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PRIMARY CARE SPENDING IN MEDICARE FEE-FOR-SERVICE: AN ILLUSTRATIVE ANALYSIS USING ALTERNATIVE DEFINITIONS OF PRIMARY CARE

KEY POINTS

- High-quality primary care facilitates continuous, person-centered, and coordinated care to address a wide range of medical conditions. One important goal of primary care is to prevent disease or detect it at an early stage. Primary care providers can also play an important role in coordinating care with specialists to holistically address the needs of patients.
- Evidence suggests that access to, and utilization of, primary care is associated with better population health outcomes and improved health equity.
- Policymakers and providers have been concerned that utilization of and spending on primary care in the United States is too low, reflecting both relatively lower reimbursement for such services relative to specialty care and a lack of access to primary care providers.
- Multiple methodologies have been used to estimate primary care spending, which can make comparisons across estimates challenging. This issue brief uses Medicare fee-for-service data to conduct illustrative analyses using a methodology that has been frequently used by policymakers and academics and can be applied to claims data.
- Using four variations of measures of primary care spending based on provider type and specialty and service location, the estimates of average monthly per beneficiary spending on primary care in the Medicare fee-for-service program ranged from $32 to $69 in 2019. This corresponded to approximately 3 to 6 percent of monthly Medicare fee-for-service spending. Between 15 and 24 percent of beneficiaries did not have any primary care spending in 2019, depending on the estimate, missing the opportunity to participate in an Annual Wellness Visit to create or update a personalized prevention plan covered without cost sharing for providers participating in Medicare. In addition, 8.3 percent of beneficiaries had no health care spending at all.
- Although the estimates did vary substantially from each other as expected, trends in each of the four measures were fairly consistent over the three years analyzed, with the exception that all the estimates showed a decline in primary care and overall health care utilization during 2020 due to the COVID-19 pandemic.
- Female beneficiaries, Asian/Pacific Islander beneficiaries (compared to all other racial/ethnic groups, particularly Black and American Indian/Alaska Native beneficiaries), and beneficiaries between 65 and 74 years old had a higher percentage of spending for primary care.
- Beneficiaries who were dually enrolled in Medicaid and beneficiaries with more chronic conditions had a lower percentage of spending for primary care.
- Beneficiaries who were older, dually enrolled in Medicaid, or had more chronic conditions tended to spend more in absolute terms (not percent) on primary care, but they also spent more on

health care overall, likely due to having more health care needs. These groups also tended to be less likely to have no spending and less likely to have no primary care spending.
- The percent of spending for primary care varied by state and was highest in Tennessee, South Carolina, Arizona, and North Carolina and lowest in D.C., South Dakota, Maine, and California.
- The U.S. Department of Health and Human Services is supporting numerous programs, policies, and initiatives intended to improve access to, and the provision of, high-quality primary care.
- The estimates provided in this brief could help inform the choice of a baseline measure to monitor the effectiveness of investments in primary care. It will be important to track whether the Department's efforts to strengthen primary care alter the portion of total health care spending that goes to primary care and whether changes in this proportion result in improved health outcomes.

INTRODUCTION

The 2021 report "Implementing High-Quality Primary Care: Rebuilding the Foundation of Health Care" from the National Academies of Science, Engineering, and Medicine (NASEM) called primary care the "foundation of a high-functioning health care system."[1] High-quality primary care involves a continuous relationship between a clinician and patient over an extended period of time, where the clinician serves as a usual source of care for the patient and develops a comprehensive understanding of the patient's medical history and personal needs. An important goal of such care is to prevent disease or detect it at an early stage to prevent its progression, while coordinating care with specialty providers as appropriate to address advanced or chronic stages of illness. Primary care can be provided from a range of provider types, including doctors, nurse practitioners, and physician assistants often working in teams. Although evidence suggests a strong link between the availability and utilization of primary care and population health outcomes and health equity,[2,3,4,5] the proportion of total health care spending accounted for by primary care in the United States has remained consistently low and is lower than in some other wealthy nations, which could potentially indicate under-utilization.[6] For instance, using one measure of primary care (which broadly included what was referred to as general care and prevention), the OECD estimated the average percent of all health care spending going to primary care among its members with available data in 2016 was 7.8 percent (ranging from 4.4 percent in Switzerland to 12.4 percent in Mexico). Some recent estimates for the United States are as low as 5.4 percent, although others are closer to the OECD average.[7] This highlights the difficulty of trying to compare across very different health care systems and across different definitions of primary care, a challenge discussed in more detail below.

Several factors may be contributing to potential under-utilization of primary care in the United States. One important factor is lower reimbursement for primary care services relative to specialty care services, which not only affects spending on primary care directly, but has also resulted in fewer medical school graduates electing to go into primary care over time.[8] This is taking place in the context of an overall shortage of clinicians across multiple specialties in many parts of the country, which may create accessibility challenges.[9] Additional factors that can potentially contribute to lack of utilization of primary care include the cost of care, uninsurance/underinsurance, language barriers, lack of cultural competency, physical accessibility, lack of transportation and distance to care, limited provider hours and availability, low health literacy, patient perceptions about the value or need for primary care, and challenges with child care or taking time off work.[10,11,12,13,14] An analysis by The Commonwealth Fund, for instance, found adults in the United States the least likely, compared to adults in other high-income countries, to have a longstanding relationship with a primary care doctor, least likely to have access to home visits by a primary care provider (PCP), and least likely to be able to see a PCP after regular business hours.[15] Although there is general agreement among policymakers on the importance of primary care, how such care should be reimbursed and delivered now and in the future continues to be an important policy discussion.

The purpose of this issue brief is to illustrate commonly used measures of primary care spending for the Medicare fee-for-service population. In addition, this analysis illustrates how estimates of such spending might vary using alternative measures of primary care, how these estimates change and track over time, and how they differ for specific subpopulations of Medicare beneficiaries. The issue brief concludes with a review of federal efforts related to strengthening primary care.

ESTIMATING PRIMARY CARE SPENDING

Different definitions and data have been used to measure primary care use and spending in the health system. Regardless of the definition and data used, many researchers and policymakers use the percent of health care spending devoted to primary care as a key metric because it is more comparable than absolute spending amounts across payers and contexts where costs for services may vary.

A recent review conducted by the Evidence-Based Practice Center under contract to the Agency for Healthcare Research and Quality (AHRQ) at HHS reviewed the current gray and published literature for estimates of primary care spending produced since 2008.[16] This report summarized the patterns that emerge as well as similarities and differences among estimates and some conceptual and practical challenges for producing them. Estimates varied widely in what is and is not included in the definition, which resulted in a range of estimates. The estimates also varied widely in whether they tried to incorporate non-claims payments,[*] and if so, how they tried to estimate how much of these non-claims payments should be attributed to primary care. This review from AHRQ provides a comprehensive, high-level overview of how primary care spending has been estimated and specific challenges to this effort, while the analysis in this issue brief does a deeper dive for the Medicare fee-for-service population (and certain subgroups) and shows how small variations in a common methodology changes the estimates.

A small set of national primary care spending estimates have been produced, in addition to state estimates, although they do not all cover the same populations or years. Many, but not all, use definitions and methodologies based on the Milbank Memorial Fund definition also used in this analysis (described in the next section). Most are claims-based analyses or use data from the Medical Expenditure Panel Survey (MEPS), a nationally representative survey of the U.S. civilian, noninstitutionalized population and their medical practitioners. Overall, the percent of spending going to primary care in the United States is usually estimated to be between 5-8 percent in these analyses using "broad" definitions and approximately half that (2-4 percent) using "narrow" definitions. When analyses are broken out by insurance coverage type, individuals with private insurance are generally found to spend the largest percent on primary care, followed by Medicaid beneficiaries, with Medicare fee-for-service beneficiaries having the lowest percent (usually estimated to be around 5 percent under a "broad" definition) among these insurance coverage categories.[17,18,19,20,21] Another recent analysis of data from the Veterans Health Administration (VHA) estimated that in 2014, 9 percent of VHA health care spending was for primary care. By 2018, total (inflation-adjusted) VHA spending had increased while the percent of spending for primary care had declined to 8 percent.[22]

Variation in the estimated percentages of total spending going to primary care presented above are likely due to methodological differences in what services are attributed to primary care, the use of claims versus survey data, and differences in the populations and years for which spending is being estimated. In addition, caution should be taken in interpreting comparisons of the percentage of spending going to primary care across different groups given that different populations may have varying health needs and challenges accessing care

[*] "Non-claims payments" are payments for anything other than a fee-for-service claim. Some examples include capitation payments, risk-based payments (for instance, incentive payments), and salary payments for providers. Further information about these types of payments as well as a description of the challenges of uniformly measuring these payments across contexts can be found here: https://www.milbank.org/wp-content/uploads/2021/04/Measuring_Non-Claims_7-1.pdf

and therefore use different levels of care overall. More research is needed to determine what the ideal percent of spending for primary care is, including for the Medicare fee-for-service population (the focus of this analysis), as well as for various population subgroups to optimize health outcomes.

METHODS

Definitions of primary care

This issue brief provides estimates of primary care spending in the Medicare fee-for-service (FFS) program overall and for certain subpopulations using variations on a commonly used definition of primary care developed by the Milbank Memorial Fund.[23] This definition was chosen as the primary analysis because this methodology was viewed by the authors as conceptually capturing in claims data those services most related to primary care. In addition, this methodology and definition has been used by other researchers and policy makers[24,25,26] which aids in comparing results across studies. It can also be adapted for different types of claims and insurance types. The primary analysis is followed by variations on the Milbank methodology to see how varying some parameters, such as the types of providers or types of services included, affect estimates of primary care spending. We consider four definitions of primary care:

Estimate 1: The definition of primary care used in the first set of estimates (i.e., an approximation of the Milbank definition) includes the following provider specialties/types: family medicine, general internal medicine, general pediatrics, general practice, geriatrics, adolescent medicine, and gynecology physicians, as well as nurse practitioners (NPs) and physician assistants (PAs). Within these specialties, clinicians were considered primary care providers if 90 percent or more of their billing was for services delivered in non-hospital settings, such as private practices, Federally Qualified Health Centers (FQHCs), and rural health clinics.

Estimate 2: The definition for the second set of estimates is the same as the definition for the first set but excludes gynecologists.*

Estimate 3: The definition for the third set of estimates includes the same list of provider types as the definition for the first set of estimates but only includes office visits and preventive services and not any other types of services (so is a subset of the first definition).

Estimate 4: The definition for the fourth set of estimates includes all office visits and preventive services but removes the restriction on provider types (this is referred to as "service-based" estimates).

For each of the four measures, we estimated spending including and excluding the last year of life, since for Medicare beneficiaries in particular the last year of life can sometimes involve much higher levels of spending, reflecting differing health care needs and service use patterns from other years. Further details of the methodology can be found in the Appendix.

* Although there is disagreement among policymakers and researchers on whether, conceptually, gynecologists should be included among primary care providers, a significant proportion of women, about 20 percent, consider their gynecologist their primary care physician https://www.commonwealthfund.org/publications/fund-reports/2020/jul/transforming-primary-health-care-women-part-1-framework For the population analyzed in this brief, who are primarily over 65, this consideration does not have much of an effect on primary care spending estimates, they are excluded from one version of the estimates to confirm how the results vary based on their inclusion or exclusion.

Table 1: Definitions of primary care

	Provider types	Place/type of service
Estimate 1: Provider-based	Family medicine, general internal medicine, general pediatrics, general practice, geriatrics, adolescent medicine, and gynecology physicians; NPs and PAs	Any ambulatory care setting, including private practice, FQHCs, primary care clinics, and rural health clinics
Estimate 2: Provider-based, minus gynecologists/OBGYNs	Family medicine, general internal medicine, general pediatrics, general practice, geriatrics, and adolescent medicine; NPs and Pas	Any ambulatory care setting, including private practice, FQHCs, primary care clinics, and rural health clinics
Estimate 3: Provider and service-based	Family medicine, general internal medicine, general pediatrics, general practice, geriatrics, adolescent medicine, and gynecology physicians; NPs and PAs	Office visits and preventive services
Estimate 4: Service-based	Any	Office visits and preventive services

Note: All estimates exclude providers if 90% or more of their billing was for services provided in hospital settings.

Data

The analysis is based on Medicare FFS claims data from 2018 to 2020. The analysis does not include beneficiaries with Medicare Advantage, because data on utilization and spending for these beneficiaries is not available in an analogous format to Medicare FFS claims data.[*] We included 2018 and 2019 to assess patterns in primary care spending prior to the COVID-19 pandemic, during which patterns of health care utilization temporarily deviated from historical norms. Beneficiaries were included in the analysis if they had at least one month of fee-for-service Medicare enrollment at any time during 2018 to 2020, regardless of the reason for their eligibility for Medicare. Individuals can be eligible for Medicare due to age (65 or older), disability, or because they have end-stage renal disease.[†] Estimates are provided for the overall FFS population as well as estimates for subgroups, including by age, sex, race/ethnicity, whether the beneficiary lives in a Health Provider Shortage Area (HPSA), whether the beneficiary lives in an urban or rural location, whether the beneficiary is also enrolled in Medicaid, by relative level of risk due to demographic characteristics and chronic conditions (specifically, their CMS hierarchical condition category (CMS-HCC) risk score), and by state of residence. The CMS-HCC risk score is used by CMS to predict expenditures for beneficiaries based on various characteristics, such as demographics and Medicaid dual enrollment, as well for various diagnoses of chronic and costly health conditions. A higher number indicates a higher level of risk and therefore higher predicted expenditures. Further details of the methodology can be found in the Appendix. Most of the results are averaged to the month level, to account for the fact that beneficiaries were enrolled for varying numbers of

[*] In 2020, approximately 44 percent of Medicare beneficiaries were covered by Medicare Advantage, and this share has been trending upward, see Clerveau et al. at https://www.kff.org/medicare/issue-brief/a-snapshot-of-sources-of-coverage-among-medicare-beneficiaries/#:~:text=In%202020%2C%20Medicare%20Advantage%20covered,%25%20of%20all%20eligible%20beneficiaries.

[†] More information about Medicare eligibility is available here: https://www.hhs.gov/answers/medicare-and-medicaid/who-is-eligible-for-medicare/index.html

months in each year. The percent of enrollees with no spending (or no primary care spending) are reported annually because individuals may not need primary care every month and to simplify the presentation of the information.

FINDINGS

A comparison of primary care spending estimates across the four definitions discussed above for 2019 is shown in Table 2, below. The numbers in brackets show the result after excluding the last year of life. For three of the four definitions, estimated per capita spending ranges from $65 to $69 per beneficiary. It is not unexpected that excluding gynecologists (in Estimate 2) would yield a similar estimate for this population, which is largely over age 65. It is more notable that Estimate 4 (the service-based estimate) is still quite similar although defined quite differently. Using the third definition, which is based on both provider and place and service type, estimated spending is much lower: $32 per month for all beneficiaries. A similar pattern is observed when the outcome is the percent of spending for primary care. Estimates 1, 2, and 4 yield estimates of approximately 6 percent, while the narrower Estimate 3 yields an estimate of 3 percent. Between 15 and 24 percent of all Medicare FFS beneficiaries do not have spending on primary care and approximately 8 percent have no health care spending.* In general, when including the last year of life, estimates of the amount of spending for primary care are somewhat higher but the percent is lower. This suggests both primary care and non-primary care spending tend to be higher in the last year of life, but the increase in non-primary care spending is larger than that of primary care spending, on average. Appendix Table 1 compares results for 2018, 2019, and 2020 for Estimate 1. Results for 2018 and 2019 are very similar, and while there is an overall drop in utilization of health care (including primary care) in 2020, the percent of spending for primary care remains around 6 percent.

Table 2: Comparing alternative definitions of Medicare fee-for-service per capita primary care spending, 2019

	Provider-based (Estimate 1)	Provider-based, minus OBGYN/ gynecologists (Estimate 2)	Provider and service-based (Estimate 3)	Service-based (Estimate 4)
Average per capita primary care monthly spending				
Among all beneficiaries	$69 [$62]	$67 [$60]	$32 [$32]	$65 [$65]
Among beneficiaries with any spending	$76 [$68]	$74 [$66]	$35 [$35]	$71 [$71]
Among beneficiaries with some primary care spending	$84 [$75]	$82 [$74]	$42 [$42]	$77 [$76]
% per capita primary care monthly spending				
Among all beneficiaries	6.2% [6.8%]	6.0% [6.6%]	3.0% [3.6%]	6.1% [7.3%]
Among beneficiaries with some primary care spending	6.4% [7.1%]	6.2% [6.9%]	3.5% [4.1%]	6.5% [7.6%]
% with no primary care spending	17.2% [17.8%]	17.6% [18.1%]	23.8% [23.5%]	15.3% [15.0%]
% with no spending on any health care services	8.3% [8.7%]			
Total number of beneficiaries	35,739,366 [34,273,612]			
Note: The numbers in parentheses are the estimates without the last year of life.				

* A disadvantage of using a percent (rather than level) of spending going to primary care is the exclusion of individuals who have no spending at all in that metric.

Figure 1 shows subpopulation estimates of the monthly amount and percent of spending going to primary care using Estimate 1 (results using the other estimates were very similar). Before reviewing the estimates in this figure and the figure that follows, it is important to note that differences across groups may be explained by multiple factors, including differences in health care needs and differences in access to care. This analysis does not attempt to identify the distinct factors contributing to observed differences. The bars in Figure 1 show that groups with the highest percent of spending going to primary care were women, Asian/Pacific Islanders, 65 to 74-year-olds, beneficiaries who were not enrolled in Medicaid, and beneficiaries with lower HCC scores. There were relatively small differences between beneficiaries in urban versus rural areas or HPSAs versus non-HPSAs. Older beneficiaries, those dually enrolled in Medicaid and those with higher HCC scores had relatively high levels of primary care spending, but primary care accounted for a lower share of their spending.

Figure 1: Percent and amount of monthly per capita Medicare fee-for-service spending on primary care using Estimate 1, 2019

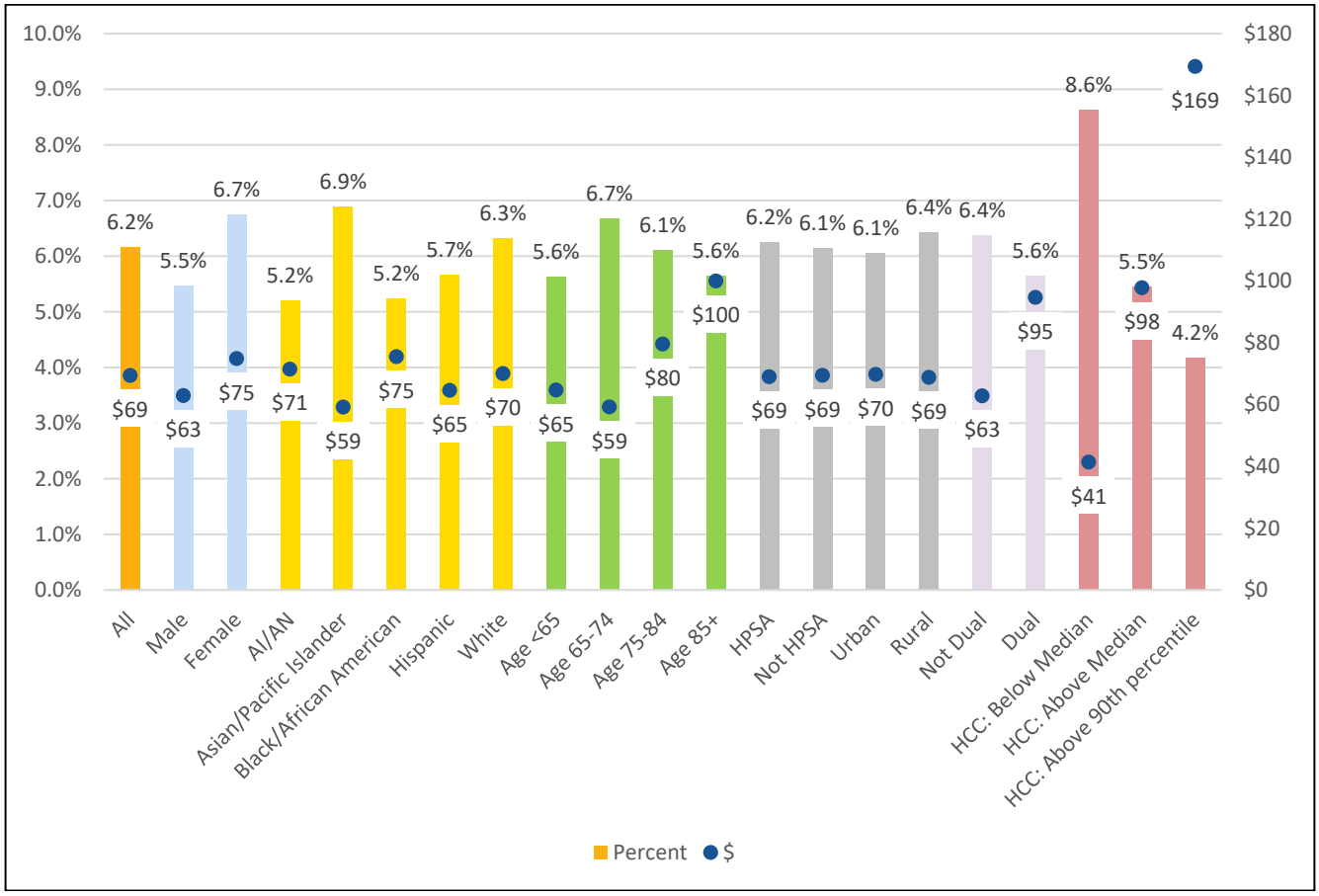


Figure 2 displays the percent of beneficiaries without any spending or without primary care spending in 2019. Here, too, there is considerable variation by subgroup, with men; Hispanic, Black, and Asian/Pacific Islander beneficiaries; beneficiaries under 65; and beneficiaries with lower HCC scores being more likely to have no primary care spending compared to their peers. There were smaller differences between beneficiaries in rural versus urban areas, beneficiaries in HPSAs versus non-HPSAs, and beneficiaries who are or are not dually enrolled in Medicaid.

Figure 2: Percent of Medicare fee-for-service beneficiaries without any spending and without any primary care spending using Estimate 1, 2019

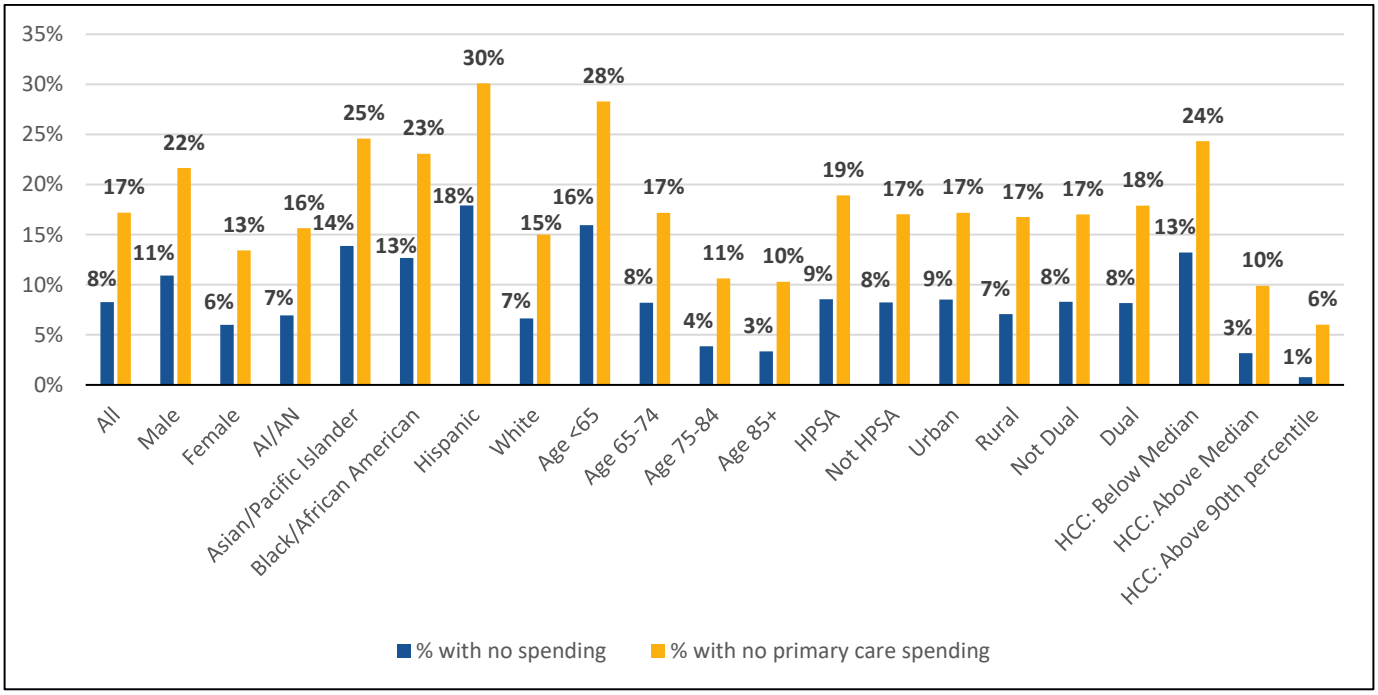
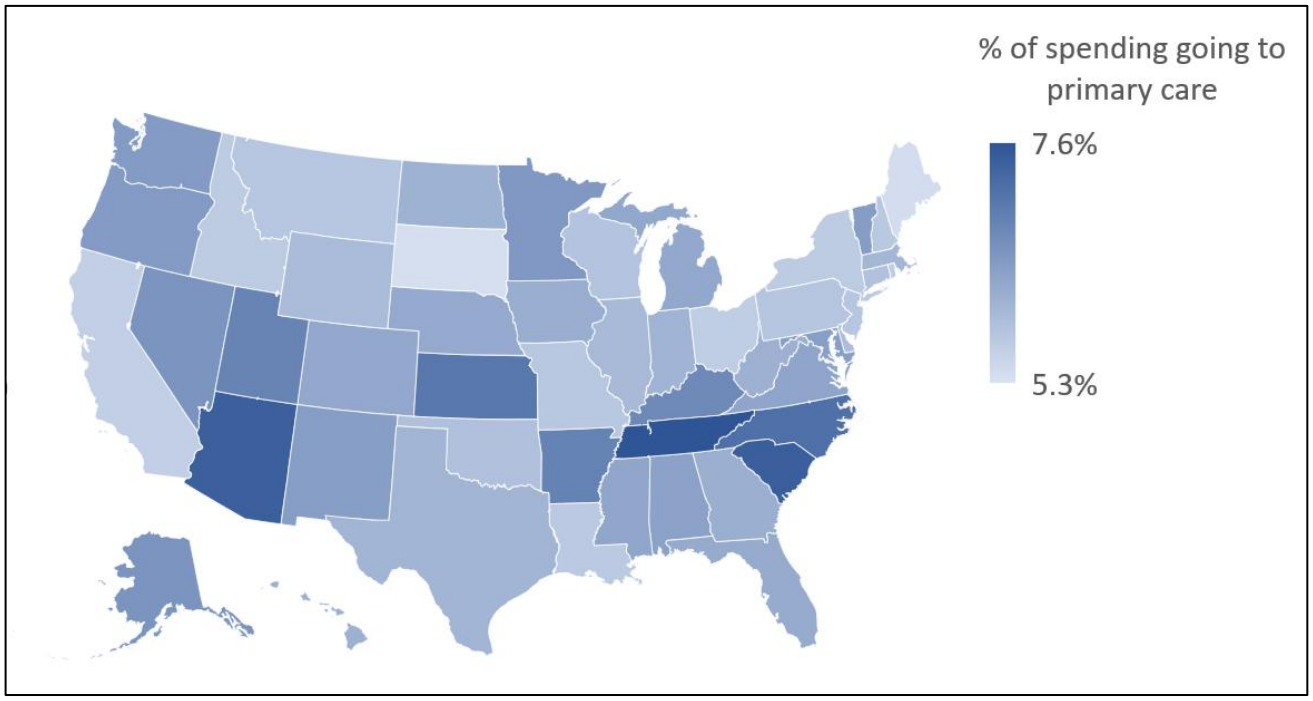


Figure 3 shows that there is substantial state-level variation in the share of spending going to primary care, ranging from 5.3 percent in the District of Columbia to 7.6 percent in Tennessee. This variation likely reflects factors that vary by state, such as state demographics (relatively younger or older populations, for instance), the distribution of provider types, and state policies. Appendix Figures 1 and 2 present state-level estimates of total per capita spending and primary care per capita spending, while Appendix Figure 3 shows the variation in the percent of beneficiaries with spending by state.

Figure 3: Percent of Medicare fee-for-service per capita spending devoted to primary care by state using Estimate 1, 2019



Note: These estimates are not age adjusted.

Table 2, below, shows how the four estimates of the percent of spending for primary care and the percent of beneficiaries without primary care spending vary between 2018 and 2020. Although the estimates do differ from one another, as discussed above, each estimate was fairly consistent over the years analyzed. The exception is that for all estimates, the percent of spending on primary care went down and the percent of beneficiaries without primary care spending went up during 2020, likely due to the impact of the COVID-19 pandemic on health care utilization. Additional years of data would be needed during and after the pandemic to determine how consistent these estimates are over time. In addition, more research would be required to determine how each estimate is impacted by any potential policy change.

Table 2: Comparing the percent of spending for primary care using alternative definitions for Medicare fee-for-service over time, 2018-2020

	2018	2019	2020
% per capita primary care monthly spending (all beneficiaries)			
Estimate 1	6.1%	6.2%	6.0%
Estimate 2	5.9%	6.0%	5.8%
Estimate 3	3.0%	3.0%	2.7%
Estimate 4	6.2%	6.1%	5.6%
% per capita primary care monthly spending (among beneficiaries with some primary care spending)			
Estimate 1	6.3%	6.4%	6.2%
Estimate 2	6.0%	6.2%	6.0%
Estimate 3	3.5%	3.5%	3.3%
Estimate 4	6.6%	6.5%	6.0%
% with no primary care spending			
Estimate 1	17.4%	17.2%	19.2%
Estimate 2	17.8%	17.6%	19.5%
Estimate 3	24.2%	23.8%	26.5%
Estimate 4	15.4%	15.3%	17.5%

Note: 2019 numbers are the same as in Table 1 but repeated here for ease of comparison.

DISCUSSION

The primary care spending estimates presented above are generally consistent with published studies on primary care spending for Medicare FFS enrollees. Three of the four definitions of primary care considered yield very similar estimates of primary care spending measured either in dollar terms or as a percentage of all spending. A definition based on both the type of provider and the type of service produces smaller estimates. For all four definitions, the estimates are not sensitive to the inclusion or exclusion of care received in the last year of life. Consistent with other evidence on the effects of the COVID-19 pandemic on health care utilization,[27] in 2020, the first year of the pandemic, spending on primary care decreased and the portion of beneficiaries without any health care spending increased.

The percent of total spending on primary care varies across population subgroups and states reflecting multiple different factors such as need for different types of health care services, preferences regarding when and how health care is received, and access to primary and non-primary care such as specialty care. In addition, the estimates include those who qualify for Medicare due to disability or because they have end-stage renal disease. These individuals may have different and potentially greater overall needs for health care on average and greater needs for specialist care compared to those who do not qualify for Medicare or those who qualify based on age.

While this issue brief provides estimates of spending for all fee-for-service Medicare beneficiaries and by population subgroup, as well as some evidence on how estimates change with alternative definitions, there are some important limitations in this analysis that point to a need for future work. One limitation is that this analysis does not capture the experiences of beneficiaries enrolled in Medicare Advantage plans, a group that is growing as a share of the full Medicare population. To the extent that the shift away from fee-for-service

continues, it will become increasingly important to consider how to incorporate non-claims payments.[*] Another limitation is that it is unknown what the ideal amount of primary care spending is, on average, across the entire Medicare fee-for-service beneficiary population or for various population subgroups to optimize health outcomes. Future research could assess the relationship between health outcomes and variation in spending across geographic areas for standardized groups of Medicare beneficiaries. Nonetheless, generating baseline estimates of primary care spending that can be used to assess changes in spending over time for all Medicare FFS beneficiaries and population subgroups is useful for tracking how general payment policy and shifts in care delivery over time are affecting the amount and proportion of spending for primary care within the program and the impacts of these changes on health outcomes.

KEY FEDERAL EFFORTS TO STRENGTHEN PRIMARY CARE SERVICES

Given this evidence on low levels of spending on primary care among the Medicare fee-for-service population, the broader focus in HHS regarding increasing access to and encouraging utilization of high-quality primary care for all persons is also important for the Medicare population. In September 2021, HHS launched the HHS Initiative to Strengthen Primary Health Care and in June 2022 had a public comment period to solicit input on innovative models, solutions to barriers, and possible federal actions to strengthen primary care. HHS recently released an issue brief summarizing action[†] the Department is taking and will continue to take to strengthen the primary care workforce, increase accessibility of primary care, support the integration of behavioral health with primary care, improve health information technology, support research and practice improvement, and address payment issues.

One avenue through which HHS is supporting innovative methods to strengthen primary care is through payment and service delivery models developed, implemented, and tested by the **Center for Medicare and Medicaid Innovation (the Innovation Center) at HHS's Centers for Medicare & Medicaid Services (CMS).**[‡] CMS set the ambitious goal that 100 percent of people with Original Medicare will be in a care relationship with accountability for quality and total cost of care by 2030.[§] CMS sees support for primary care through its models as an important tool in advancing population health and health equity. Two recently announced voluntary models illustrate this focus. In June 2023, CMS announced a new primary care model called Making Care Primary (MCP). It will launch in July 2024 and is currently accepting applications. The 10.5-year model will help improve care management and coordination, assist primary care clinicians in forming partnerships with specialists, and use connections with the community to address both health needs and health-related social needs such as housing. It also provides tools and support for primary care clinicians to gradually adopt prospective, population-based payments.

In September 2023, CMS announced a new state total cost of care model called the States Advancing All-Payer Health Equity Approaches and Development Model (the AHEAD Model). The States Advancing AHEAD model has multiple goals and components, including increasing investment in primary care, improving population health and health equity, and controlling the Total Cost of Care (TCOC) at a statewide level.[**] CMMI is requiring participating states to meet All-Payer and Medicare FFS statewide primary care investment targets,

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[*] Some discussion of how this has been done, the challenges associated with these methods, and some suggestions for data collection and definitions (produced by the Milbank Memorial Fund) is available here: https://www.milbank.org/wp-content/uploads/2021/04/Measuring_Non-Claims_7-1.pdf

[†] The issue brief can be accessed here: https://www.hhs.gov/sites/default/files/primary-care-issue-brief.pdf

[‡] A description of the Innovation Center's strategy to support primary care can be found here: https://www.cms.gov/blog/cms-innovation-centers-strategy-support-high-quality-primary-care

[§] https://www.cms.gov/priorities/innovation/strategic-direction-whitepaper and https://www.healthaffairs.org/content/forefront/building-cms-strategic-vision-working-together-stronger-medicare

[**] More details about all of the Innovation Center's models can be found here: https://www.cms.gov/priorities/innovation/models#views=models

measured as a percentage of the TCOC in each state. AHEAD created a definition for a primary care spending measure based on specialty type of the provider in combination with a list of Healthcare Common Procedure Coding System (HCPCS) codes (similarly to what was done by Milbank and in this paper). This definition was developed in consultation with Milbank and other primary care investment stakeholders and experts across the country. To develop their list of primary care HCPCS codes, CMMI cross-walked a comprehensive list of HCPCS codes used in previous CMMI primary care models, the Milbank and New England States Consortium Systems Organization definitions, [*] and every definition used in state primary care investment legislation. CMMI also obtained clinical input from primary care experts. Their list of specialty types includes the ones used in this paper and several others (including hospice and palliative care, psychiatry, geriatric psychiatry, certified nurse midwife, addiction medicine, preventive medicine, neuropsychiatry, and certified clinical nurse specialist), while the definition used for this paper but not included by CMMI also included gynecological/oncology. As part of this process, CMMI estimated primary care spending as a percent of total cost of care for the Medicare FFS population, which ranged from 1.07 percent in American Samoa to 5.79 percent in Hawaii, with a median value of 3.61 percent.[†]

Another active Innovation Center model is the Primary Care First (PCF) model. It is a five-year, voluntary alternative payment model focusing on strengthening the relationship between clinician and patient, enhancing care for patients with chronic care needs, and using financial incentives to improve health outcomes. There are two cohorts participating in this model; the first began in January 2021 and the second in January 2022. Overall, there are approximately 2,600 practices and 18 payers participating. Both the PCF and MCP models build on the principles and experiences of prior Innovation Center models, including the Comprehensive Primary Care (CPC) and CPC+ models.

In the 2024 Physician Fee Schedule (PFS) Final Rule, CMS finalized the addition of new, equity-focused services to further address health-related social needs of Medicare beneficiaries, which should also have an impact on payment for interdisciplinary primary care teams, including teams with community health workers, care navigators, or peer support specialists. To improve payment accuracy, CMS established coding to better identify and value practitioners' work when they incur additional time and resources helping patients with serious illnesses navigate the health care system or removing health-related social barriers interfering with the practitioner's ability to execute a medically necessary plan of care. These services aim to support care coordination and continuity of care and address unmet health-related social needs. Specifically, CMS finalized coding and payment for four services to help address equity and access to care priorities: caregiver training services (CTS), principal illness navigation (PIN), social determinants of health risk assessment, and community health integration (CHI). Beginning January 1, 2024, CMS also implemented a separate add-on payment for HCPCS code G2211. This add-on code will better recognize the resource costs associated with evaluation and management visits for primary care and longitudinal care. Generally, it will be applicable for outpatient office visits as an additional payment, recognizing the inherent costs involved when clinicians are the continuing focal point for all needed services or are part of ongoing care related to a patient's single, serious, or complex chronic condition.

HHS's Health Resources and Services Administration (HRSA) also supports primary care. The Health Center Program provides support to nearly 1,400 community-based health centers operating over 15,000 sites across

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[*] The New England States Consortium Systems Organization is an organization with the goal of strengthening New England states' Health and Human Service agencies by improving effectiveness and efficiency. More information is available here: https://nescso.org/about/

[†] Their estimates are most similar to our Estimate 3, because CMMI restricts both by procedure code as well as by provider type. There are also, however, some differences in the procedure codes included between the AHEAD model and this analysis. More information on the AHEAD model, including detailed information about their methodology and preliminary estimates of primary care spending by state for Medicare FFS, can be found here: https://www.cms.gov/priorities/innovation/innovation-models/ahead

the United States serving more than 30 million people, or one in 11 Americans, every year. Health Centers provide care for everyone seeking their services, regardless of a patient's ability to pay for such services and are particularly important for underserved and vulnerable populations.[*] Some of these facilities also serve as graduate medical education training sites, including for primary care physicians. HRSA also operates a number of health workforce programs that aim to increase health care access for individuals while improving the supply, distribution, and quality of health care workers. The Agency does this through clinician scholarship, loan, and loan repayment programs as well as training grant programs to organizations such as academic institutions and health care facilities. For instance, the National Health Service Corps (NHSC), supports more than 18,000 primary care, dental, and behavioral health providers with scholarships and loan repayment in exchange for their service in underserved communities. The fiscal year 2024 President's Budget seeks $2.37 billion in mandatory funding for the NHSC through fiscal year 2026.[†] HRSA also operates grant programs that focus on increasing access to quality care, particularly in underserved areas. One example is the Primary Care Training and Enhancement – Physician Assistant Rural Training Program, which develops and implements clinical rotations for physician assistant students in primary care in rural areas, and supports the training and development of preceptors in rural areas.[‡] Additionally, the Teaching Health Center Graduate Medical Education Program provides funding to teaching health centers to help cover the cost of training primary care physicians in community-based settings. The fiscal year 2024 President's Budget proposes $157 million to fund 1,469 full-time equivalents slots in academic year 2024-2025 and to continue to support the development of primary care residents.[§] HRSA also supports Bright Futures and the Women's Preventive Services Initiative, which are key foundations of preventive primary care. Bright Futures improves the health of infants, children, youth, and young adults by developing and sharing clinical guidelines that are age-specific, based on the best available scientific evidence, and that help increase the quality of primary and preventive care. A main component of the Bright Futures Guidelines is the Periodicity Schedule, which recommends services that pediatric providers should offer at every well-child visit from before birth to age 21. The Women's Preventive Services Initiative is comprised of national health professional organizations and patient advocates with expertise in women's health tasked with developing, reviewing and updating recommendations for the Women's Preventive Services Guidelines. Under the Affordable Care Act,[**] certain group health plans and insurance issuers must provide coverage with no out-of-pocket cost for the comprehensive preventive care and screening services in HRSA-supported guidelines, including Bright Futures and Women's Preventive Services Guidelines.

CONCLUSION

Lack of health insurance coverage is another factor associated with less use of primary care.[28] Legislation including the Affordable Care Act, the American Rescue Plan, and the Inflation Reduction Act have expanded health insurance coverage and therefore access to care (including primary care) for millions of Americans. It is estimated that as of early 2023, more than 40 million individuals had health coverage related to the Affordable Care Act through the Marketplace or Medicaid expansion.[29] The American Rescue Plan and the Inflation Reduction Act expanded Marketplace subsidies, among other actions, allowing more people to afford coverage. Recent expansion of Medicaid in many states has also extended coverage to more low-income adults.[30]

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[*] More information about the Health Center Program is available here: https://www.hrsa.gov/about/organization/bureaus/bphc

[†] More information about the National Health Service Corps is available here: https://nhsc.hrsa.gov/

[‡] More information about HRSA's health workforce programs is available here: https://bhw.hrsa.gov/about-us

[§] More information about the Teaching Health Center Graduate Medical Education Program: https://bhw.hrsa.gov/funding/apply-grant/teaching-health-center-graduate-medical-education

[**] More information about Section 2713 of the Public Health Service Act (PHS Act) regarding ACA provisions for coverage of certain preventive services without cost-sharing is available here: https://www.cms.gov/CCIIO/Resources/Fact-Sheets-and-FAQs/aca_implementation_faqs12

Beyond Medicare FFS, which is the primary focus of this paper, ensuring that everyone can access and receive high-quality primary care is a priority for HHS. As documented in a recent issue brief summarizing HHS action to strengthen primary care, there are a number of ongoing programs and policies in place to support this goal, including CMS Innovation Center models, the HHS Initiative to Strengthen Primary Care, workforce investments, and the Health Center Program, to name a few.[*] HHS will continue to consider new policies, payment models, and other investments that may further strengthen the primary care system. Going forward, it will be important to track whether the Department's efforts to strengthen primary care result in improved health outcomes.

[*] The issue brief is available here: https://www.hhs.gov/sites/default/files/primary-care-issue-brief.pdf

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Appendix

Methodological Details

The definitions used in this project are based on those outlined in a paper by Milbank Memorial Fund (Bailit et al. 2017) with some variations on one of its basic definitions. The Milbank paper has four definitions of PCP (PCP-A, PCP-B, PCP-C, and PCP-D). This project used PCP-C since it was viewed as including those clinicians most closely associated with primary care. This definition includes family medicine, general internal medicine, general pediatrics, general practice, NPs, PAs, geriatrics, adolescent medicine, and gynecology, and excludes primarily inpatient providers. To be considered not a primarily inpatient provider and therefore be included in the analysis, a large share of the provider's billing must be for services delivered in ambulatory settings, including FQHCs, primary care clinics, and rural health clinics.

The first estimates presented in this brief are based on Milbank's "provider-based" definition, where PCP is defined as PCP-C (above) and any services they provide are included. The second set of estimates is the same as the first but with gynecologists removed. The third is Milbank's "provider and service-based definition" where PCP is defined as in the first estimate (PCP-C) but services are limited to office visits and preventive services (so this is a subset of the provider-based estimate). These primary care services include fee-for-service claims for any of the following Healthcare Common Procedure Coding System (HCPCS) codes: 9920x, 9921x, 9924x, 99339-99345, 99347-99350, 99381-99387, 99391-99397, 99401-99404, 99411, 99412, 99420-99429, 99495, 99496, G0402, G0438, G0439. Finally, a "service-based" definition was created that included the same services but removed the PCP restrictions. In the Milbank paper, this is referred to as the service-based, claims definition. Spending with and without the last year of life was estimated for each of these variations for the overall Medicare FFS population and for several population and geographic subgroups.

There are some elements of the Milbank definitions that are not available in the Medicare data (for instance, there is no designation of providers as being PCPs). The Milbank paper calculates estimates with and without prescription drug spending but for the purposes of this project Medicare Part D drug spending is excluded. Although the Milbank paper imposes an inclusion restriction requiring a specified number of months of enrollment, anyone enrolled in fee-for-service Medicare for at least one month during the period we analyzed (2018-2020) was included.

The analysis used Medicare claims data from the Common Working File, the Common Medicare Environment, the Master Beneficiary Summary File, and the Risk Adjustment Processing System. This was combined with provider specialty information from the Medicare Data on Provider Practice and Specialty, Health Professional Shortage Area information from the Health Resources and Services Administration, and the rural/urban definition was defined based on the Office of Management and Budget's definition of a Metropolitan Statistical Area.[19] The race/ethnicity categories are based on the enhanced race code using the RTI algorithm (included in the MBSF).[20] Stratification by risk score was done using the CMS-Hierarchical Condition Categories (HCC) model. This model uses beneficiary characteristics, such as demographics and Medicaid dual enrollment, as well as diagnosis with multiple chronic and costly health conditions, to predict expenditures. A higher number indicates a higher level of risk and therefore higher predicted expenditures. For this analysis, the median and 90th percentile level of HCC scores were calculated and reported spending estimates for

[19] Information on MD-PPAS can be found here: https://resdac.org/cms-data/files/md-ppas, information on HPSA's can be found here: https://bhw.hrsa.gov/workforce-shortage-areas/shortage-designation, and information on MSAs can be found here: https://www.whitehouse.gov/wp-content/uploads/2023/07/OMB-Bulletin-23-01.pdf. OMB designates counties as Metropolitan (i.e., MSAs), Micropolitan, or neither. For the purposes of this project, urban is defined as an MSA and rural is not an MSA.

[20] Information on this algorithm can be found here: https://resdac.org/cms-data/variables/research-triangle-institute-rti-race-code.

beneficiaries above and below the median as well as for beneficiaries above the 90th percentile.[21]

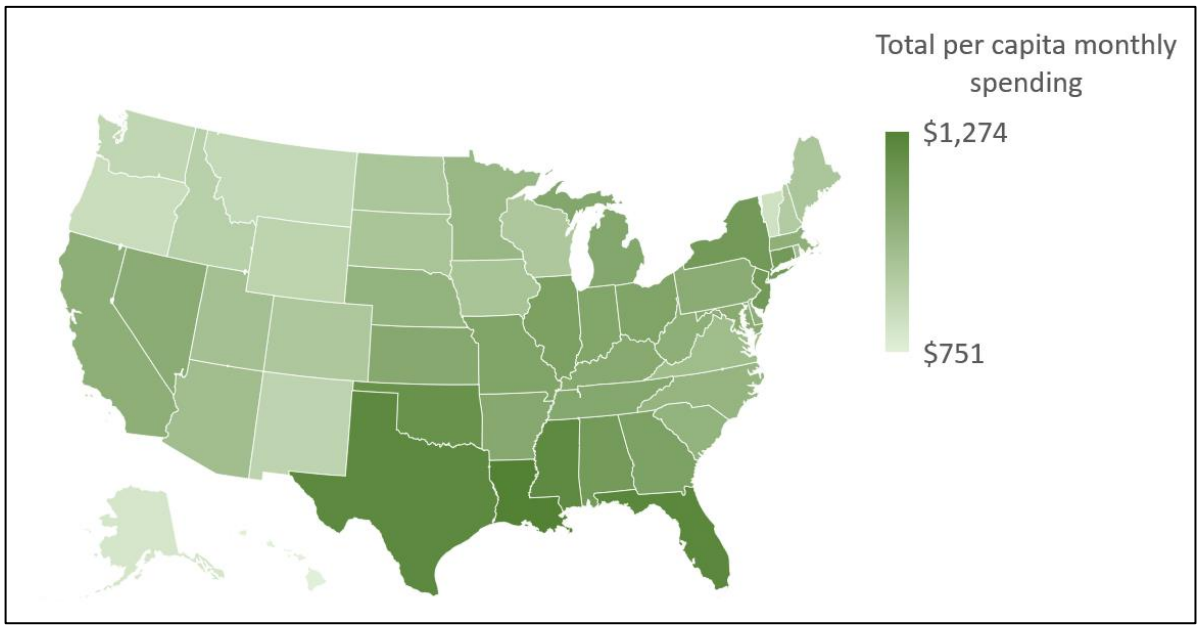
Supplementary Medicare Fee-for-Service Figures

Appendix Table 1: Estimate 1 - Milbank provider-based Medicare fee-for service per capita primary care spending, 2018-2020 (inflation-adjusted)

	2018	2019	2020
Average per capita primary care monthly spending			
Among all beneficiaries	$67	$69	$64
Among beneficiaries with any spending	$73	$76	$70
Among beneficiaries with some primary care spending	$81	$84	$79
% per capita primary care monthly spending			
Among all beneficiaries	6.1%	6.2%	6.0%
Among beneficiaries with some primary care spending	6.3%	6.4%	6.2%
% with no primary care spending	17.4%	17.2%	19.2%
% with no spending on any health care services	8.2%	8.3%	9.1%
Total number of beneficiaries	35,983,914	35,739,366	34,909,729

Note: Dollars are adjusted to 2019 levels, to make the numbers more easily comparable. The number of beneficiaries goes down over time due to the gradual shift of beneficiaries to Medicare Advantage (only fee-for-service beneficiaries are included in this analysis).

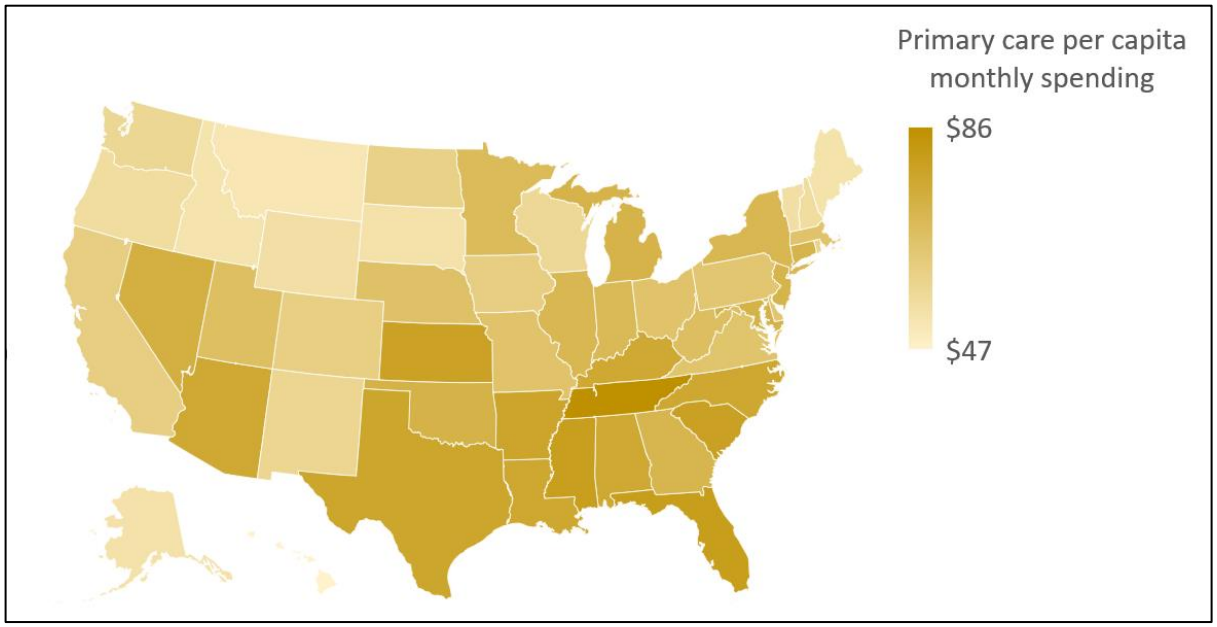
Appendix Figure 1: Total Medicare fee-for-service per capita monthly spending by state using Estimate 1, 2019



Note: These estimates are not age adjusted.

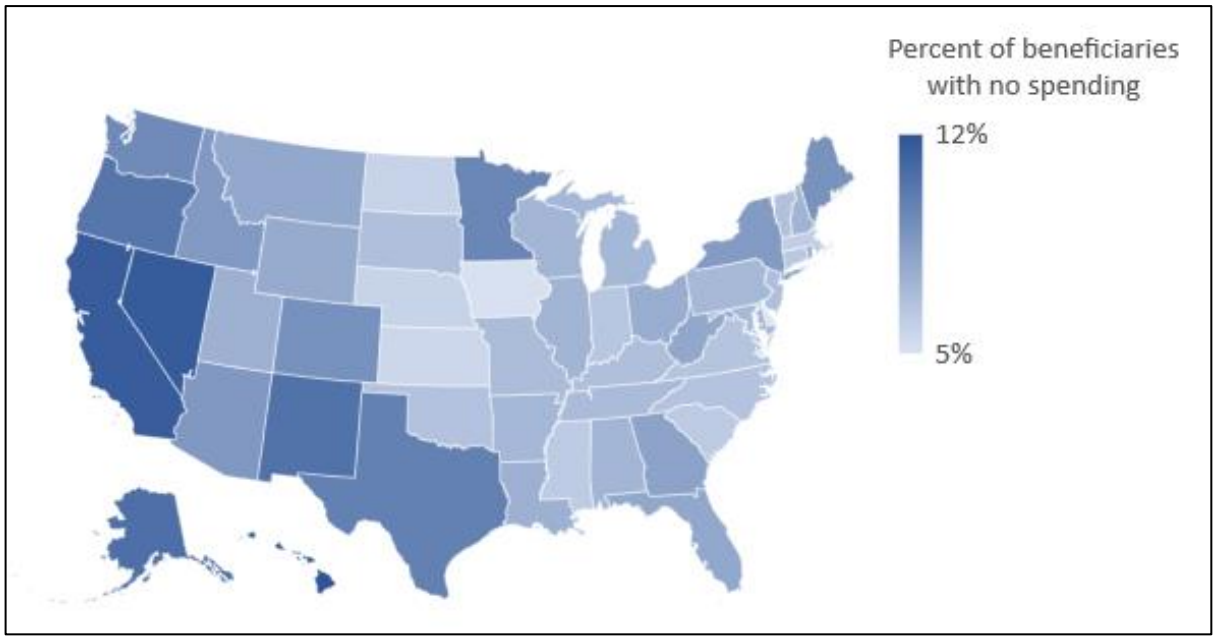
[21] Information on the CMS-HCC model can be found here: https://www.cms.gov/files/document/report-congress-risk-adjustment-medicare-advantage-december-2021.pdf.

Appendix Figure 2: Primary care Medicare fee-for-service per capita monthly spending by state using Estimate 1, 2019



Note: These estimates are not age adjusted.

Appendix Figure 3: Percent of Medicare fee-for-service beneficiaries without any spending using Estimate 1, 2019



Note: These estimates are not age adjusted.

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