Reducing the Burden of Healthcare Costs for American Families

APPLIED POLICY PROJECT: PREPARED FOR THE HERITAGE FOUNDATION

Wade Griggs
FRANK BATTEN SCHOOL FOR LEADERSHIP AND PUBLIC POLICY

Acknowledgements:

First, I would like to thank my A.P.P. advisor, Professor Raymond Scheppach for helping push me to produce my best work throughout the year. I would also like to thank Nina Shaefer and all those at the Heritage Foundation who have been an incredibly accommodating and helpful client throughout this process. Finally, I would like to thank my friends and family who have been by my side throughout my educational career.

Disclaimers:

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

The selected policy proposals, evaluations, and recommendations found in these reports are provided for illustrative purposes only and do not necessarily reflect the views of the Heritage Foundation.

Honor Statement:

On my honor as a student, I have neither given nor received unauthorized aid on this assignment.

Executive Summary

Elevated healthcare costs in the United States places an immense burden on American families. Almost a quarter of U.S. households spend 20% or more of after-tax income on healthcare, leaving these households less equipped to pay for other necessities. Furthermore, this issue can precipitate a host of other societal costs such as decreased public health and even reduction in economic output. Not only do Americans spend more on healthcare than citizens of any other nation, but this spending continues to rise far beyond inflation.

Plenty of issues drive healthcare cost increases including a lack of transparency, misallocation of resources, and the dominance of the fee-for-service payment model. This report examines five policy alternatives to address the problem of exorbitant healthcare costs.

1) Maintain the Status Quo
2) Reduce the Tax Exclusion of Employer-Sponsored Health Insurance
3) Expand Health Savings Account Eligibility and Institute Federal All-Payer Claims Database
4) Promote Value-Based Care by Reducing Medicare Reimbursement for Fee-For-Service Care
5) Incentivize State Global Budgets Initiatives

This report evaluates these policies, given the existing evidence, for five criteria: cost-effectiveness, quality, equity, political feasibility, and ease of implementation. The analysis concluded that the U.S. Congress should promote value-based care by reducing the Medicare reimbursement rate for fee-for-service care by 10%. This policy would provide the most relief to healthcare burdened Americans while promoting health equity and quality.

Problem Definition

The United States faces a major policy problem, the cost of healthcare is too high for many American families. About 30 million or almost a quarter of American households are "healthcare burdened," spending greater than 20% of income on healthcare goods and services (BLS, 2020).

Americans Spend Far More on Healthcare than Citizens of Other Comparable Nations

According to the OECD, per capita healthcare spending totaled nearly $11,000 in the United States in 2019, the latest year with data. For reference, the country with the next highest health spending, Switzerland, spent just over $7,000 in the same year. For additional comparison, two other nations we might consider culturally similar to the U.S., Canada and Australia, spent about $5,400 and $4,900 respectively, per capita in 2019 (OECD, 2021). It is important to note that simply comparing relative national health expenditures ignores possible contributing factors such as a nation's quality of care, levels of innovation, and prevalence of pre-existing conditions such as obesity. Yet, regardless of possible complicating factors, such a wild difference in health expenditures between the United States and other nations seems to indicate a serious issue regarding the level of healthcare expenditures in this country.

One may suspect that the discrepancy in healthcare spending reflects higher levels of healthcare utilization in the U.S. rather than more expensive care. Yet, 2015 OECD data shows that Americans visit the doctor at rates the same or lower than other developed countries. Americans averaged 4.0 medical consultations per person in 2015. The country with the most consultations, Japan, averaged 16.0 consultations. Canada and Australia, for additional reference, averaged 7.7 and 7.4 medical visits per person in 2015 (OECD, 2017). According to

the aforementioned metrics, Americans do not seem to consume more healthcare than citizens of other countries, lending credence to the idea that increased expenditures reflect the fact that healthcare is more expensive in the United States than in other countries. Furthermore, U.S. hospitalization rates do not differ materially from other OECD countries. Yet, interestingly, annual hospitalization rates for diabetes and congestive heart failure both exceed OECD averages by more than 50% (OECD, 2018). Thus, while U.S. healthcare utilization does not exceed that of other nations, on average, it does exceed that of other nations for select chronic conditions. This data supports the idea that the United States experiences higher health expenditures due to underlying health conditions, particularly since both diabetes and heart disease are associated with obesity. The data also points to the importance of preventative healthcare in reducing overall healthcare costs.

Healthcare Spending Has Grown at a Rapid Pace

Unfortunately, not only do Americans spend too much on healthcare, but this spending also consumes a greater portion of households' budget each year. According to the Bureau of Labor Statistics, Americans have spent an increasing percentage of their total budget on healthcare each year since 2004. For instance, in 2004, the share of household spending on healthcare was 5.9% compared to 8.1% in 2018 (Chalise, 2020). It is important to note that this healthcare spending data includes four major categories accounting for the following portions of total spending: health insurance (68.5%), medical services (18.3%), drugs (9.7%), and medical supplies (3.5%). Thus, all forms of personal healthcare spending are included in this data, whether through health insurance premiums, insurance reimbursement, or copays and

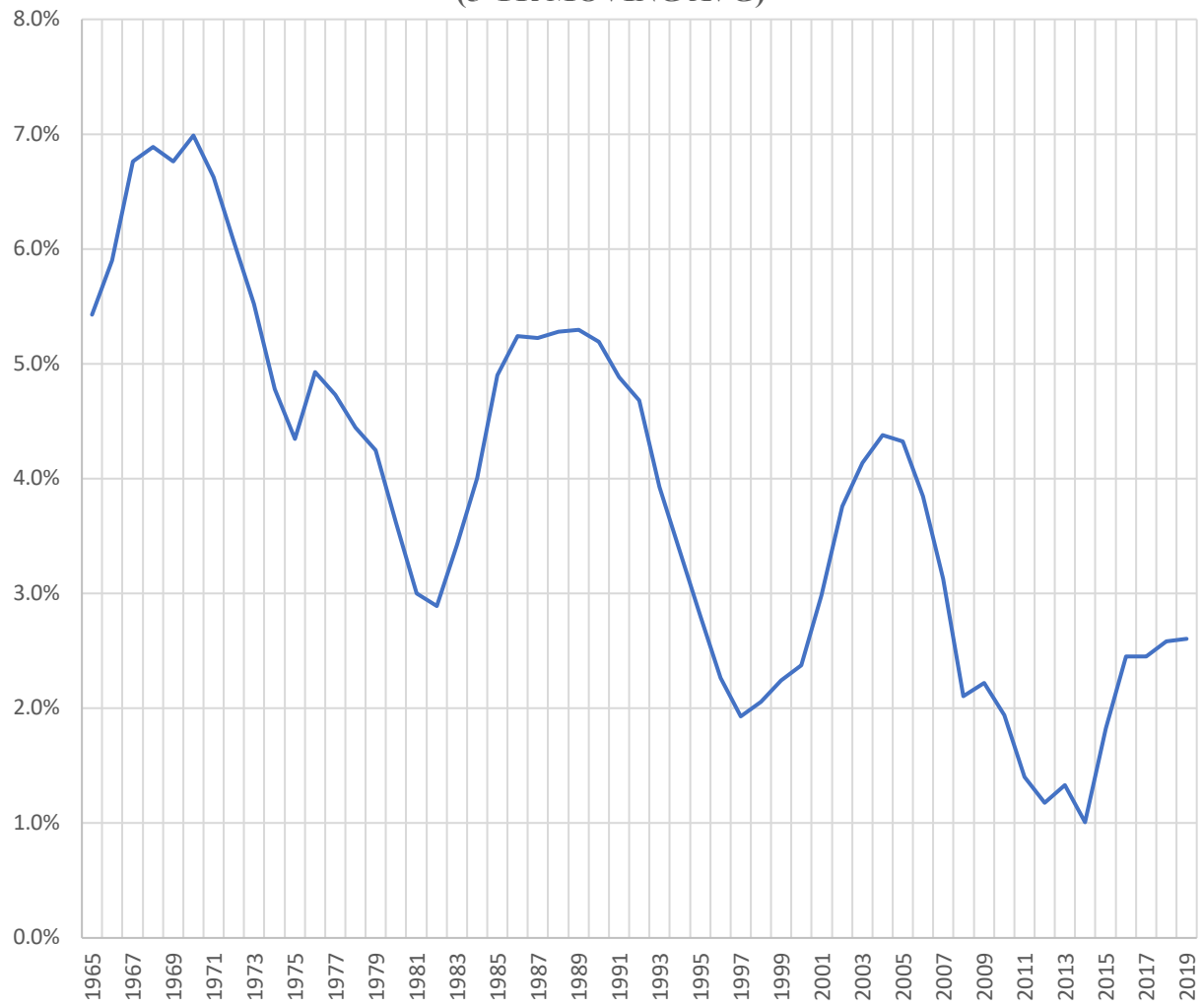
deductibles and other out-of-pocket costs.[a] Any policy aimed at "fixing" the problem of overly expensive healthcare should focus on slowing the rate of increase in healthcare expenditures. Otherwise, policymakers run the risk of producing only short-term relief to Americans' budgets.

Luckily, data on the rate of increase of healthcare spending indicate hope for the slowing of "healthcare inflation." From 2010 to 2019, for instance, health expenditures have increased by 1.8% annually, in real terms. By contrast, health expenditures have increased at an average real annual rate of 2.6% since 1990 and 3.8% since 1960 (CMS, 2021). Thus, growth in healthcare spending has slowed in more recent years, indicating that the problem of increasing healthcare costs may be on the mend. Yet, annual rates of increase of even one or two percent can lead to massive increases in costs over time. Thus, policies to address healthcare costs should prioritize lowering the rate of increase in costs. Prospective policy changes may run the risk of disrupting the current decrease in the rate of increase of healthcare expenditures. Therefore, it is extremely important that policymakers be aware of the possible negative consequences of prospective policies. The aforementioned data suggests that perhaps the maintenance of the status quo could represent a superior, lower-risk policy alternative vis-à-vis more transformational legislation as it avoids disrupting the current system which has produced decreased rates of "healthcare inflation." Many scholars argue, however, that this slowing of the growth in healthcare expenditures could be due more to the slow economic recovery from the 2008 recession than any healthcare-specific cost trends.

---

[a] The following clarifies some health insurance terminology. A deductible is the cost of healthcare paid by a patient, beyond which insurance will kick in. For instance, if someone has an insurance plan with a $1,000 deductible, he is responsible for all payment for care up to $1,000. Beyond $1,000, insurance would "kick in" and begin to pay expenses. Next, a co-payment is a fixed amount an insured patient pays for covered services. Next, co-insurance is a percent of costs the insured patient is responsible for, beyond the deductible. Thus, if I had a 20% co-insurance then I would be responsible for 20% of payment beyond the deductible while the insurance company would pay the other 80%. Finally, there is a premium, which is essentially what one pays simply to maintain insurance coverage each year (HeathCare.gov).

FIGURE 1: THOUGH REAL GROWTH IN HEALTH EXPENDITURES IS POSITIVE, IT HAS DECREASED OVER TIME (5-YR MOVING AVG)



Source: CMS, 2021

The Healthcare Affordability Problem Produces Many Societal Costs

There are many costs to society resulting from the healthcare burden policy problem including direct costs, externalities, and opportunity costs. Direct costs to society of the problem of overly expensive healthcare should be seen as how much Americans spend on healthcare beyond what is "reasonable." To gauge what might be "reasonable" health expenditures, we can look to other countries. As we have explored, the United States has the greatest per capita health expense of any nation at about $11,000 whereas Switzerland, the country with the next greatest per capita health expenditures, spends just over $7,000 annually (OECD, 2021). For a modest estimate of excess American healthcare costs, we could compare American expenditures to that of Switzerland. According to this very rough method, the excess cost of healthcare in the United States would be about $4,000 per capita, or about $1.3 trillion annually.

Compounding the costs above are other direct costs. Some of these costs are those associated with delayed care and forgone preventative care. With the price of healthcare as high as it is, many Americans may be disincentivized from seeking medical care, particularly those who lack health insurance or are faced with an unaffordable deductible and/or co-pay. Therefore, people may choose not to seek medical attention when an issue arises, to avoid the cost of care. Sometimes, this may be acceptable. People assess their health risk and condition and decide if it makes sense to seek care that may not always be necessary or helpful. However, sometimes delaying care may worsen the severity of medical issues and, in turn, require greater healthcare costs than would have otherwise been required had an issue been addressed earlier. A recent Gallup poll shows that one quarter of Americans have reported "putting off" treatment for a serious condition due to the cost of care, the highest share ever reported (Saad, 2019). It is difficult to assess the exact costs of foregone care. However, recent data regarding the COVID-

19 pandemic may shed light on the issue. During the pandemic, many patients delayed cancer care. The National Cancer Institute director estimates that this could cause at least 10,000 excess deaths from breast cancer and colorectal cancer alone over the next 10 years (Salamy, 2021). In addition to precipitating excess deaths, delays in care could increase the cost of care. A study in the Journal of Pediatrics found that delays in care of greater than two days from the onset of symptoms increased hospitalization costs by 2% (Kraft et. al., 2009). Similarly, overpriced healthcare could also lead to people failing to seek preventative care. The Department of Health and Human Services estimates that routine cardiovascular exams alone save tens of thousands of adult lives. For a variety of conditions, preventative care can save lives and reduce costs associated with potential disease (HHS, 2020).

There are also indirect and externality costs associated with medical debt. An estimated 32% of Americans have medical debt. Amazingly, half of this group have defaulted on their debt (Leonhardt, 2020). There are obviously many societal costs associated with this. For one, debt can take a toll on borrowers' mental health (RC Psych, 2017). Furthermore, as addressed, half of borrowers could result in bad debt expenses for lenders, which can in turn take its toll on the efficiency of capital markets and the overall economy.

In addition to more direct costs, there are opportunity costs to overpriced healthcare. For one, excess money used to fund overly expensive healthcare treatments could alternatively be used for other goods and services, such as food, housing and childcare. According to the Bureau of Labor Statistics, healthcare expenditures accounted for 8% of household spending in 2018 (Chalise, 2020). Similarly, government spending on healthcare programs constrains the federal budget while Medicare, Medicaid, CHIP, and ACA subsidies account for a quarter of the budget (CBPP, 2020). With such large proportions of household and government spending dedicated to

healthcare, the ability to pay for other necessities may suffer and the potential for individuals and governments to invest their money in important priorities is hindered. Furthermore, costs of delayed care and foregone preventative care as discussed above also include opportunity costs. Individuals who become ill due to neglected care may experience increased time out of the workforce. Furthermore, excess deaths caused by these issues could deplete the working-age population. Factors such as these can lead to a reduction in economic output, hindering the American economy. All in all, the problem of overpriced healthcare produces many direct societal costs as well as opportunity costs and externalities. Any policy that produces a reduction in these costs, all else equal, would therefore produce immense societal benefit.

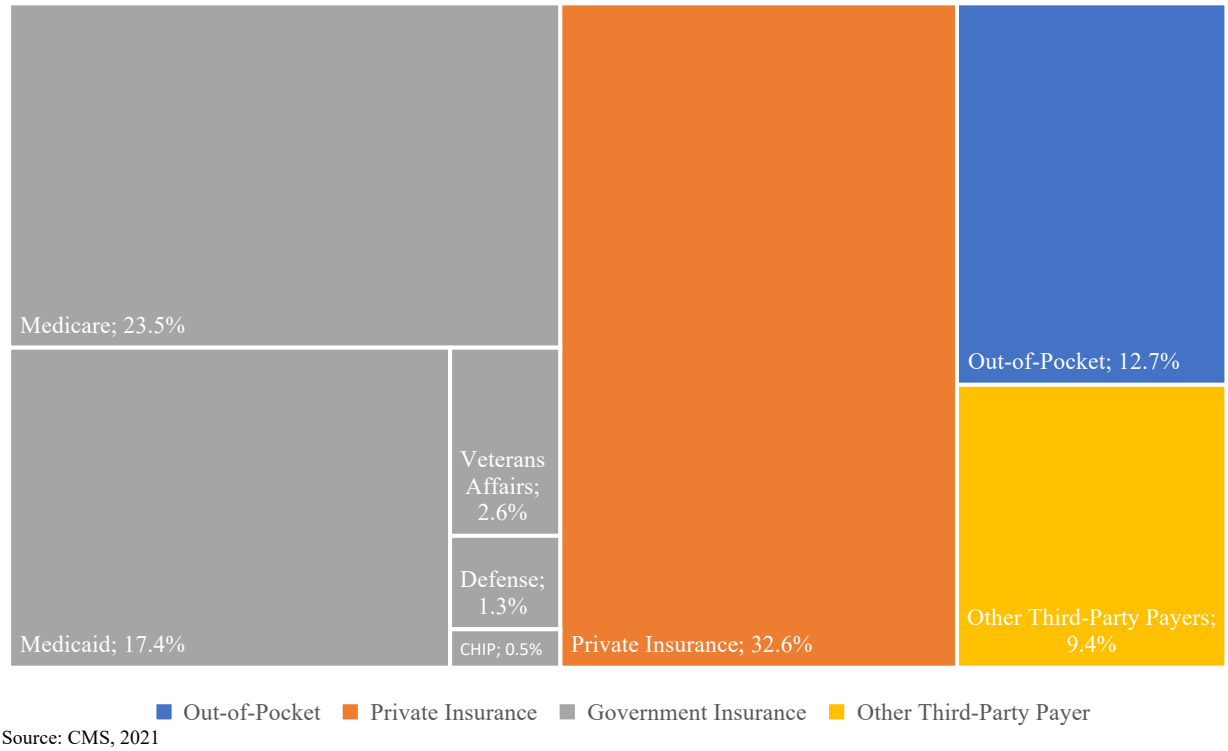
Healthcare System Background

Healthcare Payers: By Expenditures

In order to examine what policy changes could be made to address exorbitant healthcare costs, one must first explore how the current healthcare system works in the United States. One can get a glimpse of the current system by examining who pays for personal health expenditures. Personal health expenditures are over $3 trillion annually and include out of pocket costs ($400 billion), costs of private insurance ($1,200 billion), and costs of government social insurance programs such as Medicare ($800 billion), Medicaid ($600 billion), Children's Health Insurance Program (CHIP) ($20 billion), and Department of Defense and of Veterans Affairs programs ($125 billion). Other third-party payers and programs account for about $330 billion (CMS, 2021). Thus, the largest components of personal health care expenditures are private insurance, Medicare, Medicaid, and out-of-pocket costs. This illustrates the hybrid system in which the government, private insurers, and individuals pay for the majority of healthcare expenses.

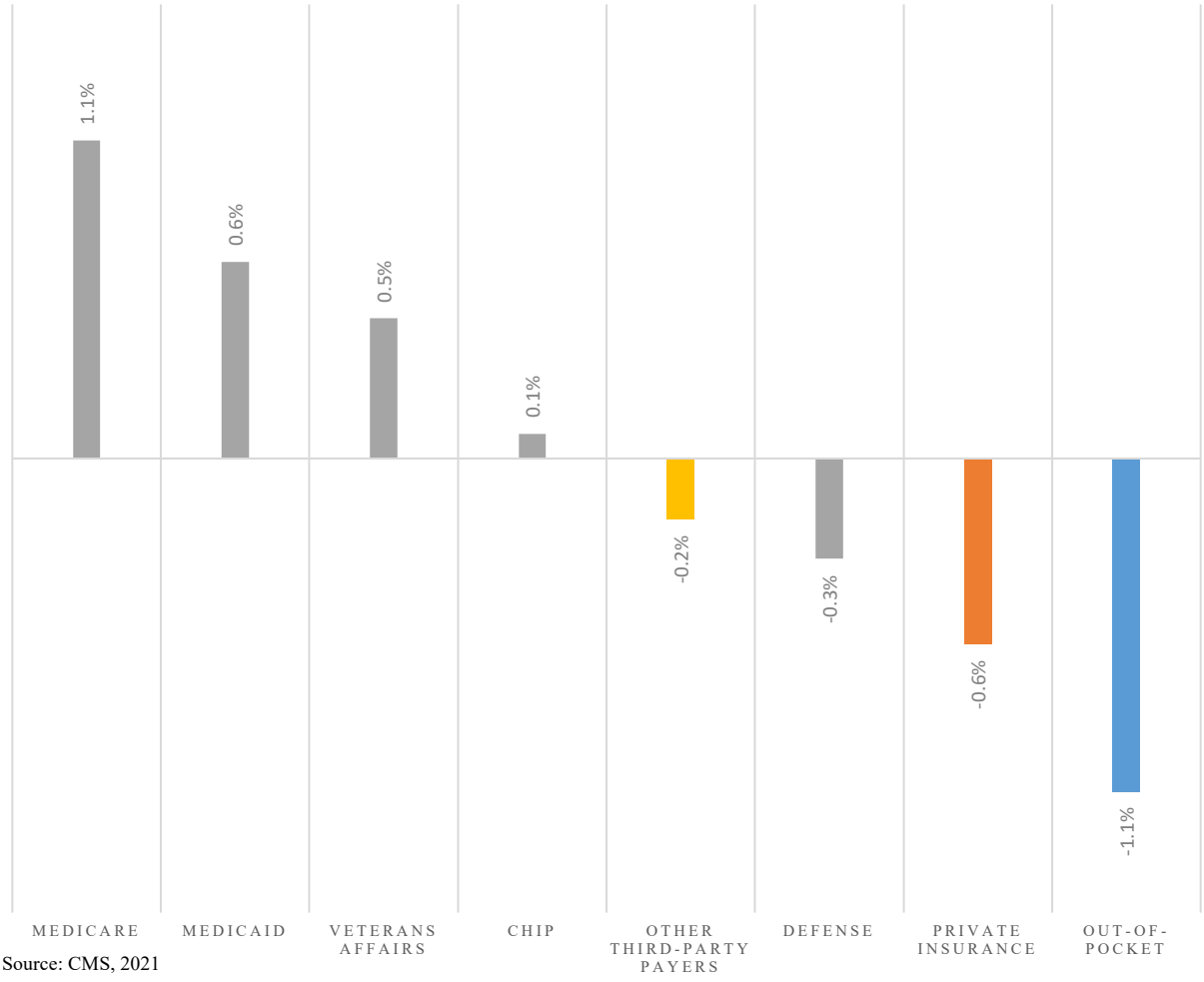
Furthermore, not only do the top 5 government insurance payers account for over 45% of medical spending, but this proportion has also grown over the past decade, highlighting the government's increasing dominance of the healthcare spending landscape (CMS, 2021).

FIGURE 2: PUBLIC AND PRIVATE INSURORS PAY THE VAST MAJORITY OF EXPENDITURES



Source: CMS, 2021

FIGURE 3: FROM 2010 TO 2019, GOVERNMENT PAYERS GAINED 2 PERCENTAGE POINTS IN SHARE OF EXPENDITURES



Source: CMS, 2021

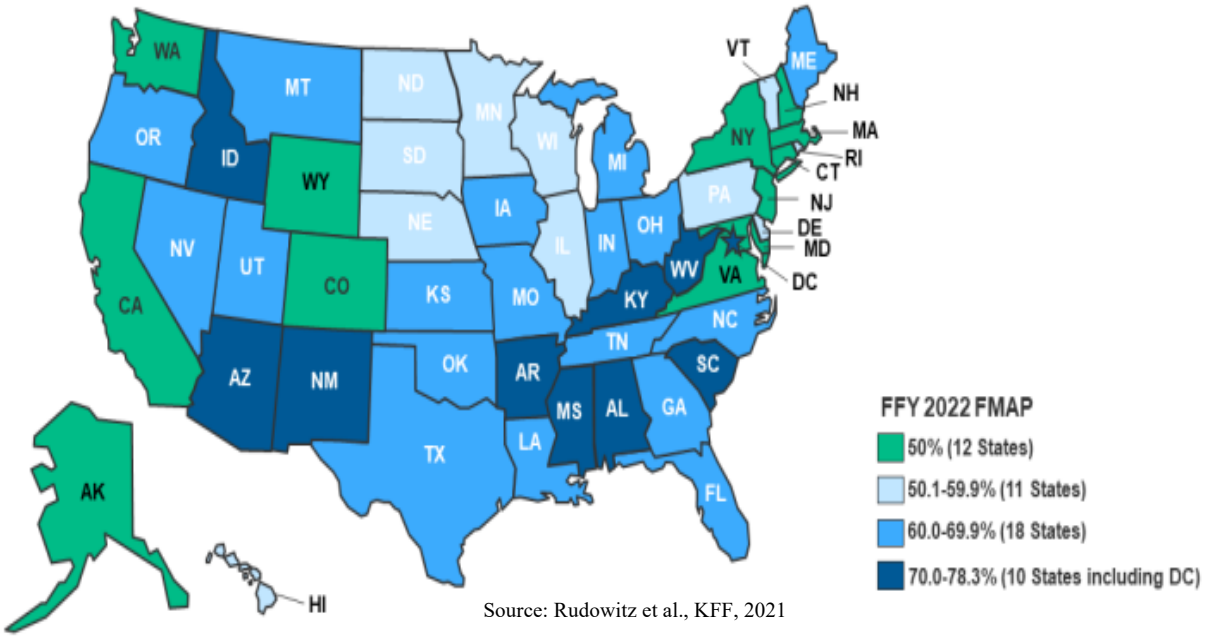
Healthcare Payers: By Covered Population

In order to better understand the healthcare payer landscape, one must further examine each payer and the population they cover, starting with the government insurers. There are several government programs that are aimed at funding care for certain subsets of the population. The most prominent of these programs are Medicare and Medicaid, government programs which were introduced in the 1965 as amendments to the Social Security Act and as part of the

government's "war on poverty." Medicare is essentially a single-payer program for those over the age of 65, paid for by the federal government as part of mandatory "entitlement" spending (Cohen et al., 1965). 18.4% of the population use some form of Medicare (Census, 2020). Medicare is broken up into 4 parts, A, B, C, and D. First is Medicare Part A, baseline coverage which essentially pays for hospital visit costs in excess of a given deductible which is projected to be $1,556 in 2022. Then there is Medicare Part B, which is more comprehensive, covering other services such as routine doctor's visits, medical screenings, ambulance transportation, and more, subject to a monthly premium as well as a deductible and 20% coinsurance. Then, there is Medicare Part C, known as Medicare Advantage, which is essentially a supplementary private plan that seniors can sign up for which provides superior coverage. Medicare Part D also enlists private insurance companies and covers prescription drugs (Bunis, 2021).

Then there is Medicaid, which is a similar government program but for low-income individuals and families. An estimated 17.8% of the population is enrolled in Medicaid (Census, 2020). Medicaid is authorized as mandatory spending and is administered at the state level and funded by both state and federal governments. The percent of Medicaid funding provided by federal as opposed to state funds is determined based on a variety of factors and depends on the state. In wealthier states such as California, the federal government pays for a minimum of 50% of Medicaid expenditures. In Mississippi, however, federal funding pays for 78% of Medicaid expenses (Rudowitz et al., 2021). Both Medicare and Medicaid are administered by the Centers for Medicare and Medicaid Services. Finally, two federal plans for veterans and active service members, TRICARE and Department of Veterans Affairs coverage (VA) insure 2.8% and 0.9% of the population respectively (Census, 2020).

FIGURE 4: LOWER-INCOME STATES TEND TO RECEIVE A GREATER PROPORTION OF MEDICAID FUNDING FROM THE FEDERAL GOVERNMENT



Source: Rudowitz et al., KFF, 2021

Private health insurance companies provide coverage for the majority of Americans. In the United States, private health insurance plans are largely provided through employers. However, since the passage of the Affordable Care Act, health insurance has also been available on an individual exchange, primarily for those who are self-employed or work for a small business. An estimated 54.4% of the population was covered by employment-based private insurance during all or some of 2020 while 10.5% were covered by direct-purchase insurance (Census, 2020). Finally, 8.6% of the population had no insurance at any point during 2020 and thus paid for all healthcare out of their own pocket (Census, 2020).

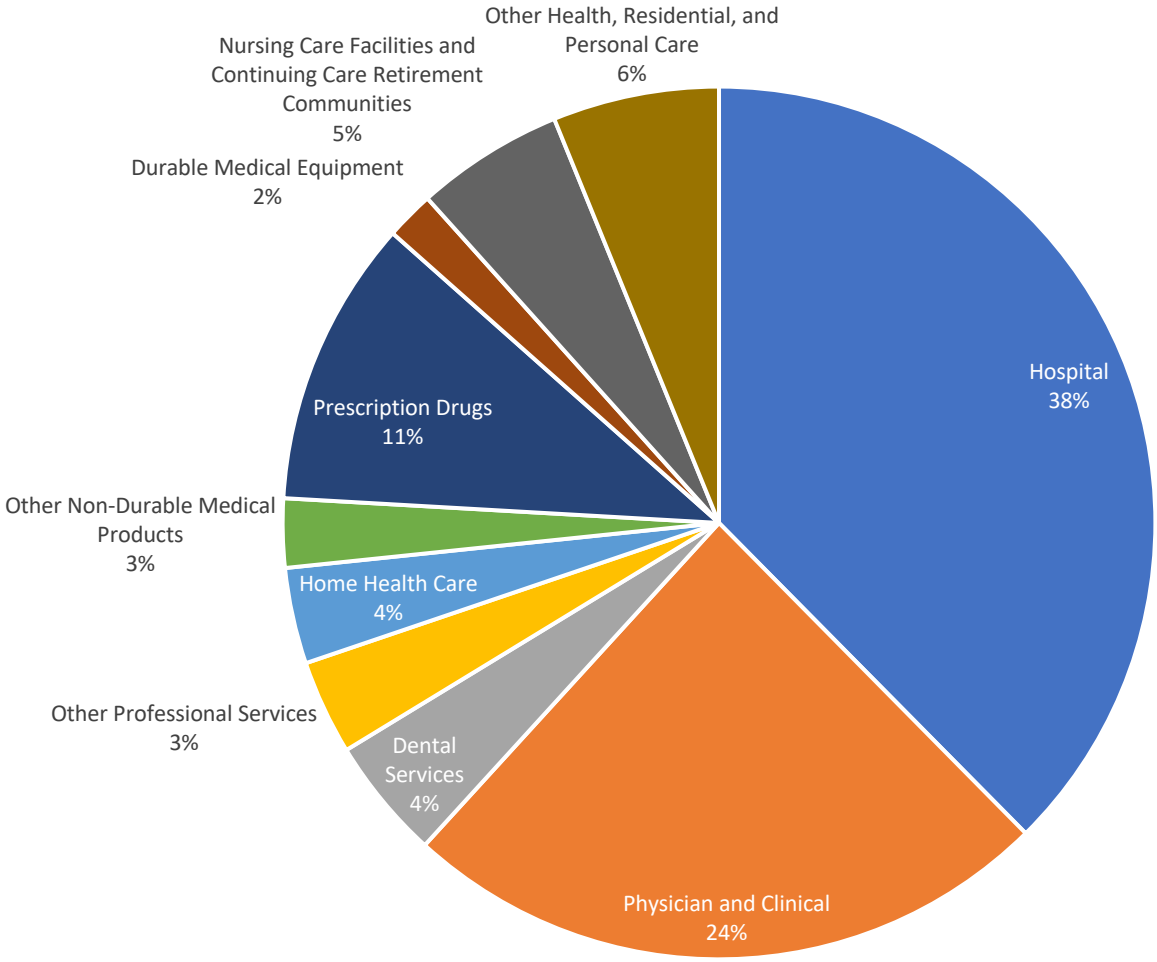
The Census Bureau counts each insurance coverage category if a surveyed individual qualifies at any point in the year. Therefore, the above proportions do not add to 100%, making interpretation of the data difficult. Nonetheless, one fact is clear in the data; while private

insurers cover over half of the population, only about a third of expenditures are paid for by private insurance. This illustrates the reality that public insurers outspend private insurers relative to the number of individuals who receive insurance coverage.

Healthcare Service Providers: By Expenditures

It is also important to categorize health expenditures by product or service. This data could give us further insight into the primary cost drivers in healthcare. Figure 5 shows the break-down for personal health expenditures in 2019 (CMS, 2021).

FIGURE 5: HOSPITAL AND PHYSICIAN SERVICES REPRESENT THE GREATEST PROPORTION OF HEALTH SPENDING

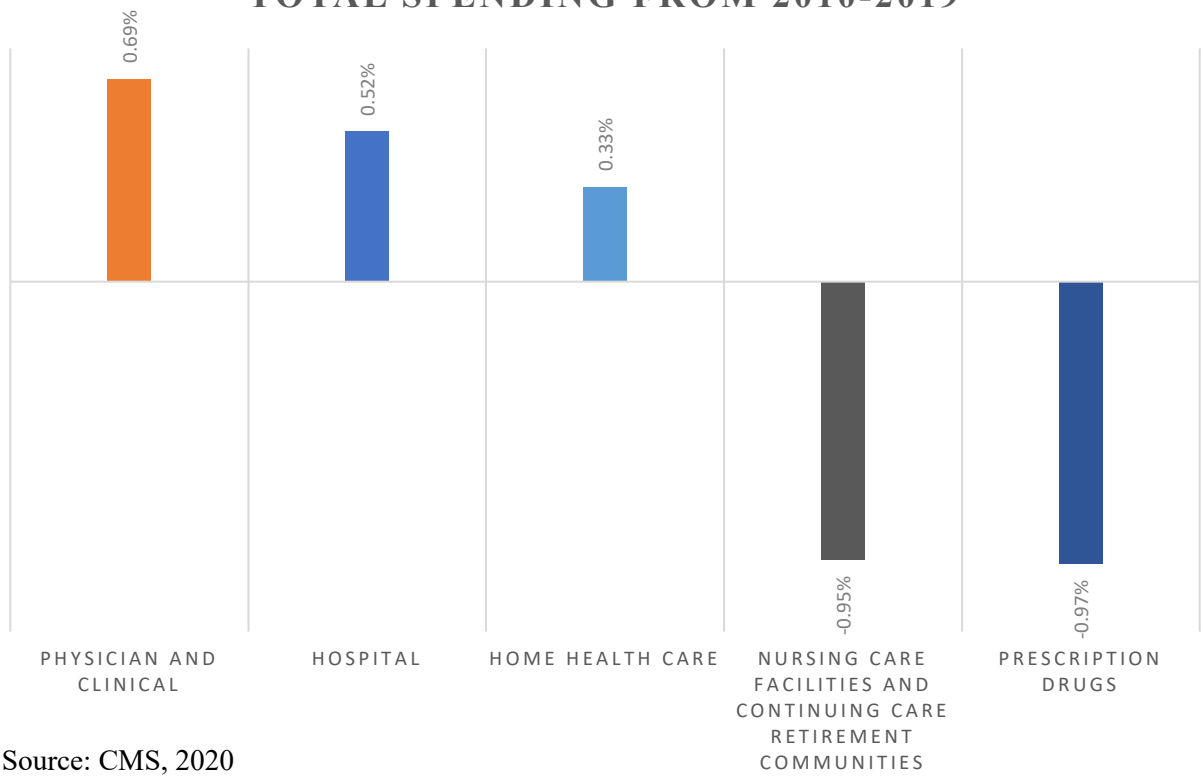


Source: CMS, 2021

Thus, hospital, physician and clinical, and prescription drug expenditures account for over 72% of all health expenditures. Examining the growth in spending in these major categories could provide further clarity on which healthcare goods and services are the primary drivers of cost increases. Interestingly, the data does not reveal huge variations in the growth in health spending based on category in recent years. From 2010 to 2019, both hospital and physician expenditures rose about 50%, whereas prescription drug spending increased a more modest 33%. Also notable, home healthcare spending increased 60% and nursing/retirement

care increased 24%, the largest and smallest respective increases over the same period. These data are somewhat surprising, given the emphasis that policymakers have placed on reducing spending on prescription drugs, for instance. Further examination shows that, since 1990, growth in prescription drug spending (739%) has far outpaced that of hospital (377%) and physician care (383%). As was the case with the ten-year data, home health care (802%) and nursing care (289%) represent the highest and lowest respective 30-year spending growth (CMS, 2021). Thus, if focusing on a longer time frame, prescription drug spending has increased at a greater rate than hospital and physician spending, for instance. Yet, this does not seem to hold true over more recent years, where hospital and physician expenditures have increased at a greater rate than pharmaceutical spending. This suggests that while the common narrative of prescription drugs driving much of the increase in healthcare costs is not untrue, it may be the result of somewhat outdated data.

FIGURE 6: PHYSICIAN AND HOSPITAL SPENDING HAS GROWN MOST AS SHARE OF TOTAL SPENDING FROM 2010-2019



Source: CMS, 2020

Measuring Quality

Though this analysis is focused on healthcare costs, it is necessary to also explore healthcare quality, as any policy to reduce costs should do so without compromising quality of care. Typical quality measures, as evaluated by the CMS, comprise of three categories: structure measures, process measures, and outcome measures. Structure measures evaluate the resources of a healthcare provider. Does the provider have the necessary healthcare equipment, for instance, for proper treatment of patients? Process measures evaluate the quality of healthcare services and procedures as derived from evidence-based clinical guidelines. Does a provider, for instance, provide a patient with the best course of medication in accordance with clinical

guidelines? Lastly are outcome measures. The National Quality Measures Clearinghouse defines a clinical outcome as "a health state of a patient resulting from health care." Something as simple as mortality rates for certain disease treatments represent outcome measures. The reliability and procurement process of these aforementioned quality measures is a source of great controversy and serves as a possible pitfall of value-based care models, a subject that will be addressed in more detail shortly (Kessell et al., 2015).

American Healthcare Quality Lags Behind Comparable Nations

Despite the difficulty of measurement, organizations such as the Peterson-KFF Health Tracker attempt to measure how the quality of healthcare in the United States relative to other comparable countries. According to the KFF Health Tracker, the United States rates below the comparable country average in the Health Quality and Access Index, which attempts to measure age-standardized, risk-standardized, amenable mortality for 32 causes of death. With a score of 88.7, the United States ranks below the UK (90.5), Japan (94.1), and Australia (95.9), just to name a few countries, and falls below the 93.7 comparable country average (Kurani et al., 2021). Thus, this data seems to indicate that the United States, despite higher costs, has a lower quality of care, or at least no better quality of care, than comparable countries.

Healthcare Quality is Improving

Although American healthcare quality may lag behind other nations, it seems to be improving. The Agency for Healthcare Research and Quality (AHRQ) measures quality by five categories. The agency publishes trends in healthcare quality measures for each of its categories over the past 5-10 years.

Person-centered care

14 of 26 measures saw improvement. Zero measures saw a decline. Much of the improvement in person-centered care is due to better communication between healthcare providers and patients regarding pain, medication, and emotional support, particularly for home and hospice care providers.

Patient safety

11 of 26 patient safety measures saw improvements while one measure worsened. Notable improvements include fewer adverse nursing home events and fewer adverse events involving blood thinners. The single worsening measure reflects declining review of over-the-counter medications by home healthcare providers.

Care coordination

5 of 9 care coordination measures improved while 3 of 9 worsened. Improvements included timely delivery of home healthcare and fewer home healthcare patients needing hospitalization. Worsening measures related to increased overreliance on emergency departments for care.

Effective Treatment

15 of 35 effective treatment measures saw improvements while 4 out of 35 saw declines. The greatest improvements included better care for patients with HIV and colon cancer as well

as more appropriate treatment of antibiotics. The worsening measures all pertained to the trends associated with the opioid and suicide epidemics.

Healthy Living

40 of 63 healthy living measures saw improvements while three measures worsened. These improvements include increased vaccinations while the worsening metrics included a rise in childhood obesity.

Outcome Measures

The data also indicates improvements in healthcare outcomes. For instance, "deaths per 1,000 hospital admissions with expected low-mortality" have improved over the three-year period from 2016-2018 from 0.57 to 0.52, a statistically significant improvement (AHRQ, 2020). All in all, it is clear that quality of care has improved over the past decade of data, showing further promise for the healthcare system.

Recent Legislation

Medicare Modernization Act (2003)

Now let's briefly examine a couple recent pieces of legislation affecting the healthcare policy landscape. The first is the Medicare Modernization Act. Signed into law by President Bush in 2003, this piece of legislation makes an array of tweaks to existing healthcare law, including introducing Medicare Part D, as I have previously outlined. In addition, the bill introduced into law the policy of health savings accounts (Congress.gov, 2003). Health savings accounts (HSAs) are tax-shielded savings accounts meant to supplement high-deductible health

insurance coverage as payment for medical expenses. In theory, health savings accounts are one policy which aims to decrease health expenditures by giving the consumer, rather than a third-party health insurance provider, more control over healthcare spending decisions (Appleby, 2017). Federal tax expenditures on health savings accounts were an estimated $7 billion in 2019 (TPC, 2020). I will discuss health savings accounts in more detail later.

Affordable Care Act (2010)

The second more recent healthcare legislation I would like to briefly examine is the Affordable Care Act (ACA). Signed into law by President Obama in 2010, the legislation attempted to overhaul the American healthcare system through a number of provisions, all of which could not possibly be addressed here. Among other things, the ACA attempted to increase access to insurance coverage through expansion of Medicaid eligibility to cover people with incomes below 133% of the federal poverty level, requiring the creation of individual healthcare exchanges for non-employer-provided insurance, instituting subsidies and tax credits for insurance premiums and requiring individuals to purchase health insurance (this provision known as the individual mandate has since been effectively repealed), and outlawing the practice of health insurance companies rating individuals' risk based on preexisting conditions. All-in-all, the ACA's primary purpose was to expand access to healthcare and insurance coverage, rather than simply decrease healthcare costs, though increased access may theoretically have the effect of decreased costs. The Supreme Court ruled that states had to approve Medicaid expansion, striking a small blow to the cause. Yet, to this day, all but 12 states have opted to do so. Yet, the ACA also introduced policies aimed at improving the value of care, that is, reducing costs and improving quality of care. For instance, the ACA introduced accountable care

organizations (ACOs), allowing Medicare recipients the option to transition from the traditional fee-for-service model and towards a value-based payment system focused on coordinated care by a network of providers (Congress.gov, 2010).

Medicare Access and CHIP Reauthorization Act (2015)

Another 2015 bill, the Medicare Access and CHIP Reauthorization Act (MACRA), pursued a further transition away from fee-for-service and towards value-based care. MACRA created the Medicare Quality Payment Program, allowing clinicians to opt into receiving value-based payment. The bill also uses incentives to encourage physician enrollment in the Quality Payment Program (Liao et al., 2020).

Systemic Issues: Cost Drivers

Now that we have examined the system, let's briefly explore some of the issues in the system. As we have explored, the healthcare system in the United States is quite complex. Furthermore, as with many issues, the issue of healthcare policy is quite political, with different people proposing different issues in the system. While remaining mindful of these complexities, let's explore some of the potential issues in the current healthcare system that may contribute to excess costs.

Prescription Drug Prices

The cost of prescription drugs represents some of the excess cost of healthcare in the United States. Prescription drug prices are more than 2.5 times more in the U.S. than in other nations on average. Interestingly, generic drugs are actually cheaper, on average, than in other nations. Thus, brand name pharmaceuticals drive this increase in costs. Policy analysts blame a host of policies for these excess costs, including drug patent laws and the relative lack of Medicare price negotiation (Mulcahy, 2021).

End-of-Life Care

Some cite end-of-life care as a major cost driver. End-of-life care accounts for an estimated 10-12% of total healthcare spending. Furthermore, about a quarter of Medicare's budget is spent on beneficiaries who are in their last year of life. Thus, healthcare costs, (specifically Medicare costs) are incredibly skewed upwards due to the massive cost of end-of-life care (Raphael, 2001).

Lack of Transparency

Many policy experts cite a lack of transparency regarding the price of healthcare goods and services as an important impediment to cost reduction. In the United States, private insurance companies as well as public insurance programs such as Medicare negotiate prices with healthcare providers. As opposed to so many other industries, prices for healthcare goods and services are not readily available. Patients are often unaware of the cost of medical procedures, for instance, until afterwards when they receive the bill (Lagasse, 2021). Furthermore, the cost of medical procedures can vary vastly depending on the provider. A 2019 study from the Health Care Cost Institute found, for example, that a blood test could cost 25 times as much in Beaumont, Texas as it would in Toledo, Ohio. Even within the same metropolitan area, the cost of healthcare could vary greatly at different hospitals. For instance, in the Boston region, the cost of a vaginal birth could cost anywhere from about $4,700 to $16,000. In the Tampa area, the same blood test could cost as much as $440 or as little as $11, depending on the hospital (Osborne, 2019). These price discrepancies seem to suggest severe market inefficiencies within the healthcare system. Imagine if the exact same product costed $100 at Target and $10 at Walmart! This nearly incomprehensible situation surely would not last long as Target would be forced to lower its prices to better reflect those of the competition. Perhaps this analogy is more applicable to a routine blood test than a life-saving medical procedure. Yet, this situation still reflects the large market inefficiencies in healthcare and suggests that issues such as the lack of price transparency could be driving them.

Lack of Competition and System Fragmentation

Beyond price unavailability, lack of consumer agency and bargaining power may also contribute to higher costs. In the United States, as we have already discussed a bit, most health expenditures negotiated and paid by public and private insurance. Medicare, for instance, is responsible for a huge client base. Thus, Medicare administrators have supreme bargaining power to negotiate prices. The same goes for large private insurance companies, though on a smaller scale. Uninsured patients, consequently, with little bargaining power, are left paying exorbitant prices for healthcare procedures. Furthermore, with insurance and government programs paying the majority of healthcare costs, most consumers are left desensitized to the price of healthcare (Evans et al., 2021).

Misallocation of Resources

There is also an issue of misallocation of resources in the healthcare system. Many individuals, particularly low-income Medicaid recipients lack primary care options and use the hospital's emergency department for all medical needs. This leads to overcrowding and inefficiency. Patients may stay at the hospital for long periods of time and the American taxpayer foots the bill (Maeng et al., 2017).

Fee-For-Service Payment Model

Other issues driving up the cost of care may stem from the fee-for-service payment model, under which a predetermined amount is charged for each discrete medical service provided. For instance, rather than charging for "appendicitis patient care," providers will charge for each discrete procedure administered to the patient in their course of appendicitis

treatment. Fee-for-service is the predominant payment method in the U.S., accounting for about 70% of medical expenditures (Henry, 2017). First of all, the fee-for-service model fails to account for the quality of medical care provided, thus allowing for increased cost of care relative to outcomes. Furthermore, under fee-for-service there is no limit to how many services one can be charged for in pursuit of care. Therefore, patients can be saddled with exorbitant bills accounting for charges for a myriad of administered services. This system may improperly incentivize medical providers to administer a host of costly services, rather than providing the most efficient and effective care (Miller, 2009).

Administrative Costs

Finally, administrative costs are a heavy burden on the healthcare system. Recent studies find administrative costs to account for upwards of 15% of total healthcare spending (Tollen, 2020). In theory, these administrative costs represent unnecessary and wasteful spending and are a drag on the system. The problem of administration costs indicates that policy solutions to the healthcare issue should prioritize simplifying the incredibly complex healthcare system avoiding the promulgation of new rules and regulations.

Policies: Existing Evidence

Health Savings Accounts (HSAs)

Now that we have explored the status quo of the healthcare systems and some issues it may present, let's explore some policies that seek to address the problem of overpriced healthcare and the existing evidence regarding the efficacy of such policies. As I discussed earlier, health savings accounts are one policy that has been implemented to reign in health care costs. One possible measure one could take would be to expand the HSA program and its eligibility. In theory, HSAs could reduce healthcare spending through two channels. First, consumers, being more sensitive to costs, should spend less by consuming less (buying fewer drugs, treatments, etc.) and "shopping around" for cheaper alternatives. A reduction in spending of this type is not necessarily desirable as it may represent not a reduction in the price of healthcare but rather a decrease in its consumption, something that could actually be detrimental if people are neglecting to get necessary treatments, for instance. Secondly, healthcare providers could respond to increasing cost pressures from consumers by lowering prices for healthcare services (Appleby, 2017). This secondary effect is what HSAs seek to precipitate, as it represents a substantive reduction in the cost of healthcare, rather than a change in its consumption. Thus, any study of the effect of HSAs or related policies on healthcare costs should make a distinction between these two mechanisms for cost reduction, attempting to focus on the policy's effect on overall "prices" rather than changes in consumption.

A 2010 study from the journal of Health Services Research examined the effect of HSAs on personal health expenditures. Using a database of 76,310 health insurance enrollees, the study used the rollout of HSA-eligible plans in 2006 and 2007 to study the effects of enrolling in such plans. The study found that HSA enrollees spent about 5-7% less on healthcare than non-

HSA enrollees. Reduction in pharmaceutical spending due to HSA enrollment of 6-9% was the greatest and highly statistically significant, compared to spending on medical treatment which was not great enough to determine statistical significance (Sasso, 2010). This indicates that most of the reduction in costs were due to changes in consumer spending habits on pharmaceuticals, for instance, rather than due to decreases in the market prices for healthcare services.

Price Transparency Regulations

Policies such as HSAs are meant to empower healthcare consumers to better "shop" for healthcare based on prices, increasing market efficiency in the healthcare space. Yet, prices in healthcare are not always easy to identify. This makes it difficult, of course, for reforms such as HSAs to promote any substantial change in consumer behavior. Some price transparency policies, such as all-payer claims databases, aim to address this issue by increasing price transparency in the healthcare market (Cauchi, 2018).

There have been many studies on the merits of price transparency regulations in reducing costs. A 2017 study estimates that consumer price awareness lowered the prices paid by 17% across a variety of healthcare services (Lieber, 2017). In other words, consumers who were actually aware of prices "shopped around," achieving a significant reduction in prices. Though price-aware consumers saw significant decreases in healthcare costs, the results of price transparency measures for lowering aggregate costs are less promising. One 2013 study found that price transparency regulation reduced prices charged for common, elective medical procedures by 5%. Price transparency regulation also increased consumer sensitivity to a 1% increase in price by 0.5%. Yet, the study also reports that reduction in actual prices paid by ensured patients were mostly limited to those patients that had the greatest incentive to consider

the cost of care (Christensen et al., 2019). All in all, the research indicates great potential for the merits of price transparency in changing consumer behavior and reducing healthcare costs. Yet, due to low rates of use, transparency tools may have less of an effect on overall market prices than on the prices paid by price-aware consumers.

One study found that just 12% of people given access to a price transparency tool searched for price information within the first 3 months (Lieber, 2017). Two other studies indicate similar results, finding that 10-11% of employees used an employer provided price transparency tool during the first year of availability (Desai et al., 2016; Gourevitch et al., 2017). This suggests that consumer adoption of price transparency services is slow and limited. This would explain why price transparency reforms lead to little change in overall healthcare costs, even though some consumers use the information to achieve lower-cost healthcare. For a market to effectively respond to consumer demand, more consumers must utilize price to make informed choices about their healthcare. It is unclear what consumer usage of pricing transparency tools is necessary to significantly lower market prices; yet, it seems that consumer usage would need to be greater than the 10-12% that is observed studies.

Value-Based Care

Another policy proposal to lower healthcare costs is transitioning the healthcare payment system away from the fee-for-service model and towards a system of value-based care. As we have discussed, in the current system, payment for medical services is primarily based on a fee-for-service system where providers charge for each service provided individually and do not account for quality of care. Value-based care alternatives such as bundled payments and accountable care organizations (ACOs), attempt to move payment away from the fee-for-service

model and towards a value-based care model which holistically accounts for outcomes and quality of care for entire episodes of treatment (Miller, 2009). A 2020 study in the Clinical Journal of the American Society of Nephrology studied the effect of accountable care organizations on healthcare spending for long-term dialysis patients. Long-term dialysis patients account for 1% of the population, yet over 7% of fee-for-service Medicare spending, thus they represent a prime opportunity for spending reduction due to policies such as ACOs. Studying a random sample of long-term dialysis patients between 2009 and 2016 the study finds evidence of ACOs cost-reducing effects. First of all, from 2012 to 2016, the number of long-term dialysis Medicare beneficiaries on ACO-aligned plans increased from 6% to 23%, indicating successful adoption of ACOs as a perceived means to cut costs. The study also found that ACO-aligned Medicare beneficiaries' spending was $143 less than that of ACO-nonaligned beneficiaries (a difference of $5 to $282, given a 95% confidence interval) (Bakre et al., 2020). This study seems to suggest modest yet promising potential for ACOs' ability to reduce healthcare cost for Medicare beneficiaries. However, it is important to note that though this retrospective study attempts to control for the influence of differing patient characteristics, there is still a potential for bias. The researchers themselves even shy away from using overly causal language in their conclusions, indicating that they too are not overly confident in the study's potential for indicating the causal effect of ACO participation on cost reduction. Nevertheless, taken in context, this study indicates the promising potential for cost reduction due to ACO adoption.

Global Budgets

One hospital payment model, called "global budgets" has gained increased interest as a method for reducing the burden of healthcare costs. Under the global budgets model, a state mandates that the rate of increase in hospital expenditures does not exceed a predetermined level. The hope is that these cost controls will reduce unnecessary medical spending and ease the burden of rising healthcare costs. By its nature, this payment model would compel reigning in rising hospital costs. Yet, one concern policymakers have is that it could lead to reduced hospital use relative to other forms of care, merely creating the appearance of reduced spending. A 2018 academic work studied Maryland's global budget program as introduced from 2010 to 2014 across the state's hospitals. It found that global budgets produced no change in hospital use relative to a control group (Roberts et al., 2018). These promising results suggest that one policy for reducing healthcare costs would be to adapt a similar global budgets program at the federal level, perhaps by providing incentive payments for states that are able to reduce rates of increase in hospital costs. Yet, policymakers should be mindful of the limited scope of the available research, particularly as it relates to the external validity of the research. The results from Maryland may not be replicated in a state with different geography, demographics, and social attitudes, for instance. Additional research should be needed to further identify the effects of global budgets and to determine how scalable such a program may be.

Restructuring the Tax Exclusion for Employee-Sponsored Insurance

The previous policies examine inefficiencies in the consumer market for healthcare services. Yet, much of healthcare spending is conducted via third-party health insurance providers. Though policies such as HSAs attempt to empower consumers vis-à-vis third-party

payers, there will always be a large role for insurance in the healthcare space. Thus, what policy can be pursued that promotes market efficiency in the market for health insurance? One such policy is that of limiting the tax exclusion for employee-sponsored insurance. The theoretical, economic reasons for such a policy are as follows. Currently, employer-provided health insurance is not subject to taxation as are salary and wages. Employer-provided insurance, a benefit of employment, is essentially a non-monetary form of employee compensation. There also exists a private market exchange for individual health insurance plans. Thus, since employer-provided insurance is not taxed whereas wages are, the law essentially "subsidizes" employee-provided insurance as opposed to using wages to acquire health insurance on the individual exchange. In addition to promoting a system that "ties" health insurance to employment, this policy, in theory, "subsidizes" employer-provided health insurance, thus driving up the price of health insurance on the individual exchange. Therefore, one policy proposed to alleviate this inefficiency in the market for health insurance would be to reduce the tax-preferential treatment of employer-sponsored insurance (Finkelstein, 2002).

One 2002 study cleverly uses a 1993 tax change in Quebec, Canada, to estimate the effect of a reduction in the tax-preferential treatment of employee-sponsored insurance. The 1993 law reduced the "tax subsidy" for employer-provided supplementary health insurance by nearly 60%. Experimenters use a difference-in-difference methodology to compare the health insurance changes in Quebec vs. surrounding provinces which did not experience such a change in tax law. The study found that the tax change resulted in a 20% decrease in coverage by employer-provided supplementary insurance. The study found that individual (non-employer-provided) supplementary insurance rose slightly, offsetting about 10-15% of the decrease in employer-provided insurance. The study revealed an employee elasticity with respect to tax price of

employee-provided health insurance of 0.5, meaning that consumers respond to a 1% increase in tax price by decreasing spending on such insurance by .5% (Finkelstein, 2002). This study reveals that consumers respond to changes in health insurance prices due to changes to tax treatment of employee-provided insurance. In theory, this market response should push the market price of health insurance lower, to reflect consumers' willingness to pay. Though this study does not address the long-term effect of tax changes on the price of health insurance, it confirms the presence of market supply and demand dynamics that economists theorize would decrease health insurance prices on the individual exchange. Unfortunately, literature studying the effect of tax treatment of employee-provided insurance on health insurance prices is limited. Yet, the studies of the economic fundamentals behind such an effect highlight the possible merits of such a policy in reducing health insurance prices.

Conclusion

All in all, there are a host of policy proposals aimed at fixing the broken American healthcare system. As I have outlined, the problem of exorbitant healthcare costs is too great to ignore and the issues inherent in the American healthcare system are extensive. The good news is that this provides an incredible opportunity for improvement. In the realm of healthcare, where costs are rapidly rising, even modest reductions in the rate of increase in cost could provide massive long-term positive impact for the affordability of care.

Policy Alternatives

Status Quo

The first policy alternative would be to implement no new policy and preserve the status quo. As has been discussed, the current status quo consists of a system of public and private payers. Somewhat recent policy, the Affordable Care Act expanded coverage and implemented new programs such as the health insurance exchange and accountable care organizations. The current policy, as this analysis has outlined, places great emphasis on employer-provided health insurance as well as government payers such as Medicare and Medicaid. Furthermore, the current law does contain health-savings accounts, price transparency measures, and value-based care payment programs such as accountable care organizations.

Modify Employer-Provided Insurance Tax Exclusion

Current health policy treats employer-provided insurance as non-taxable. One policy alternative would be to keep most of the status quo yet cap the amount of employee-provided insurance that is tax deductible. This policy would not disrupt the current status quo much, especially the system of private health insurance. Yet, it has the potential to provide incentives for reducing inefficient spending on overly-expensive, employer-provided health insurance. Average premiums for employer-sponsored insurance are just over $7,000 for an individual and just under $21,000 for a family (KFF, 2020). Limiting the tax exclusion to $5,000 per employee for individual coverage and $15,000 for family coverage is reasonable enough that it may incentivize lower premiums yet far enough below the average premium that it would also raise revenues for the government. These limits on the tax exclusion would not be pegged to the CPI to account for inflation. Thus, over time, the real tax expenditure of this policy would be

minimized and the program would essentially be phased out. Tax exclusions for health insurance account for about a quarter of federal government healthcare "expenditures." These tax expenditures also disproportionately benefit higher income households (Iselin & Stallworth, 2016). Inflation will over time reduce the real costs of this inequitable program. Finally, this policy would also introduce the same tax exclusion for health insurance obtained through private exchanges, further reducing the preferential tax treatment of employer-sponsored insurance.

Expand Market Reforms (HSAs and Price Transparency Measures)

Under current law, the maximum individual annual contribution to a health savings account is $3,600. Furthermore, to qualify, one must be enrolled in an insurance plan with a deductible of at least $1,400 for an individual and $2,800 for a family (HealthCare.gov, 2022). One alternative policy would be to expand HSA eligibility to include plans with lower deductibles. Expansion to plans with at least a $800 individual and $1,600 family deductible would allow many more consumers access to HSAs. There are also current price transparency measures on the books. Made law as part of the ACA, the CMS has recently begun mandating price disclosure for hospitals. Under the rule, hospitals must post all prices online. Yet, recent data shows that only 6% of hospitals were compliant with the rule (Lagasse, 2021). Further measures could still be taken to ensure price transparency in healthcare. One policy change would be to improve price transparency by creating a federal all-payer claims database (APCD). APCDs, which currently exist in some states, are databases that include medical claims including pharmacy claims, dental claims, and more (AHRQ, 2018). Implementing APCDs would eliminate the problem of non-compliance, while also promoting price transparency beyond the hospital level. Together, health savings accounts and APCDs seek to empower the consumer and

improve efficiency in the market for healthcare. Thus, expanding both measures serves as a logical policy alternative for improving consumer-facing healthcare markets.

Promote Value-Based Care Through Reducing Medicare Reimbursement Rates

Current law allows Medicare beneficiaries to opt-in to value-based coverage through accountable care organizations. Reducing the Medicare reimbursement rate for fee-for-service care by 10% could incentivize increased value-based payment model usage. Ultimately, these reforms would serve to increase ACO and bundled payment usage and hasten Medicare's transition towards value-based payment.

Federally Incentivize Cost Containment Global Budgets Programs

Maryland is one state that has instituted global budgets reforms for its acute-care hospitals. Under this program, the state limits per-person hospital spending growth, regardless of the number of services a hospital provides it patients. The federal government could promote such value-based cost-cutting measures by giving states a bonus equal to 10% of federal Medicaid funds for containing annual hospital spending growth to below 2% while maintaining care quality. Then, states would be incentivized to experiment with their own value-based cost cutting programs. This policy could create massive savings for Medicare and Medicaid while incentivizing healthcare value.

Evaluative Criteria

Cost-Effectiveness

The primary criterion for evaluating prospective policies is cost-effectiveness. Cost-effectiveness is a hugely important measure and quantifies both the effectiveness of prospective policies in reducing healthcare costs and the cost to implement these policies. One must beware not to confuse cost-effectiveness with the healthcare cost containment. Reducing the cost of healthcare, specifically the rate of increase in the number of households who spend more than 20% of income on healthcare, is our desired outcome. The "cost" in our cost-effectiveness analysis is then total American health expenditures. In examining cost-effectiveness, one should project outcomes and costs over ten years or more, discounting these projections using a discount rate to account for the time value of money. The United States government should generally expect lower opportunity cost of capital than private sector counterparts since it is a far less risky institution. 10-year government bonds, for instance, recently hit yields of 3%. Thus, a discount rate of about 3% is appropriate. Next, one must also decide on a base year. The global pandemic has unexpectedly strained the health system in 2020 and 2021. I suspect that this represents a short-term shock to the health system that could obscure health data trends. Thus, we will use a base year of 2019 for our analysis. Finally, we will use a standard time horizon of 10 years. Using the above methodology, cost-effectiveness will be calculated for each of the prospective policies as the net present value of the cost (total health expenditures) over the 2029 outcome (number of households spending greater than 20% of after-tax income on healthcare).

Quality

Quality is also quite an important criterion for healthcare policy evaluation. One policy alternative focuses on value-based care. Quality, being half of that value equation, must be used as an evaluative criterion. For policies that maintain the fee-for-service model, we must also evaluate quality, though it may be harder to quantify. In evaluating quality, we can begin by using the system set forth by Medicare Accountable Care Organizations. As was addressed earlier, ACOs evaluate quality of three types: structure, process, and outcomes. All of these measures are important in providing a different perspective on healthcare quality. To the extent that we can, we want to try to evaluate prospective policies on each of these quality measures, at the population level. Of these three quality metrics, outcome measures are most important. While the other two measures are important for quality evaluation, especially when outcomes can be difficult to assess, outcome measures represent the most important and unbiased quality indicators for projecting policy effects. In measuring healthcare outcomes, we can look to patient-reported outcomes (PROs). Though inexact and crude, patient-reported outcomes are easily accessible through the National Institutes of Health database (Kessell et al., 2015). PROs also provide important, human-centered and qualitative measures to contrast with more quantitative metrics. In addition to these qualitative measures, we must also evaluate quantitative outcomes at the population level. These such outcomes could include measures such as mortality rates due to certain dangerous medical procedures, percentage of patients re-admitted to the hospital for reoccurring acute illness, and maternal mortality rates, for instance. Furthermore, the National Committee for Quality Assurance publishes the Health Effectiveness Data and Information Set (HEDIS), which includes more than 90 quality measures across six domains of care: effectiveness, access/availability, experience, utilization, heath plan descriptive

information, and measures reported using electronic clinical data systems (NCQA, 2022). Using the given data, we can assign a quality score for each policy alternative from 1 to 5, where a score of 5 represents the highest quality of care. All-in-all any prospective policy must be evaluated on quality, especially since cost-reduction can easily cut against healthcare quality. This analysis will prioritize policies that have little effect or improve quality while combatting rising costs.

Equity

Any prospective healthcare policy should strive to promote equity in access to care and health outcomes. At the very least, we should avoid policies which reduce equity for only a marginal reduction in overall cost. A prospective policy should prioritize cost reduction for all demographics, particularly those who struggle most from budget constraints, for whom even small improvements in the cost of healthcare could provide immense benefit. In evaluating equity, we would need to distinguish between outcomes for different demographic groups. Prospective policies should strive to reduce healthcare costs and increase value across socioeconomic, ethnic, regional, and other demographic characteristics. One primary measure of equity would be the difference in cost containment and quality between the top and bottom 10% of income earners. A policy which aims to reduce healthcare costs should do so for people of all walks of life, especially those who are most vulnerable. Equity will be scored from 1-5 for each policy alternative.

Political Feasibility

In any field, but especially in the field of healthcare policy, political feasibility is an important concern. One can merely observe the Clinton administration's failure in passing sweeping healthcare reform in 1994 or the Trump administration's failure in repealing the Affordable Care Act in 2017 to see the importance that political headwinds can play in determining the success of a policy (Skocpol 1995 & Cohn 2020). While these aforementioned policy proposals sought opposite directions for the role of the federal government in healthcare, both pushed overly hard to upend the status quo. One should beware of prospective policies which can be framed as threatening to "take away" Americans rights, privileges, or entitlements for instance. One should also be extra aware of the political feasibility of policies which cut strongly against the status quo. Furthermore, public polling data should provide some further insight into policies' prospective feasibility. Proposals that consistently poll poorly with the public should raise feasibility concerns. It is also important to note, however, that with many policies, especially those as complicated as many proposed healthcare policies, opinion polling may not be the best source of feasibility, as the public may be woefully ignorant and/or easily misled by the framing of particular policies. Therefore, it may be helpful to focus on stakeholders as well as key decision-makers.

The opinions of private stakeholders are incredibly important for political feasibility. In healthcare, the opinion of groups such as private insurance companies, pharmaceutical and biotech firms, and medical providers are incredibly integral to a policy's political viability in addition to the opinions of interest groups such as the AMA, AHA, PhRMA, and AARP.

Most important to determining political feasibility is the opinion of important legislative decisionmakers. Furthermore, in most cases, the opinion of key legislators regarding different

policy measures is easily observable. Major parties and/or legislators may have public stances on their support or opposition of prospective policies or those that are similar to our proposed policies. In determining political feasibility, we must first observe the published stances of the major parties. If the majority party has a strong stance against a prospective policy, its enactment should not be considered feasible. Then, we can observe the public stances of legislators. Important legislators include the Senate Majority Leader, Chuck Schumer and the Speaker of the House, Nancy Pelosi. Also important are the stances of Minority Leaders Mitch McConnell and Kevin McCarthy of the Senate and House, respectively. We must also take note of any public stances of members of the Senate Health, Education, Labor, and Pensions Committee, particularly Chairwoman Patty Murray. The House does not have a health committee, yet we can research the stances of relevant decisionmakers. It may also be helpful to research the stances of "moderate" legislators in both parties, such as Democratic Senator Joe Manchin and Republican Senator Susan Collins. Support of these powerful "swing" legislators may indicate that a policy is not overly controversial and has enough support for passage. For further data on the political feasibility of prospective policies, we can research the results of previous votes on similar bills. Obviously, low levels of support in these votes suggest low political feasibility. All-in-all, the above factors should be roughly compiled to form a political feasibility score. A scale from 1-5 makes sense, with 5 and 1 representing the highest and lowest respective levels of political feasibility.

Ease of Implementation

Just as is the case for political feasibility, the relative ease of implementation of a prospective policy can make or break its success. While political feasibility represents the chance of a policy becoming law, ease of implementation represents the ease with which administrative authorities can enforce the policy. Policies that impose minimal administrative burden should score well for ease of implementation. Furthermore, policies which operate within the current system should be desirable from an ease of implementation standpoint. A policy which would require the establishment of a new administrative agency, for instance, would be less desirable. Other issues important to policy implementation include administrative expertise, particularly in the realm of technology. As has been exemplified by events such as the faulty rollout of the "Obamacare" website, government agencies have a poor track record with technology. Policies may be difficult to implement if they require extensive technological implementation. Similarly to political feasibility, the further a policy drifts from the status quo, the more difficult its implementation may be. A scale from 1-3 can serve to represent ease of implementation amongst different policies, with 3 representing the maximum ease and 1 representing maximum difficulty in policy implementation.

Cost Effectiveness

Methodology

This analysis will establish cost effectiveness estimates for the outcome, healthcare burdened households, for the relevant region, the United States, over a ten-year time horizon and using a base year of 2019 and a discount rate of 3%.

Cost, Net Present Value of Total Healthcare Expenditures

The cost, as defined as total national healthcare expenditures, is available via the CMS health expenditures database (CMS, 2020). By extrapolating the trend in 2009-2019 health expenditures as a percentage of GDP and GDP projections, this analysis projects costs over the decade of this analysis, 2020-2029.

Outcome, Healthcare Burdened Households

The number of healthcare burdened households is defined as the number of households spending greater than 20% of income on healthcare. Using mean and standard error data by household income decile from the available BLS consumer expenditure surveys, one can produce estimates for the number of healthcare burdened households. The data from 2014-2019 shows that the percentage of healthcare burdened households remained fairly steady over that period, going from approximately 24.3% of U.S. households in 2014 to 23.0% in 2019. The corresponding absolute number of healthcare burdened households decreased from approximately 30.92 million in 2014 to 30.46 million in 2019 (BLS, 2020). Unfortunately, the data for our outcome is only available for a sub-optimal five-year period. Yet, the available data can offer insight in projecting the future trajectory in the number of healthcare burdened households.

Baseline Case

This analysis uses the 2014-2019 growth rate in the proportion of healthcare burdened households and household projections as well as the growth rate in total health expenditures as a percentage of GDP and GDP projections to develop the following baseline cost-effectiveness estimate for the ten-year period from 2020-2029.

10-yr PV Cost of $34,399 billion

Outcome: 29.56 million healthcare burdened households in 2029

Alternative 1: Modify Employer-Sponsored Insurance (ESI) Tax Exclusion

Research shows that consumers respond to a 1% increase in tax price by decreasing spending on health insurance by .5%. Thus, half of the savings to the government of reducing the tax exclusion should be translated as increased personal health expenditures. Using our model, this analysis achieves the following cost-effectiveness estimate.

10-yr PV Cost of $33,246 billion

Outcome: 29.56 million healthcare burdened households in 2029

Alternative 3: Expand HSAs and APCDs

Currently, it is estimated that around 21% of the population have high deductible health plans (HDHPs) with health savings accounts (HSAs) (KFF, 2021). Furthermore, an estimated 45% of private industry workers use HDHPs. For those who do not have HDHPs, approximately 15% have no deductible and 85% have a deductible, whose median is $500 for an individual

(BLS, 2018). Thus, decreasing the minimum deductible for HSA eligibility to $500 for an individual would increase the number of HSA-eligible workers by around 23 percentage points, or about 50%. Assuming the same rate of HSA usage amongst this population, health savings accounts would increase the budgetary cost of HSAs by about 50%. Based on scaled-up state estimates, the implementation of a nationwide APCD could cost and additional $150 million per year.

Increased HSA eligibility could decrease healthcare spending by 5% for the around 10% of the population that gains eligibility. Furthermore, studies show a 17% reduction in healthcare costs for price-aware consumers while just over 10% of consumers utilize the price transparency tool enough to become price aware. Assuming a more generous 20% rate of utilization for those with HDHPs, this analysis achieves the following cost-effectiveness estimate for HSA expansion and federal APCD implementation.

10-yr PV Cost of $34,399 billion

Outcome: 29.41 million healthcare burdened households in 2029

Alternative 4: Promote Value-Based Care

Evidence shows that value-based care adoption could decrease Medicare spending by $150 per person, precipitating the following cost-effectiveness estimate.

10-yr PV Cost of $34,399 billion

Outcome: 29.31 million healthcare burdened households in 2029

Alternative 5: Incentivize Global Budgets Hospital Cost Containment at the Federal Level

Evidence shows that the implementation of global budgets can contain hospital costs without redirecting care. To achieve the following cost-effectiveness estimate, this analysis assumes that all states succeed in containing hospital spending growth to 2% annually and thus receive a bonus worth 10% of Medicaid funding.

10-yr PV Cost of $34,871 billion

Outcome: 29.06 million healthcare burdened households in 2029

Quality

Status Quo

Maintaining the status quo would, by definition, have no effect on the current quality of care. Furthermore, we could assume that the current trends in quality would be sustained in the near future. According to the Agency for Healthcare Research and Quality (AHRQ), healthcare quality measures in 2019 have improved over a 5-10 year period. As noted in AHRQ's 2021 National Healthcare Quality and Disparities Report, quality measures have mostly improved across the six quality categories: person-centered care, patient safety, care coordination, affordable care, effective treatment, and healthy living. Additionally, outcomes such as "deaths per 1,000 hospital admissions with expected low-mortality" have improved over the three year period from 2016-2018 from 0.57 to 0.52, a statistically significant improvement. Healthcare quality seems to be improving. Assuming these trends would continue under the status quo, we can say that this alternative would achieve at least moderate health quality. This analysis will assign the status quo a quality score of 3 out of 5.

Alternative 2: Alter the Tax Exclusion for Employer-Sponsored Insurance

Changing the tax treatment of health insurance would hardly alter the status quo. All else equal, this alternative should have little effect on healthcare quality. This analysis will assign this alternative a quality score of 3 out of 5.

Alternative 3: Expand HSAs and APCDs

Just as is the case with alternative 2, expanding HSAs and price transparency should have little effect on healthcare quality, all else equal. This analysis will assign this alternative a quality score of 3 out of 5.

Alternative 4: Promote Value-Based Care

Value-based care expansion would serve to transition healthcare payment to a value-based system which prioritizes improvements in healthcare cost as well as quality. According to a 2014 CMS analysis, quality scores for ACOs increased by 19% in just one year from 2012 to 2013. ACOs showed improvements in 28 of 33 quality measures over this time (CMS, 2014). Overall, the evidence seems to show that ACOs see large increases in quality of care over time. This analysis will therefore assign this alternative a quality score of 5 out of 5.

Alternative 5: Federal Global Budgets Incentives

By seeking to confine the rate of increase of hospital costs, federal incentives risk incentivizing prioritizing cost containment over quality improvement. Thus, this analysis will assign this alternative a quality score of 2 out of 5.

Equity

Alternative 1: Status Quo

Under the status quo, the bottom decile of income earning households spend around 30% of income on healthcare. This contrasts with the highest 10% of income earners, who spend just above 4% of household income on healthcare (BLS, 2020). This discrepancy may seem shocking at first. Yet, it should not be surprising given that those with lower incomes will inevitably spend a higher percentage of income on necessities such as food, shelter, and healthcare. Assuming the current trends continue under the status quo, we should expect to see the lowest and highest decile of income earners spend 25-30% and 4-5% of income on healthcare respectively over the next decade. Again, though these numbers may seem to indicate large inequities in the provision of healthcare, they are hardly surprising. This analysis will assign the status quo an equity score of 3 out of 5.

Alternative 2: Alter the Tax Exclusion for Employer-Sponsored Insurance

According to the Tax Policy Center, "because the employer-sponsored health insurance exclusion reduces taxable income, it is worth more to taxpayers in higher tax brackets than to those in lower brackets, who are less likely to be covered by ESI in the first place" (TPC, 2020). Therefore, reducing this employer-sponsored insurance deduction should increase overall equity in the health insurance market. Furthermore, providing an equivalent tax credit for insurance obtained on the individual exchange could further benefit middle- and lower-income Americans. Finally, as the tax exclusion phases out due to inflation, the preferential treatment of employer-sponsored insurance would decrease, effectively further decreasing this tax subsidy for higher-income earners. All in all, altering the ESI tax exclusion would produce greater equity in health

insurance markets and after-tax income. This analysis will assign this policy alternative an equity score of 5 out of 5.

Alternative 3: Expand HSAs and APCDs

While lower-income Americans do utilize health savings accounts, it is widely accepted that HSAs provide a greater benefit to those at the middle and upper ends of the income spectrum. This is fairly self-explanatory; individuals with a higher taxable income have a higher ability to contribute to health savings accounts. Furthermore, overall HSA utilization is lower amongst lower income Americans than higher income Americans. For example, according to the Government Accountability Office, 16% of tax filers with adjusted gross income below $30,000 report HSA contributions while 50% of filers with incomes over $75,000 do the same (CBPP, 2020). The equity effects of greater price transparency are less easy to discern. To the extent that greater price transparency motivates increased market efficiency in healthcare, it benefits all people, especially those at the lower end of the spectrum, who have more to gain from overall healthcare cost reduction (small reductions in the cost of healthcare can result in greater changes in healthcare spending as a percentage of income for those at the lower end of the income spectrum). Yet, since lower-income Americans have lower utilization of HSAs, we may expect that they are less price-sensitive than higher income Americans. On the other hand, lower-income Americans who spend more on out-of-pocket healthcare costs might be more price-aware than other Americans. All-in-all, this policy alternative likely benefits all Americans, yet, it should benefit middle- and upper-income Americans the most, all else equal. Thus, this analysis will assign this alternative an equity score of 1 out of 5.

Alternative 4: Promote Value-Based Care

Expanding value-based care should benefit Americans of all income levels. Yet, those on the lower end of the income spectrum have more to gain from relative improvements in healthcare affordability and quality, particularly for government social insurance beneficiaries. Therefore, this analysis will assign this alternative an equity score of 4 out of 5.

Alternative 5: Federal Global Budgets Incentives

Since hospital care utilization is greater amongst low-income Americans, reductions in the rate of increase of hospital costs could serve to benefit lower income Americans the most. Yet, to the extent that healthcare quality suffers, this burden would also land on lower income Americans. This analysis will assign this alternative an equity score of 3 out of 5.

Political Feasibility

Alternative 1: Status Quo

The status quo clearly has the highest political feasibility since it requires, by definition, little political support to be maintained. One may argue that an increasingly untenable status quo could be seen as less politically feasible than other alternatives. Yet, given the "gridlock" inherent in the federal legislature, we can assume that the status quo is highly feasible relative to alternatives. This analysis will assign this alternative a feasibility score of 5 out of 5.

Alternative 2: Modify ESI Tax Treatment

This policy alternative strays the least from the status quo. Rather than upend the healthcare system, it would simply promote small incremental change. Certainly, stakeholders such as private health insurers would oppose such a change, since it would decrease the incentive for employees to "splurge" on insurance coverage. Yet, it introduced far less sweeping and disruptive change than other proposals. This analysis will assign this alternative a feasibility score of 4 out of 5.

Alternative 3: Expand HSAs and APCDs

Health insurance providers would certainly protest these reforms' intended effect of decreasing their role in healthcare payment. Healthcare providers and innovators, however, should support this alternative. Both PhRMA and the AMA promote greater consumer empowerment and cost transparency in the healthcare system. Amongst legislators, this policy alternative would surely break down along party lines, with Republicans supporting it as

empowering consumers and Democrats deriding it as benefitting the wealthy. All in all, this policy should achieve a feasibility score of 2 out of 5.

Alternative 4: Promote Value-Based Care

There is surprisingly shared support for further value-based healthcare payment and delivery amongst stakeholder interest groups. PhRMA, the AMA, and America's Health Insurance Plans (AHIP) all claim to support value-driven payment reforms. Furthermore, promotion of value-based care payment and delivery has been a relatively non-controversial issue on capitol hill, as well, embraced by legislators on both sides of the political aisle. For instance, a 2021 prospective bill titled "Accountable Care in Rural America Act" garnered co-sponsorship from a mixed group of House Democrats and Republicans. This analysis will assign this policy alternative a feasibility score of 4 out of 5.

Alternative 5: Federal Global Budgets Incentives

The political feasibility of this alternative is less certain as it is less prominent in the national discussion. Many academic journals have weighed in on the policy merits of global budgets state programs; yet, there is less discussion of the political support for such a policy. Thus, any measure of political feasibility would contain quite a bit of uncertainty. Yet, we can assume, given the limited experimentation with global budgets at the state level (solely in the particularly Democratic state of Maryland), that a national proposal would have plenty of detractors. Since this approach entails greater state-level regulation, more conservative and moderate legislators would likely oppose such a measure. Furthermore, it seems likely that

medical providers and/or pharmaceutical firms would lobby against such legislation. All in all, this analysis will assign this alternative a feasibility score of 1 out of 5.

Ease of Implementation

Alternative 1: Status Quo

Clearly maintenance of the status quo is easily implemented. This analysis will assign this alternative an implementation score of 3 out of 3.

Alternative 2: Modify ESI Tax Exclusion

The implementation of this policy would add little difficulty to the already complicated tax structure and implementation. This analysis will assign this alternative an implementation score of 3 out of 3.

Alternative 3: Expand HSAs and APCDs

Expanding HSA eligibility would similarly add little additional complexity to the tax system. Yet, the implementation of a nationwide all-payer claims database would certainly introduce additional implementation concerns. Rolled out through the Department of Health and Human Services, an additional database would invite technological difficulty and implementation concern. We will assign this alternative an implementation score of 1 out of 3.

Alternative 4: Promote Value-Based Care

This alternative would require mere modification to the current Medicare reimbursement law. This policy's implementation could presumably be introduced as yet another of the many responsibilities of the CMS. We will assign an implementation score of 3 out of 3.

Alternative 5: Federal Global Budgets Incentives

This alternative could be quite difficult to implement as it would require intensive recording of state hospital costs. These incentives, however, could be delivered using the current Medicaid state funding channels. All in all, we will assign this alternative an implementation score of 2 out of 3.

Outcomes Matrix

	Cost Effectiveness Score (50%)	Quality (20%)	Equity (10%)	Political Feasibility (10%)	Ease of Implementation (10%)	Weighted Average Score
1. Status Quo	2	3	3	5	3	2.9
2. Modify ESI Tax Exclusion	3	3	5	4	3	3.5
3. Expand HSA and APCD	4	3	1	2	1	3.1
4. Promote Value-Based Care	4	5	4	4	3	4.3
5. Federal Global Budgets Incentives	3	2	3	1	2	2.6

Recommendation

Given my analysis, **I recommend the federal legislature implement alternative 4: expanding accountable care organizations**. In addition to proving highly cost-effective, this policy alternative scores well in all five of our evaluation criteria. This policy would serve to hasten the move to a value-based system of care delivery and payment. In doing so, it would tackle shortcoming in both cost and quality of care simultaneously, providing the greatest relief to the broadest range of Americans.

This policy would be enacted through the traditional legislative process, by a majority vote in both chambers of congress and a sign-off from the President. Then, the CMS would spearhead implementation of the policy by modifying Medicare reimbursement rates and widening ACO eligibility in coordination with the states.

One should note that all five of the prospective policy alternatives show promise as successful federal measures to address rising healthcare costs. All in all, our fourth alternative of expanding value-base care through ACOs simply provides the best combination of cost-effectiveness, quality and equity promotion, and general enactment and implementation practicality. I would also like to **secondarily recommend both alternatives 2 and 3**, for modification of the ESI tax exclusion and expansion of consumer-empowering reforms. Both policies show great promise and could be implemented alongside alternative 4. Alternative 2 is particularly attractive for its political and implementation practicality. Yet, it fails to measure up to option 4 in cost-effectiveness. All in all, the implementation of these recommendations should precipitate positive change towards controlling the rising cost of healthcare in this country.

References

Appleby, J. (2017). *Health Savings Accounts Are Back in the Policy Spotlight*. NPR. Retrieved November 1, 2021, from https://www.npr.org/sections/health-shots/2017/02/02/513060189/health-savings-accounts-are-back-in-the-policy-spotlight.

Bakre, S., Hollingsworth, J. M., Yan, P. L., Lawton, E. J., Hirth, R. A., & Shahinian, V. B. (2020). Accountable care organizations and spending for patients undergoing long-term dialysis. *Clinical Journal of the American Society of Nephrology*, *15*(12), 1777–1784. https://doi.org/10.2215/cjn.02150220

Bunis, D. (2021). *Understanding Medicare part A, part B, part C and part D*. AARP. https://www.aarp.org/health/medicare-insurance/info-01-2011/understanding_medicare_the_plans.html.

Cauchi, R. (2018). *Collecting Health Data: All-Payer Claims Databases*. National Conference of State Legislatures. https://www.ncsl.org/research/health/collecting-health-data-all-payer-claims-database.aspx.

Center on Budget and Policy Priorities (2020). *Policy basics: Where do our federal tax dollars go?* https://www.cbpp.org/research/federal-budget/where-do-our-federal-tax-dollars-go.

Centers for Medicare & Medicaid Services (2021). Office of the Actuary. National Health Statistics Group; U.S. Department of Commerce, Bureau of Economic Analysis; and U.S. Bureau of the Census.

Chalise, Lekhnath (2020). How have healthcare expenditures changed? Evidence from the Consumer Expenditure Surveys. *Beyond the Numbers: Prices & Spending*, vol. 9, no. 15. U.S. Bureau of Labor Statistics. https://www.bls.gov/opub/btn/volume-9/how-have-healthcare-expenditures-changed-evidence-from-the-consumer-expenditure-surveys.htm.

Christensen, Hans Bonde and Floyd, Eric and Maffett, Mark G. (2019). The Only Prescription is Transparency: The Effect of Charge-Price-Transparency Regulation on Healthcare Prices. Chicago Booth Research Paper No. 14-33. https://ssrn.com/abstract=2343367 or http://dx.doi.org/10.2139/ssrn.2343367.

Cohen, W., & Ball, R. (1965). *Social Security Amendments of 1965: Summary and Legislative History*. Social Security Administration. https://www.ssa.gov/policy/docs/ssb/v28n9/v28n9p3.pdf.

Congress.gov. (2003). *H.R.1 - 108th Congress (2003-2004): Medicare Prescription Drug, Improvement, and Modernization Act of 2003*. https://www.congress.gov/bill/108th-congress/house-bill/1

Congress.gov. (2010). *H.R.3590 - 111th congress (2009-2010): Patient protection and Affordable Care Act*. https://www.congress.gov/bill/111th-congress/house-bill/3590/

Department of Health and Human Services (2020). *Clinical Preventive Services*. Healthy People. https://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Clinical-Preventive-Services.

Desai S., Hatfield L., Hicks A., Chernew M., Mehrotra A. (2016). Association between availability of a price transparency tool and outpatient spending. JAMA - Journal of the American Medical Association; 315: pp. 1874-1881.

Evans, M., Mathews, A. W., & McGinty, T. (2021). *Hospitals often charge uninsured people the highest prices, New Data Show*. The Wall Street Journal. https://www.wsj.com/articles/hospitals-often-charge-uninsured-people-the-highest-prices-new-data-show-11625584448

Federal Reserve Economic Data (2021). Consumer Price Index: Total All Items for the United States. *Federal Reserve Bank of St. Louis*. https://fred.stlouisfed.org/series/CPALTT01USA661S.

Finkelstein, A. (2002). The Effect of Tax Subsidies to Employer-Provided Supplementary Health Insurance: Evidence from Canada. Journal of Public Economics, Volume 84, Issue 3. https://doi.org/10.1016/S0047-2727(00)00155-9.

Gourevitch R., Desai S., Hicks A., Hatfield L., Chernew M., Mehrotra A. (2017). Who uses a price transparency tool? Implications for increasing consumer engagement. Inquiry, 54.

HealthCare.gov. (2021). *Glossary*. https://www.healthcare.gov/glossary/.

Henry, T. (2017). *Despite APM participation, fee for service still dominates*. American Medical Association. https://www.ama-assn.org/practice-management/payment-delivery-models/despite-apm-participation-fee-service-still-dominates .

Kessell, E., Pegany, V., Keolanui, B., Fulton, B. D., Scheffler, R. M., & Shortell, S. M. (2015). Review of Medicare, Medicaid, and commercial quality of care measures: Considerations for Assessing Accountable Care Organizations. *Journal of Health Politics, Policy and Law*, *40*(4), 761–796. https://doi.org/10.1215/03616878-3150050

Kraft, A. D., Quimbo, S. A., Solon, O., Shimkhada, R., Florentino, J., & Peabody, J. W. (2009). The Health and Cost Impact of Care Delay and the Experimental Impact of Insurance on Reducing Delays. *The Journal of Pediatrics*, *155*(2). https://doi.org/10.1016/j.jpeds.2009.02.035.

Kurani, N., & Wager, E. (2021). *How does the quality of the U.S. health system compare to other countries?* Peterson-KFF Health System Tracker. Retrieved April 28, 2022, from https://www.healthsystemtracker.org/chart-collection/quality-u-s-healthcare-system-compare-countries/#:~:text=The%20U.S.%20ranks%20last%20in,by%20timely%20and%20effective%20care.

Lagasse, J. (2021). *Just 5.6% of hospitals are compliant with the Price Transparency Rule*. Healthcare Finance News. https://www.healthcarefinancenews.com/news/just-56-hospitals-are-compliant-price-transparency-rule

Leonhardt, M. (2020). *32% of American workers have medical debt-and over half have defaulted on it*. CNBC. https://www.cnbc.com/2020/02/13/one-third-of-american-workers-have-medical-debt-and-most-default.html.

Liao, J. M., Navathe, A. S., & Werner, R. M. (2020). The impact of Medicare's alternative payment models on the value of care. *Annual Review of Public Health*, *41*(1), 551–565. https://doi.org/10.1146/annurev-publhealth-040119-094327

Lieber, E. (2017). Does it pay to know prices in health care?. American Economic Journal: Economic Policy; 9: pp. 154-179.

Maeng, D. D., Hao, J., & Bulger, J. B. (2017). Patterns of Multiple Emergency Department Visits: Do Primary Care Physicians Matter?. *The Permanente journal*, *21*, 16–063. https://doi.org/10.7812/TPP/16-063.

Miller, H. D. (2009). From volume to value: Better Ways to pay for Health Care. *Health Affairs*, *28*(5), 1418–1428. https://doi.org/10.1377/hlthaff.28.5.1418

Mulcahy, A. (2021, January 27). *Prescription drug prices in the United States are 2.56 times those in other countries*. RAND Corporation. Retrieved from https://www.rand.org/news/press/2021/01/28.html

Organization for Economic Co-operation and Development (2017), "Consultations with doctors", in Health at a Glance 2017: OECD Indicators, OECD Publishing, Paris. DOI: https://doi.org/10.1787/health_glance-2017-60-en.

Organization for Economic Co-operation and Development (2021), Health spending. doi: 10.1787/8643de7e-en.

Osborne, M. (2019). *Costs for exact same medical procedures vary dramatically in different hospitals, study says*. ABC News. Retrieved from https://abcnews.go.com/US/costs-exact-medical-procedures-vary-dramatically-hospitals-study/story?id=62747516.

Raphael, C., Ahrens, J., & Fowler, N. (2001). Financing end-of-life care in the USA. *Journal of the Royal Society of Medicine*, *94*(9), 458–467. https://doi.org/10.1177/014107680109400912

Roberts, E. T., Hatfield, L. A., McWilliams, J. M., Chernew, M. E., Done, N., Gerovich, S., Gilstrap, L., & Mehrotra, A. (2018). Changes in hospital utilization three years into Maryland's Global Budget Program for rural hospitals. *Health Affairs*, *37*(4), 644–653. https://doi.org/10.1377/hlthaff.2018.0112

Royal College of Psychiatrists (2017). *Debt and mental health*. https://www.rcpsych.ac.uk/mental-health/problems-disorders/debt-and-mental-health.

Rudowitz, R., Williams, E., Hinton, E., & Garfield, R. (2021). *Medicaid Financing: The Basics - Issue Brief*. KFF. https://www.kff.org/report-section/medicaid-financing-the-basics-issue-brief/.

Saad, L. (2019). *More Americans Delaying Medical Treatment Due to Cost*. Gallup. https://news.gallup.com/poll/269138/americans-delaying-medical-treatment-due-cost.aspx.

Salamy, E. (2021). *Delayed medical care due to covid-19 could cost thousands their lives*. WSET. https://wset.com/news/nation-world/delayed-medical-care-due-to-covid-19-could-cost-thousands-their-lives.

Sasso, A.T., Shah, M. and Frogner, B.K. (2010), Health Savings Accounts and Health Care Spending. Health Services Research, 45: 1041-1060. https://doi.org/10.1111/j.1475-6773.2010.01124.x

Tollen, L., Keating, E., Weil, A. (2020). How Administrative Spending Contributes to Excess US Health Spending. *Health Affairs*. https://www.healthaffairs.org/do/10.1377/hblog20200218.375060/full/

U.S. Census Bureau. (2021). *Health insurance coverage in the United States: 2020*. Census.gov. Retrieved December 7, 2021, from https://www.census.gov/library/publications/2021/demo/p60-274.html.

U.S. Bureau of Labor Statistics. (2015-2020). Consumer Expenditure Survey.