care expenditures for the uninsured population. In this report, MHCC used the NASHP Hospital Cost Tool to estimate a portion of spending on uninsured individuals, recognizing that these estimates capture a portion of the care received at hospital facilities. MHCC looks forward to discussing how to include additional spending for uninsured individuals with MDH and other agencies in the state in the future.

In 2020 the federal government allocated funding for state health care providers and businesses impacted by the COVID-19 pandemic. In this report, MHCC includes these allocated expenditures in 2020. In the future, MHCC hopes to understand the disbursement of these funds for non-hospital and other services to accurately account for actual expenditures.

Maryland's health care policy environment has an impact on the data included in this report. Additional data studies would be needed to understand how policy decisions impact Marylanders' personal health care expenditures and trends in spending by payer type.

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- Vinayak Sinha, MPH, CSM, *Consultant*
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- Linda Green, MPA, *Executive Vice President*

Questions about the report should be directed to Shankar Mesta at shankar.mesta@maryland.gov.

Appendix: Glossary of Terms

The following information on terms is adapted from the Centers for Medicare and Medicaid Services' National Health Expenditure Accounts (NHE). More detailed definitions can be found at the following web address: National Health Expenditure Accounts: Methodology Paper, 2021 (cms.gov)

Hospital Care: Covers all services provided by hospitals to patients. These include room and board, ancillary charges, services of resident physicians, inpatient pharmacy, hospital-based nursing home and home health care, and any other services billed by hospitals in the United States. The value of hospital services is measured by total net revenue, which equals gross patient revenues (charges) less contractual adjustments, bad debts, and charity care. It also includes government tax appropriations as well as non-patient and non-operating revenues. Hospitals fall into NAICS 622 – Hospitals.

Physician and Clinical Services: Covers services provided in establishments operated by Doctors of Medicine (M.D.) and Doctors of Osteopathy (D.O.), outpatient care centers, plus the portion of medical laboratories services that are billed independently by the laboratories. This category also includes services rendered by a doctor of medicine (M.D.) or doctor of osteopathy (D.O.) in hospitals, if the physician bills independently for those services. Clinical services provided in freestanding outpatient clinics operated by the U.S. Department of Veterans' Affairs, the U.S. Coast Guard Academy, the U.S. Department of Defense, and the U.S. Indian Health Service are also included. The establishments included in Physician and Clinical Services are classified in NAICS 6211-Offices of Physicians, NAICS 6214-Outpatient Care Centers, and a portion of NAICS 6215-Medical and Diagnostic Laboratories.

Other Professional Services: Covers services provided in establishments operated by health practitioners other than physicians and dentists. These professional services include those provided by private-duty nurses, chiropractors, podiatrists, optometrists, and physical, occupational and speech therapists, among others. These establishments are classified in NAICS-6213 Offices of Other Health Practitioners.

Dental Services: Covers services provided in establishments operated by a Doctor of Dental Medicine (D.M.D.) or Doctor of Dental Surgery (D.D.S.) or a Doctor of Dental Science (D.D.Sc.). These establishments are classified as NAICS 6212 Offices of Dentists.

Other Health, Residential, and Personal Care: This category includes spending for Medicaid home and community based waivers, care provided in residential care facilities, ambulance services, school health and worksite health care. Generally these programs provide payments for services in non-traditional settings such as community centers, senior citizens centers, schools, and military field stations. The residential establishments are classified as facilities for the intellectually disabled (NAICS 62321), and mental health and substance abuse facilities (NAICS 62322). The ambulance establishments are classified as Ambulance services (NAICS 62191).

Home Health Care: Covers medical care provided in the home by freestanding home health agencies (HHAs). Medical equipment sales or rentals not billed through HHAs and non-medical types of home care (e.g., Meals on Wheels, chore-worker services, friendly visits, or other custodial services) are excluded. These freestanding HHAs are establishments that fall into NAICS 6216-Home Health Care Services.

Nursing Care Facilities and Continuing Care Retirement Communities: Covers nursing and rehabilitative services provided in freestanding nursing home facilities. These services are generally provided for an extended period of time by registered or licensed practical nurses and other staff. Care received in state & local government facilities and nursing facilities operated by the U.S. Department of Veterans Affairs are also included. These establishments are classified in NAICS 6231-Nursing Care Facilities and NAICS 623311-Continuing Care Retirement Communities with on-site nursing care facilities.

Prescription Drugs: Covers the "retail" sales of human-use dosage-form drugs, biological drugs, and diagnostic products that are available only by a prescription.

Durable Medical Equipment: Covers "retail" sales of items such as contact lenses, eyeglasses and other ophthalmic products, surgical and orthopedic products, hearing aids, wheelchairs, and medical equipment rentals.

Other Non-Durable Medical Products: Covers the "retail" sales of non-prescription drugs and medical sundries.

Population: The population used in the NHEA tables is defined as the U.S. Census resident population plus the net undercount.

Private Health Insurance: Includes premiums paid to traditional managed care, self-insured health plans and indemnity plans.

Medicare: Includes Medicare Advantage and Medicare Fee-for-Service (FFS).

Medicaid/CHIP: Includes Medicaid Fee-for-Service (FFS) and Medicaid Managed Care Organization (MCO).

Other Third Party Payers & Programs: Includes worksite health care, other private revenues, Indian Health Services, workers' compensation, general assistance, maternal/child health, vocational rehabilitation, other federal programs, Substance Abuse and Mental Health Services Administration (SAMHSA) programs, other state and local programs and school health.