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REDUCING THE COST OF VIRGINIA'S MEDICAID PROGRAM

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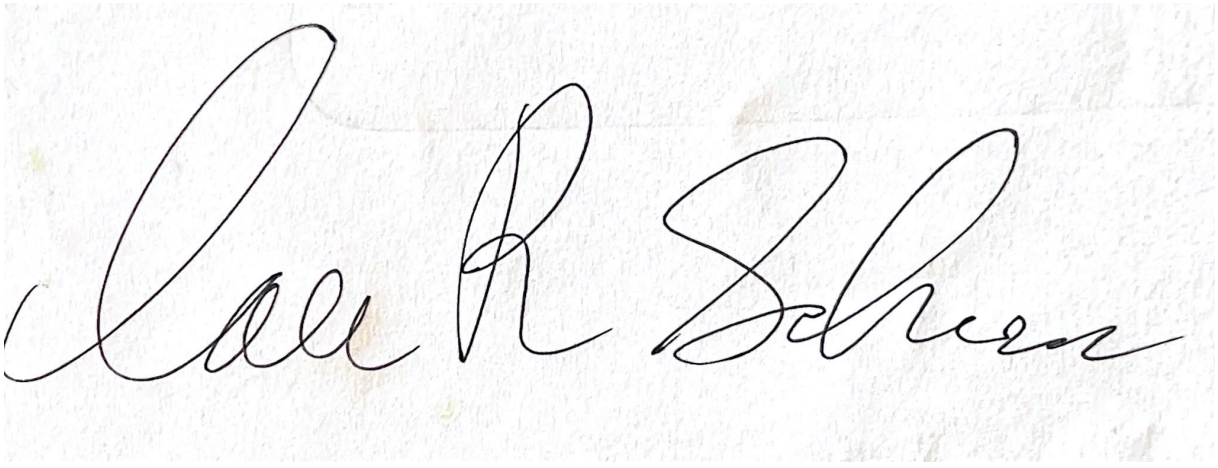
DISCLAIMER & HONOR CODE

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.

Honor Pledge:

On my honor, I pledge that I neither received nor gave unauthorized aid on this assignment



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Medicaid Issues in Virginia

EXECUTIVE SUMMARY:

This report focuses on solving the cost burden that Virginia's Medicaid program imposes on the Commonwealth. Since 2012, the state's Medicaid program has become 36% more expensive to run and costs $6 billion dollars greater to run each year (KFF, n.d.; JLARC, 2020). This increased spending brings significant financial waste which costs the state millions of dollars every year. This is money that does not provide any health benefits and can no longer be spent on other services. This inefficiency is abundantly obvious when Virginia's Medicaid program is compared to the Medicaid program run by other states in the region. Most worrisome, the program has picked up its pace of spending, growing by over 8% a year over the last decade. This report looks at what is causing this rapid growth in Medicaid spending and provides solutions that can set the state back on pace for much healthier, slower growth.

This report was written for the Commonwealth Institute of Fiscal Analysis and focuses on long-term solutions that tackle the systemic spending issues associated with Virginia's Medicaid spending. To understand these solutions, this report contains sections on the background and structure of the Medicaid program in general and how it is run in Virginia. Within this background section is an analysis of the true social cost of the Medicaid program, identifying exactly what the state loses each year by running its current system. This report follows the issue background with a look at what policy solutions have been attempted in both other states and abroad to find a potential basis for a Virginia policy fix. Having evaluated previous policies in the Medicaid Literature section, this report proposes three policies that could provide some relief from Medicaid's financial toll. The policies evaluated here are: starting a Medicaid health home in Richmond, Virginia, installing a global budget financial structure at two Virginia hospitals, and establishing three Regional Accountable Care organizations in three separate Virginia house districts.

These policy solutions are evaluated on a range of criteria that include cost-effectiveness, cost reduction, political feasibility, and more. After in-depth cost evaluations, which are detailed in Appendix C, this report recommends that the Commonwealth Institute lobby Virginia's Department of Medical Assistance Services to establish these Regional Accountable Care organizations. The driving factor behind this recommendation is the program's ability to save $888 million dollars over the next 10 years and could be expanded even further if effective. Finally, an implementation plan is provided to aid both the Commonwealth Institute and the Virginia Department of Medical Assistance Services in pursuit of this policy.

Acknowledgments

To my Family:

I could not have done any part of this project or program without your love and support. To my mom, who is the strongest person I have ever met, you inspired me every time I struggled. To my father, the steady presence I needed every time I felt lost. To my brothers, I wouldn't trade the world for you guys, thank you for always being there.

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REPORT OVERVIEW

Virginia's Medicaid program is a massive state-run health program that continues to consume greater portions of state spending every year. This report takes a comprehensive view of the Medicaid program to identify the issues that stem from this spending and the negative effects that it has on Virginia. From there, this report reviews the available literature on the Medicaid program and policies that have been attempted in other states to find possible alternatives that could be used in Virginia. The next step of the report applies this literature to create programs which are fitted to the state and are then evaluated to measure their future financial and health impacts. Based upon preset criteria, this report identifies and recommends which program would have the greatest benefit and how it could be implemented. At its base, this report identifies why Virginia's Medicaid spending should be addressed, how it can be addressed, and what specific policy would best improve its future.

Report Overview

The Issue

As of the fiscal year (FY) 2022, Medicaid will account for around 26% of Virginia's entire budget and cost the state over $13 billion in FY2021 (KFF, n.d.). This is up from 19% of the budget and $7.6 billion in FY12. State health expenditures have averaged a growth rate of over 8% per year for the last decade (JLARC, 2020). Yet, this runaway spending is not unique to the Commonwealth of Virginia, as combined national and state expenditures on Medicaid reached around $240 billion in 2019; up from $129 billion in 2010 (CMS, n.d.; CMS Report, 2010). Such high growth rates indicate that it is unlikely for Medicaid spending to slow any time soon. Despite rapidly increasing spending, Virginia's Medicaid program performs poorly in comparison to other states in its region, and estimates of the program's inefficiencies put programmatic waste around 10-14% of annual spending (Linder, 2018). **As a result, Virginia's Medicaid program costs too much money for the level of care it provides**. Reducing the total cost of the program, without reducing access or quality of care (QOC), should lead to greater spending on other state projects and increased well-being for Virginia's citizens.

Client Background

The client for this report is the Commonwealth Institute (TCI) for Fiscal Analysis. Located in Virginia, they are a research organization that combats public policy issues by advocating for solutions that are formed by working with the affected populations (TCI, n.d.). This has led the team to be focused on advancing racial and economic justice in Virginia with policies that are shaped by credible fiscal and policy research. TCI is driven to use public policy to remove rather than erect barriers to entry in building healthier communities across the state. This report is critical to TCI as Virginia's Medicaid program greatly affects socially marginalized communities in Virginia. For example, Virginia's Medicaid beneficiaries are all low income, 35% are black or African American, and overall 50% are non-white citizens (DMAS, n.d.). These are the populations whom TCI looks to help and improving the Medicaid program can do this.

TCI needs to have this research because changes to Medicaid are constantly being discussed at both the national and state level. If TCI wants to be able to effectively advocate for disadvantaged populations when changes are considered by the Virginia Department of Medical Assistance Services (DMAS) or the state legislature, having an issue background and a synthesized report on policy options is critical. Political science research is very clear that to effectively advocate for a policy alternative, organizations need to identify policy windows and that advocates have to be properly prepared before this window opens (Kingdon, 1984). Though Virginia's Medicaid program is not currently in such a window, to properly advocate for their preferred policy option TCI needs have this report before it is. By working with TCI, we can prepare their organization to be ready to strike whenever Virginia's Medicaid program faces significant pressures to change.

ISSUE BACKGROUND:

Rising Healthcare Expenditures and their Effect on Medicaid

Background

Medical spending in the United States is a national crisis with spending on health expenditures increasing from $75 billion in 1970 to $3.6 trillion in 2018 (Kamal, 2020). As the largest provider of low-income health coverage in the nation, the Medicaid program has been no exception to this growth (Medicaid, n.d.). Medicaid is a federally established program that, though it is run by individual states, is paid for by both state and federal governments (Garfield, 2019). The program works by providing health coverage to low-income families who fall under a certain range of the federal poverty line, a threshold which was set by individual states before the passage of the Patient Protection and Affordable Care Act (Health Care.org, n.d.). As an entitlement program, any patient who is eligible to receive state coverage has a right to state benefits (CBPP, 2020). Crucially, since Medicaid provides state health insurance rather than state health care services directly, as the cost to provide services rise, so does the cost to the state. Medicaid insurance operates predominantly as a fee-for-service (FFS) provider, with exceptions, where they pay doctors and healthcare professionals directly for every service provided to beneficiaries (MACPAC, n.d.). It is the cost to run this government program in Virginia that has become the greatest issue.

The increasing cost of this program results from the rapid pace of healthcare spending in the U.S., which has had a growth rate almost double that of the entire U.S. economy since 1995 (Dielman, 2017). Indeed, the Consumer Price Index (CPI), which represents how the price of goods has changed over time, rose by about 34% for all urban consumer goods between 2000 and 2020, yet rose by more than 50% for urban medical care over the same period (FRED, n.d.; FRED, n.d.). The two sides of healthcare spending are the utilization of services and unit prices (Karapiperis, 2018). Understanding which one of these is driving spending increases can help create more targeted policy solutions. One study found that since 1995, increases in the population size, aging of the national population, and changes in service prices were associated with about 83% of spending increases, with service pricing changes accounting for about 50% of this (Dielman, 2017). Yet other sources have provided evidence that there are also other drivers of increased spending. The CBO estimated in 2008 that chronic conditions account for more than 75% of all healthcare spending (Norbeck, 2013). Common chronic conditions include heart disease, cancer, asthma, diabetes, arthritis, stroke, and many more (CDC, 2010). These chronic conditions create a situation where around 1% of health care users account for 20% of all healthcare expenditures and the 10% account for 63% of all spending. These chronic conditions, combined with growth in service pricing, give policymakers several avenues by which they can address rising healthcare spending.

Who is Responsible for Medicaid?

As a joint state-federal program, there are many layers to Medicaid responsibility. Though federally established, Medicaid programs vary from state to state and can have differing degrees of coverage, payment, and eligibility (CBPP, 2020). The cost of the program is split between federal and state governments and differs across states. The amount of money that is paid for by the federal government is set by Federal Medical Assistance Percentages, which are determined by the costs of the program (Snyder, 2015). States are guaranteed at least one dollar for every dollar they spend on the program but can also earn enhanced matched rates for expanded population groups. It is because of this matched funding that Medicaid is both one of the largest state expenditures and one of the largest sources of state funding (Snyder, 2015). Virginia has an FMAP of around 50.4%, meaning the state is responsible for 49.6% of all of its own Medicaid spending (CRS, 202).

Background

Outside of funding, the Virginia Medicaid program is administered by three different government agencies: the Department of Health and Human Services (HHS), the Centers for Medicare and Medicaid Services (CMS), and the Virginia DMAS.

Being a jointly run program, the major laws governing Medicaid come from both state and federal legislative bodies. Federally, the Patient Protection and Affordable Care Act (P.L. 111-148), known as the Affordable Care Act (ACA), enacted the most prominent Medicaid changes over the last 20 years. The law's main goal is to decrease the rate of uninsured citizens across the country (King, 2011). Major relevant provisions of the ACA created government-run health insurance marketplaces, increased the Medicaid FMAP for states that offered no-charge coverage for preventative health, and expanded Medicaid coverage to those who had incomes under 138% of the federal poverty line rather than 100% (Tolbert, 2015; King, 2011). For this expanded Medicaid coverage, the federal government funded 100% of the cost of covering this new population when the program started in 2014 but phased down to 90% by 2020 (Rudowitz, 2021). Though the expansion of coverage was originally mandatory, the Supreme Court in National Federation of Independent Business v. Sebelius limited the federal government's ability to enforce the provision (Rosenbaum, 2012). Expanded coverage, known as Medicaid expansion, became an optional decision that would be left up to each state (Rosenbaum, 2012). Almost 10 years later, there are several states who have not expanded their coverage, despite the high FMAP and the increased financial incentives that were passed under the American Rescue Plan of 2021 (Rudowitz, 2021).

At the highest level, HHS is the federal agency that oversees the operation of CMS as one of its 8 public health agencies (HHS, n.d.). HHS's mission statement lists providing effective health services through the fostering of advances in public health and social services as a core tenant of the organization (HHS, n.d.). Ensuring proper administration of CMS, the agency in charge of Medicaid and the ones responsible for setting federal standards of operations, is part of this mission (CMS, n.d.). CMS itself helps guide individual states and their Medicaid agencies through standards of operation outputs such as their State Medicaid Director and State Health Official letters (MacPAc, n.d.). CMS and HHS are the federal organizations directly charged with leading effective administration of the Medicaid program.

Even though CMS overlooks Medicaid laws at the federal stage, Virginia's DMAS helps to set Medicaid rules at the state level and is responsible for administrating the Medicaid program in Virginia (DMAS, n.d.). This includes major provisions such as the changes that came with the Affordable Care Act. Virginia recently enacted Medicaid expansion from this act as a part of its budget during a special session of the legislature in 2018 (HB5001, 2018). More than 300,000 state citizens enrolled in the program over the eight months following the programs start date in January, 2019 (JLARC, n.d.). DMAS lists its mission as "improving the health and well-being of Virginians through access to high-quality health care coverage" (DMAS, n.d.). Even smaller than this, local government social services departments are responsible for determining who is eligible for the Virginia Medicaid program (Alexandria, n.d.).

In addition to the changes associated with expansion, Virginia's Medicaid system has started to move away from the basic fee-for-service model of health insurance by switching its beneficiaries over to managed care organizations (MCOs) (DMAS, 2020). MCOs attempt to deliver lower cost and higher quality healthcare by assigning patients to

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a group of doctors who work together with other providers to administer the best care (Medallion, n.d.). There are two MCO models in Virginia, Medallion 4.0 and Commonwealth Coordinate Care Plus, that administer Medicaid benefits to more than 90% of all the state's beneficiaries (DMAS, n.d.). Though this is one of the main policies Virginia has pursued to reduce the cost of the Medicaid program there are other options that could be more beneficial to the state. The most advantageous of these are discussed in the possible policy section.

Consequences of this Medicaid Spending

The status quo of Virginia's Medicaid program revolves around how much the state spends to run its health insurance program and how many people it affects. As of FY 2020 (which ran from October 2019 to September 2020), Virginia spent more than $13.5 billion on its Medicaid program, including Medicaid expansion (KFF, n.d.). Appropriations to DMAS made up about 25% of the state's appropriations and accounted for 22% of the entire state's $22.3 billion general fund (JLARC, 2020). Worse, DMAS has doubled their total cost from $7.5 billion to $15.1 billion and accounted for 32% of the entire increase in Virginia's budget over the last decade. As such a huge state expenditure and one that is growing so rapidly, the Medicaid program must be run effectively and with as little waste as possible. While it would be 26% more expensive to move an adult covered by Medicaid to private insurance for a year and 37% more expensive for a child, there are still large areas of inefficiencies in the program (Ku, 2008; Kim, 2017). The current program provides Medicaid services to about 1.5 million state citizens for $13.5 billion (KFF, n.d.). Within this status quo, there are areas of inefficiency that result in massive direct and opportunity costs being levied on the state.

Knowing that these Medicaid inefficiencies exist, it is then important to define how Virginia's program creates societal costs that are levied on the commonwealth. In fact, the societal cost of the program is not the total spending that Virginia pays every year. Providing health insurance to low-income families and individuals has huge social

Figure 1: Regional Medicaid Spending Per Capita (KFF, n.d.)

	Total Medicaid Enrollees (2019)	Total Medicaid Spending (FY20)	Spending Per Capita
West Virginia	593,900	$4,169,411,129	$7,020
Tennessee	1,547,400	$11,593,910,801	$7,492
Kentucky	1,458,900	$11,933,626,395	$8,179
North Carolina	1,801,100	$14,946,535,882	$8,298
Maryland	1,367,100	$11,955,707,042	$8,745
Virginia	1,496,500	$13,565,556,185	$9,064

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benefits to the state, so most of the spending provides net benefits to the state. The direct costs come when Virginia spends more on Medicaid than they need to gain particular benefits. Though the literature may say that Medicaid is more efficient at providing services than private insurance, Virginia's program incurs costs by being less efficient than they are able to (Clemons, 2016). Figure 1 shows the regional enrollment, spending, and per capita spending of other states and D.C.'s Medicaid programs using data from the Kaiser Family Foundation (KFF, n.d.). If Virginia's Medicaid program is compared with its regional partners, the program is providing its services at the highest per capita cost despite not having the largest Medicaid population or spending the most. Virginia's per capita spending is 14% higher than the average of the region's other states making the program 14% more inefficient and creating direct costs that are equal to roughly $1.89 billion in inefficient spending.

Nationally, there are broader estimates of Medicaid's costs that come from research on wasted spending. One study estimates that Medicaid programs waste about 30% of every dollar spent on healthcare (Berwick et al., 2010). Another paper argues that this rate is probably too high but that states do waste more than 5% of their entire Medicaid spending (Linder, 2018). Using these estimates as bookends would put the direct costs of Virginia's current Medicaid program between $678 million and $4.07 billion respectively. The true cost to Virginia is probably somewhere in between these two, most likely around 10-14% like the regional estimate found above. Both of these papers reference failures in care delivery, care coordination, overtreatment, and administrative complexity as problems adding to broad issues of waste. As these are problems that can easily be found in Virginia, using an estimate derived from the literature and regional comparisons is likely representative of the true estimate. As such, this report puts the direct cost of Virginia's Medicaid problem between $1.35 billion - $1.89 billion a year (literature derived estimate of 10% - a regional estimate of 14%). To reduce even part of these costs would create realized savings of hundreds of millions of dollars for the state.

Outside of direct costs of the program, Virginia's Medicaid has large indirect and opportunity costs. Considering the state's constitutional requirement to balance its budget, every dollar that the program spends inefficiently is a dollar that cannot go to another government service, benefit, or decreased tax burden (Urban, 2021). This results in a situation where every dollar spent inefficiently represents a dollar in opportunity cost. These dollars can no longer be spent on state projects such as state infrastructure, improved educational opportunities, or other welfare programs. Assuming a ratio of one dollar in benefit for every dollar wasted, the opportunity cost of Medicaid's wasted spending is the same as its direct cost, between $1.35 to $1.89 billion.

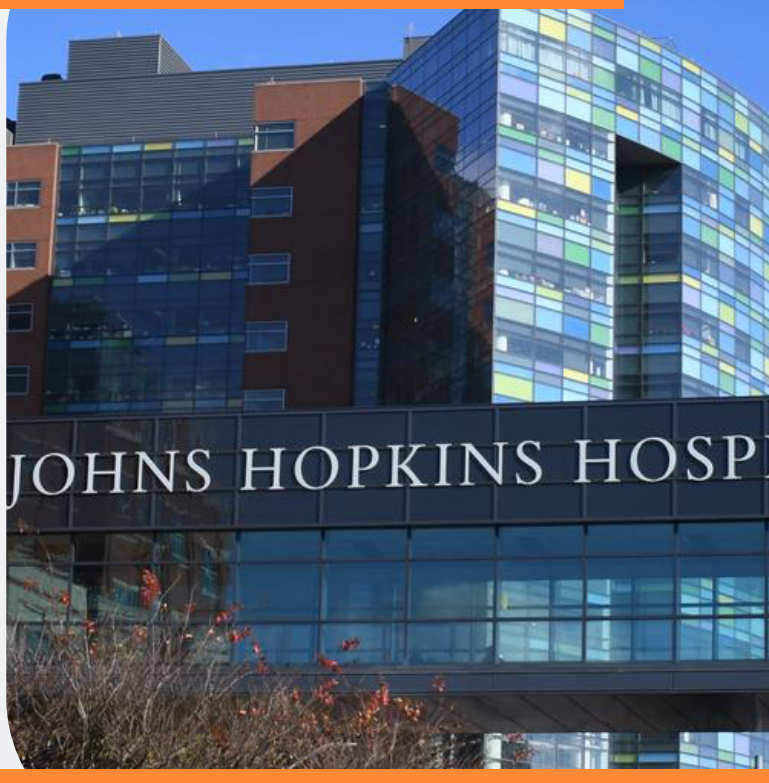
Other indirect costs are generated by the specific way the Medicaid program is run and the incentives this creates. An indirect cost is created when Medicaid fails to incentivize beneficiaries to visit primary care physicians over emergency rooms. Nationally Medicaid beneficiaries were seven times more likely to visit an emergency department (ED) for low severity issues in a year than commercial insurance users (0.25 visits a year vs 0.03 visits) (Kim, 2017). Considering that, on average, it costs $1,865 more to visit an ED compared to a physician's office, which treats low severity cases, this applies additional costs on the state (UnitedHealth Group, 2019). Since there are about 1.53 million non-expansion Medicaid beneficiaries in Virginia, using estimates from this study, there would be around 382,500 low severity ED visits annually (DMAS, n.d.; Kim 2017). In aggregate, these visits represent over $310 million in potential savings for the state if Medicaid was able to reduce beneficiaries' low severity ED visits to commercial insurance holder rates (calculations in Appendix A1).

Background

In total this report estimates the yearly societal costs of Virginia's Medicaid program is somewhere between $3.01 billion – $4.09 billion. This is a wide estimate, but it shows how expensive it is for Virginia to not address the rising cost of its Medicaid program.

MEDICAID POLICY LITERATURE

Potential Policy Routes to Improve Virginia's Program



Policy Literature

The rising cost of medical care has received extensive academic study and researchers have developed a broad literature on ways to reduce it. Possible options found in the literature look at how to decrease the underlying costs of American health care both in and outside of the Medicaid program. The hope is to create more efficient Medicaid programs that would potentially decrease the programmatic costs outlined in the last section without reducing health outcomes. Three options that are considered in this review are switching Virginia's Medicaid program to value-based care, instituting hospital global budgets, and creating state-run super-user programs.

Policy Alternative 1: Value-Based Care

A value-based care alternative would continue to switch Virginia's Medicaid program away from FFS and toward payment models that reimburse medical care providers for the quality of care they provide (CMS, n.d.). This includes either Accountable Care Organizations (ACOs) or a bundled payment system but not the MCOs currently used. CMS has backed this idea for other programs, instituting federal regulations that require every Medicare beneficiary to transition to some form of value-based payments by 2030 (CMS, n.d.). Value-based pricing alternatives aim to measure the value of patient care by relating the comprehensive outcomes of treatment to the resources used (Gray, 2017). Under Medicaid, care quality is evaluated using 32 quality measures set by CMS in 2017 (CMS, n.d.). Most often, value-based alternatives result in fewer healthcare treatments by aligning fiscal rewards with patient outcomes, rewarding providers for healthier patients who require less care, or by punishing providers who issue excessive treatments (NEJM, 2017). The ultimate goal is to transition evaluations of "good" healthcare away from the number of services provided to the true health status of the patient (Putera, 2017). Understanding this, the main question becomes how to achieve such high-quality care while maintaining cost-efficiency.

ACOs are networks of hospitals or healthcare providers who sign contracts with large single payers, usually CMS or state Medicaid organizations, to provide care to a large group of patients (Rebitzer, 2014). These contracts transform many individual providers into a single risk-bearing entity with financial incentives to cut costs. A common configuration sets it such that the ACOs that come under certain cost ceilings set in contracts, while meeting quality standards, earn back a portion of their savings (Rebitzer, 2014). This type of ACO would be considered one-sided, as they only have to worry about securing savings, and not the same as two-sided ACOs, which would have to pay a penalty to their payment provider if they spend more than the contracted budget (Rosenthal, 2011). Though any two-sided ACO that accepts this type of "down-side risk" is also eligible to earn higher percentages of their savings if they do come under their spending level. By sharing both the financial risk and benefits of patient care, policymakers hope ACOs will bring better care coordination, improved communication between specialties, and more comprehensive outpatient care while leading healthcare systems away from the FFS model (McWilliams, 2017). The desired result is a reduction in the overall cost burden of a healthcare system.

So far, data on ACOs show mixed success in achieving both lower-cost care and some small increases in care quality. Throughout many ACO programs, in both Medicaid and Medicare, there have been demonstrable cost savings. In one peer-reviewed study carried out among 4 states, limited Medicaid ACOs saw program cost savings that ranged from about $5.5 million to $65 million over two years (without considering the significant implementation costs) (Rutledge, 2019). While impressive, this study fails to qualify what percentage of savings

these numbers represent which limits the applicability of the research. Yet, a different study of Medicaid ACOs, which was peer-reviewed and journal published, shows how well ACOs can operate at the provider level. In the study, one urban ACO, made up of 10 metro areas health centers, was able to create $16.6 million in cost savings in three years by reducing the total cost of care by about 5% (Blewett, 2017). This cost reduction came from significant reductions in emergency department use (18%) and inpatient hospital use (8%) which are two of the main cost areas ACOs look to reduce (Blewett, 2017). Similarly, a peer-reviewed study of the first year of New Jersey's Medicaid ACO program showed that the state-approved ACOs were able to realize annual savings rates of up to 5.3% (Truchil, 2018). Research also suggests some care increases after several years, with Medicare's ACOs featuring slight improvements in their quality measures with the most improvement in preventive care (Bleser, 2018). All of these results indicate that while ACOs have seen demonstrable cost improvements, the cost savings may not be coming along with significant care improvements.

Another model of value-based medical payments is bundled payments for treatment. Bundled payments operate by linking together the payment of all the services involved in treating a healthcare episode such as a joint replacement or cancer treatment in the Oncology Care Model (Press, 2016). Under such a model, providers receive one payment to cover every step involved in replacing a patient's hip, from surgery to hospital stay to post-acute care recovery, rather than having separate payments, from many different providers, for each step in the process. By installing episodic payments, the incentive to increase services provided is reduced and there is more freedom to reward medical professionals for higher quality and lower cost care (Press, 2016). Medicare has been one of the main users of bundled payments, launching a program in 2013, the Bundled Payments of Care Improvement (BCPI) with over 1,000 participating hospitals (Maddox, 2018; Shan, 2020). Though there are several models of the BCPI, the most popular model for hospitals has them accept responsibility for all of the costs of a patient's care within 30-90 days of their admission for 48 medical conditions. These conditions encompass about 70% of Medicare's entire spending (Maddox, 2018). Providers under BCPI have a target price for the cost of the health episode treatments and are eligible for possible awards for coming in under the target or face repayments to CMS if they go significantly over (Press, 2016). These spending metrics are also mitigated by how well providers perform in quality of care to incentivize better, not just cheaper, care (Barnett, 2019).

Bundled payments are currently used more in Medicare than Medicaid, but within Medicare, there have been some positive results with one peer-reviewed study in the British Medical Journal finding that spending reductions associated with bundled payment have averaged around 2% (Rolnick, 2020). However, bundled payment results have been very heterogeneous across several studies. For instance, another evaluation of 125 hospitals voluntarily joining BCPI, which has been peer-reviewed study by the New England Journal of Medicine (NEJM) and cited by over 95 different articles, found no significant reductions in Medicare spending across five common medical bundles (Maddox, 2018). Another strongly cited peer-reviewed study from the NEJM found that Medicare's Care for Joint Replacement (CJR) program, which mandated bundled payments for hip/joint replacement in some hospitals, was associated with a 3.6% differential reduction in total spending, 0.7% differential reduction in Medicare spending, and was associated with reductions in both the volume of patients who needed to be discharged to expensive post-acute care facilities and the length of stay for those who were in the care facilities (Barnett, 2019). Despite cost reductions, there was not any statistically significant difference in the quality of care and patients' selection between the CJR program and control hospitals. Internationally, bundled payment strategies in the Netherlands led to increases in the total healthcare

expenditures for medical conditions over 7 years (Karimi, 2021). The results of these studies provide some evidence that it may be that bundled payments have their best cost reduction effects with surgical conditions, such as joint replacements, where they can receive better post-surgical care (short post-acute stays). In cases of medical conditions the greatest cost savings come from the prevention of future care, which bundled payments are not as well-situated to produce as other value-based payments.

Policy Alternative 2: Global Budgets

A different way to combat the basic fee-for-service model is to institute global budgets into a state's medical system. This option is designed to limit the healthcare spending of hospitals by providing a fixed annual budgetary ceiling (Berenson, 2016). The main objective of this policy option is to constrain how much money a healthcare system spends by having payment organizations cover only the total expected spending for a patient population and not per patient or treatment episode (McConnell, 2017). Essentially, global budgets are supposed to shift costs from per discharge to per capita of an area and force hospitals to control high emergency department use, inpatient admissions, and patient readmissions (Malmmose, 2018). By pre-setting a budget for the hospital, they can retain any surplus generated by operating under the budget but also have to sustain financial losses if they finish above the budget provided (Global Health Payment, 2018). This institutes financial upside and downside risk for a healthcare system but still affords it financial flexibility (McConnell, 2017). One fear associated with this function is that, to reduce costs, hospitals will limit the amount of care they provide to patients or restrict who they treat. Examples of global budgets abroad have shown that some hospital systems did indeed restrict the volume of services provided to meet their budget (Redmon, 1995). Yet there are other examples, and ones closer to home, where this form of payment has reduced health expenditures while avoiding the loss of patient care.

One such example lies with Maryland's establishment of its "Global Budgets Revenue" system. This system provides yearly revenue caps for its state hospital system before the year begins (Maryland, n.d.). Maryland has had a unique all-payers system since 1977 in which every payer (government insurance, private insurance, and self-payers) is charged similar, state-set, rates for health services (Galarraga, 2020). Then in 2014, they established their new system which replaced fee-for-service payments with a global budget system that caps the annual revenue for all hospital-based services and ties them to quality measures to incentivize better care (Galarraga, 2020). Hospitals in the state are expected to come near their revenue caps and face penalties on the portions of their budgets that go over or under 5% of the cap (Oakes, 2020). Having penalties for spending above and below the budget should incentivize Maryland hospitals to adjust prices to maintain, which should reduce the cost to the system, and also avoid the reduction of patient services. Over 5 years, Maryland aimed to create $330 million in Medicare savings through their global budget system while also limiting new spending growth to under 3.6% annually (Roberts, 2018). In its final evaluation report to CMS, Maryland reported over $500 million in cost savings, a 2.8% decline in Medicare expenditures, and a 4.1% decline in hospital expenditures (CMS, n.d.). Despite these positive trends, it was found that Maryland was not reducing the overuse of hospital services and that two years after the program was instituted there were no attributable changes in hospital or primary care usage (Oakes, 2020; Roberts 2018). Maryland's evidence shows that global budgets can be cost-effective in the U.S. but that they do not solve every systemic issue associated with medical spending.

Policy Literature

Similar evaluations of global budgets can be found in other states across the country, specifically Oregon, Massachusetts, and California. Oregon and Massachusetts were both forms of managed care organizations that used global budgets to control rising medical costs (McConnell, 2017; Song, 2014). Oregon created 16 different coordinated care organizations (CCOs) and controlled their costs by installing them with set budgets for the year. Using these CCOs, Oregon saw expenditures in evaluated costs areas increase by about 7 percentage points less than comparable states in the area (McConnell, 2017). Even in the private sector, global budgets have had positive cost savings. For example, in Massachusetts, Blue Cross Blue Shield (a private health insurance company) ran an Alternative Quality Contract (ACQ) and paid a risk-adjusted global budget for yearly costs to providers (Song, 2014). Over the first two years of the contract, the ACQ witnessed a decrease in medical spending by around $90 per enrollee per year, which was the equivalent of about a negative 3% change in spending (Song, 2014). Looking at a continuum of factors, the ACQ under these global budgets also saw a rise in health outcomes and outpatient quality. Finally, in California, Blue Cross Blue Shield established a global targets system in partnership with California's Public Employees' Retirement System (Song, 2014). This system, made in partnership with California's largest healthcare system Dignity Health, saved over $52 million in its first two years and saw reductions in hospital length of stay and patient readmissions (Markovich, 2012). The health providers accredited information sharing and the resulting ability to target high-cost areas as a core reason why they were able to reduce costs (Markovich, 2012). In face, over a 5 year stretch between 2012 and 2017, global budgets were able to save about $2.2 billion in total across state and federal Medicaid spending (Kitzhaber, 2019). These cases provide strong evidence that global budgets can dampen rising healthcare costs in a state.

Policy Alternative 3: Super-User Programs

Super-user programs create cost savings by tackling one of the main inefficiencies in U.S. healthcare: that a minority of the system's total patients account for the bulk of the system's expenditures (Grafe, 2020). These patients are often referred to as "super-users" because they are the ones who interact with the system most often. Super-users have complex medical situations which result in them being either hard to treat or likely to use expensive medical treatments, like emergency department visits, more often than normal patients (Gafe, 2020). They are also often patients with chronic diseases and chronic disease patients consume about 86% of all healthcare expenditures (Holman, 2020). The effect of these super-users is astounding, as the top 10% of most expensive Medicaid users account for almost 75% of all Medicaid's expenditures (Cantor, 2020). Policy entrepreneurs have targeted these super-users as a point where better care would both reduce medical expenditures while increasing enrollees health outcomes.

One policy option being evaluated to alleviate the cost of superusers are health homes. Health homes are teams of providers who are responsible for coordinating all of a patient's physical and mental health care (Ollove, 2014). Mental health can be a leading cause of emergency department visits for patients who either lack access to services during a mental health crisis or receive care from a specialist normally but are capable of accessing them in an emergency, driving up the cost of treatment (Ollove, 2014; Unützer, 2013). Health homes often also cover behavioral health issues including substance abuse disorders (McCllelan, 2020). Under health homes, primary and mental health care can be integrated and paid for in a way that increases care coordination (Unützer, 2013). Treating both physical and mental health together can have substantial savings effects, with one study finding savings of up to $1,300 per participant in 2002 (Unützer, 2008). Data also shows that states that instituted

Policy Literature

Medicare and Medicaid health homes were associated with higher rates of care uptake for substance abuse and mental health disorders (McClellan, 2020) As one of the states to institute these homes, Missouri was able to reduce patient costs over two years while also better coordinating their care (Ollove, 2014). Missouri's program produced cost savings of $3 million while increasing the amount of severe mental health patients who reported having their other co-existing conditions under control.

Another way to reduce the costs of super-users in healthcare systems is to reduce the instances of chronic diseases. Chronic disease is a growing cause of both rising healthcare spending and death in the United States (Basu, 2015). In Virginia alone, there are over 2.2 million people who live with at least one chronic disease (CDC, 2010). Patients with chronic diseases have annual medical costs of around $6,000; five times greater than for a person without chronic diseases (Hayes, 2020). Such estimates mean that chronic disease in Virginia has direct costs in the billions of dollars. Reducing the prevalence of these conditions could save the state greatly, with one study of chronic disease reduction showing that chronic disease self-management education programs would generate national savings of $3.3 billion by reaching only 5% of the chronic disease population (Ahn, 2015). Indeed, Virginia's DMAS ran a study on the effects of chronic disease management in Medicaid (Zhang, 2007). The program provided chronic disease management services to a limited population of Medicaid beneficiaries in Virginia and witnessed possible cost savings of about $3 million. This $3 million was a result of the decreased cost of $43 per patient hospitalization, in 2002 dollars, for those who received intervention in the study (Zhang, 2017). The Chronic Disease Self-Management Program (CDSMP) is one option policymakers have tried to contain the costs of this population (Basu, 2015). The CDSMP works by providing resources for Americans to sit through self-management education programs (Basu, 2015). The evidence from this study shows that it can cost as little as $30,000 per quality life-year gained to carry out the CDSMP program. Overall, addressing chronic diseases and healthcare super-users leaves huge opportunities for medical and payment providers to achieve substantial gains in quality of life and cost containment.

Virginia Specific Policy Alternatives

Section Overview:

This report uses lessons learned from the policy literature to analyze three Virginia-specific policies that aim to lessen the burden of Virginia's Medicaid spending. These three alternatives are: establishing a Medicaid health home program in Richmond, Virginia, instituting a global budgets payment system for two Virginia hospitals, and replacing three of Virginia's Managed Care Organizations with Regional Accountable Care (RACs) Organizations. This report evaluated the preceding alternatives under the assumption that it would be infeasible to enact systemic Medicaid reform without first evaluating smaller programs in Virginia. As such, each policy alternative discussed here is a pilot program of some form. Despite being smaller programs, the alternatives were designed with the idea of balancing evaluations of future applicability of programs on a larger scale with the need to generate cost savings in the short term. In search of this balance, this report significantly emphasizes evaluations of cost per-capita to balance these needs when comparing alternatives.

Policy Alternatives

The following section contains a description of the proposed policy alternatives and evaluations of how well they preformed on a set of six predetermined criteria. An in-depth discussion of these criteria and how they were used to evaluate each policy alternative can be found in Appendix B.

Alternative 1: Start a Super-User Program in Virginia

This alternative would have Virginia Medicaid contract with a healthcare provider to run a health home, as detailed below, in Virginia's 69th House District, containing the Richmond City and Chesterfield Counties. Rather than an actual home for patients, a health home is an overarching organization that contracts the services of healthcare providers. By organizing these providers, the company pushes them to collaborate to ensure that specific patients are receiving care that is in line with their care from other providers. This allows higher numbers of patients to be covered by several providers. The program will be instituted in this district because health homes need to be able to reach super-users to affect change but Virginia Medicaid does not track where these users are. As such, the easiest way to guarantee the most super-users enter the program is to implement the project in the district with the most Medicaid users (DMAS, 2021). Though this program will treat many fewer patients than the following two, the literature is very clear that these few patients have extreme costs so a successful program should feature comparatively competitive cost reductions and cost-effectiveness despite the smaller sizes.

Virginia DMAS would look to partner with Anthem Blue Cross Blue Shield which has already put forth one proposal to run a pilot behavioral health home partnership with DMAS (DMAS, n.d.). While Medicaid could cover initial startup charges like new hire salaries, offices, and the establishment of an online patient database, Anthem would also be reimbursed 10% of the annual cost savings generated. DMAS would cover the payments for each beneficiary per month and cover up to 2,500 beneficiaries, which would represent a little more than 5% of Medicaid beneficiaries in the district. Considering the size of this population, Virginia DMAS will offer a $50 incentive per patient per year to healthcare providers who agree to sign on to this project.

Though the health home would be run by a private healthcare company and paid for by Virginia Medicaid, 90% of the starting cost of the program is reimbursable to the state from the federal government (CMS, n.d.). Under the Affordable Care Act, health home costs receive a higher level of federal reimbursement for the first 8 quarters (or two years), of the establishment. After two years, DMAS will be responsible for the program at the normal federal reimbursement rate of 50.4% (KFF, n.d.).

Cost Reduction: $15.54 Million

Instituting a health home program in this county would produce roughly $15 million in savings for Virginia DMAS over the next 10 years (see Appendix C for cost projection). Though any savings generated should be considered a positive, this number is much lower than the estimates seen in the other alternatives. One reason for this is that the health home program deals with a much smaller population base than the other alternatives which may make it an unfair comparison. Yet, the point of a super-user program is that despite being a small proportion of Medicaid enrollees, super-users have outsized cost effects. Thus, in treating the costliest Medicaid members, as this program does, we would hope to see a much larger cost reduction than the one that is present. Overall, this alternative is the worst-performing in the cost reduction category.

Policy Alternatives

Cost-Effectiveness: 4/10 ($787 per treatment year)

For this alternative, cost savings would be seen to a greater degree the longer that patients have their care coordinated by the health home. Even though the program only treats a small subsect of Medicaid users, between 1,700 and 2,000 a year, it has a poor rate of cost savings per treatment year averaging $787 per treatment year over the ten years (see Appendix C for data). This is not the significant level of per-capita savings seen in other alternatives, especially when you consider this alternative was supposed to generate outsized cost savings per person. Even the small numbers observed here are very sensitive to two very key factors: how much providers are paid per year per patient and the estimated cost savings per patient. To provide the most realistic outcomes, the estimate this report uses in its calculation is the middle point between the highest observed cost savings of any health home experiment, $1,600 per treatment year, and one of the lower observed cost savings, $123 per treatment year (major assumptions included in Appendix C) (Shane et al., 2016; Reid et al., 2010). Adjusting this assumption higher or lower provides different results.

Quality of Care: 7/10

The health home program receives this score for their QOC metrics as similar programs across the country have displayed positive results in the care that patients receive. Health homes have shown beneficial increases in the screening for medical conditions among participants and have had positive effects on emergency department usage and outpatient primary care usage (Stone, 2019). Indeed, other studies found that health homes had a positive effect on preventative care usage, decreased required nursing care usage, and increased patient satisfaction with care (Momany, 2017). As such, there are positive increases in very important care categories from health home programs.

Equity: 8/10

This alternative ranks highly on equity because of who receives this higher-level care. That is, super-users are often the most disadvantaged members of society, and improving the care of the worst-off is quite equitable. As super-users are more likely to be female, lower-income, have lower levels of education, and more likely to suffer from multiple chronic conditions, they are disproportionately more likely to come from vulnerable populations (Rayabandla, 2020). In addition, health homes look to improve the care for those with mental health conditions, which is quite equitable as people with mental health conditions often receive worse care than most other medical patients (Lawrence, 2010). Though this alternative does not set out to target disadvantaged citizens, the core nature of the program lends itself to increasing the health equity of Virginia's Medicaid population.

Implementation: 4/10

Implementing health homes will face serious challenges that may hinder its ability to produce the limited benefits projected here. To institute this program, Virginia DMAS would need to hire a contracting partner who would be responsible for recruiting the healthcare providers who make up the health home. If the contracting agency does not properly evaluate the healthcare providers it recruits, this can hamper the

effectiveness of the health home. Poor recruiting would include contracting with providers who have poor QOC and spending records. In addition to recruiting healthcare providers, the contracting agency will need to hire healthcare workers who can properly manage the operation of the health home between providers. If project managers are not bought in on the project, they will have negative effects on the home. One positive aspect of the project is that Virginia's Medicaid MCOs create a helpful infrastructure for being able to track patients and would ease the patient switch over to the health home (Hasselman et al., 2011).

Political Feasibility: 6/10

The political feasibility of this model is moderately positive as there is both a significant hindrance but also a helpful aide to starting this program. The challenge lies in the difficulties in convincing Virginia DMAS to choose to start this program. There is evidence that Virginia DMAS is not currently interested in running a health home because Anthem, a health insurance company, already proposed starting a health home program but has received no action on the proposal (DMAS, n.d.). Despite potential blockage at the agency level, a boon for this program is that Medicaid reforms are politically possible through the legislature. A program of this kind could be enacted through the Virginia budget or a legislative package. Many Republicans in Virginia who showed amenity toward reforming Medicaid, as seen through their yes votes on Medicaid Expansion, are still in office today (Vozella, 2019). Considering Republicans' former support and Virginia Democrats' overwhelming support for the Medicaid program, it is logical to assume that a bill designed toward cutting costs while improving care for the disadvantaged would pass the state legislature. This is despite a split legislature where the Democrats control the State Senate and Republicans control the House of Delegates (Ballotpedia, n.d.)

Alternative 2: Set Global Budgets for Two Separate Virginia Hospitals

This alternative would establish a set yearly budget for two Virginia hospitals that they would have to come under or face penalties from the state. On top of this budgetary ceiling, hospitals would be restricted from spending less than 95% of their budget to avoid having them create savings by cutting services. They would also be required to meet the same health standards that Virginia MCOs are currently required to achieve (DMAS, 2020). These provisions should ensure that these hospitals can confirm what spending will be year to year without losing any QOC. This program will target the rising costs that are associated with high hospital usage among Medicaid users. The two hospitals this alternative will use are LewisGale Hospital Alleghany and Sentara Norfolk General Hospital. To incentivize these hospitals to sign on to this program, they would be reimbursed 30% of the cost savings they generate for the first 5 years and 15% of the savings after that. Every year, the Virginia government will set these two hospitals' budgets at 3.38% higher than the previous fiscal year's budget, following the standard set by the Centers of Medicare and Medicaid Services in a similar program in Pennsylvania (CMS, n.d.). This alternative would establish a firm global budgets pilot program that can demonstrate whether an expanded system would have financial viability in Virginia.

This alternative would use these specific hospitals because they are full-service facilities that treat very diverse sets of patients that reside in two different demographic regions (LewisGale, n.d.; Sentara, n.d.). These specific hospitals are used to acheive this reports dual goal of balancing evaluations of future applicability of a similar program on a larger scale and creating current cost savings in the ten-year short run.

Policy Alternatives

LewisGale Hospital treats a small rural population and may not provide huge upfront cost reductions but is critical in evaluating programmatic cost-effectiveness at at small regional hospital, places that rural citizens rely on for care (LewisGale, n.d.). Inversely, Sentara Norfolk, a much larger urban hospital, is included to see if this program can create the type of large cost reductions needed to properly advocate for an expanded program in the future (Sentara, n.d.). Losing one of these hospitals would severely limit the applicability of the program to future projects or reduce the ten-year cost reduction totals required to offset the effort of installing.

Cost Reduction: $192 Million

Global budgets for these two hospitals generate much higher cost savings for the state over ten years than the Medicaid health home. At almost $200 million in savings, global budgets represent huge gains to the state (see Appendix C). The biggest source of these savings is the ability of the state to limit the hospital's year-to-year spending growth to more than a full percentage point less than we would expect to see under normal, uncapped, hospital spending growth rates. The largest cost of the program are its reimbursement payments to the two hospitals which are based on a percentage of savings generated (Appendix C). These cost about $43 million over the ten years, though this cost would lessen as the reimbursement rate is lowered after 5 years. Though expensive, these reimbursements should increase the chances that Sentara Norfolk participates in the program. The necessity of these reimbursements is discussed further in the implementation section.

Cost Effectiveness: 9/10 ($2,098 per treatment year)

In addition to savings of over $190 million, this alternative performs the best out of all the alternatives in regards to cost-effectiveness. Though it deals with a much larger population than the one seen under the health home alternative, global budgets for these two hospitals obtain high savings per treatment year. This alternative can save about $900 more per treatment year than any other alternative evaluated in this proposal. A key to these estimates is assuming that about 20% of all hospital spending and patients are covered by Medicaid (Appendix C for assumptions). This assumption follows a study done by Virginia Commonwealth University on the rate of Medicaid hospital admissions. Using this study and publicly available admissions data for each hospital, a rough estimate for how many Medicaid patients will be treated by these hospitals becomes usable (Cunningham, 2020). Adjusting the assumption on what percentage of hospital admissions are paid for by Medicaid would significantly change how cost-effective this program is.

Quality of Care: 5/10

Global budgets receive this moderate grading because previously enacted global budgeting programs have not seen any big changes in the care quality for their patients. In Maryland, the most developed American global budget system, patient experience with hospitals did not change over the evaluative period (Sharfstein, 2018). Indeed the only change seen with global budgets regarding care is a reduction in usage of some hospital services (Sharfstein, 2018). Though there are not any positive effects on care, it is a good sign that Maryland has not witnessed any negative pressure on the level of care received. This indicates that despite reduced budgets, hospitals did not reduce their QOC. As such, this alternative receives a grade of 5 to demonstrate the neutral effect of global budgets on QOC.

Policy Alternatives

This indicates that despite reduced budgets, hospitals did not reduce their QOC. As such, this alternative receives a grade of 5 to demonstrate the neutral effect of global budgets on QOC.

Equity: 4/10

This alternative performs poorly in terms of equity because of its negative effect on hospital usage. While evaluations of Maryland's system did not feature any negative pressure on access, many other studies have demonstrated that global budgets slightly reduce the number of hospital admissions without resulting in any increased primary care usage (Sharfstein, 2018; Roberts, 2018). Without the offsetting rise in primary care usage, it becomes clear that global budgets reduce an area's total treatments administered. Those who lose treatment likely come from uninsured populations as uncompensated care is expensive from a hospital's perspective (Institute of Medicine, 2003). This removes vital care from those who are least able to afford to miss work or find another source for health treatments, creating negative effects on health equity.

Implementation: 3/10

Implementing global budgets for LewisGale Hospital and Norfolk Sentara Hospital may be particularly difficult. The first problem is trying to convince the two hospitals to sign onto the program. Previous examples of global budgeting with hospitals in Pennsylvania and Maryland did not face this challenge. In Maryland, the state passed an all-payers system in the state's legislature and requires every hospital to use a global budget (Maryland, n.d.). This type of program requires a legislative overhaul of a state's health system and would be too aggressive to implement in Virginia. On the other hand, Pennsylvania did not force participation in their global budgeting program but is also only offering to hospitals in rural areas (Knudson, 2021). Rural hospitals were likely to sign onto this program because they are suffering financially and would benefit from having a set budget every year. While a similar program may entice LewisGale-Alleghany to voluntarily sign up, the same cannot be said for Sentara Norfolk which is a very profitable urban hospital with revenues of over a billion dollars in 2021 (Virginia Health Information, n.d.). As such, this program provides enticements in the form of savings reimbursements to incentivize the hospitals, mainly Sentara Norfolk, to agree to run this program.

In addition to the implementation issues of securing the hospitals' commitments, this alternative faces challenges in setting up a system to ensure that budgeting limits are being followed, measuring savings to properly provide the reimbursement, and a way to track market changes in an area so that a hospitals budget can be adjusted (Murray, 2018). Though not challenging enough to be prohibitive, having to deal with these extensive issues should be considered as one of the main tradeoffs to the potential savings that global budgets suggest they can bring.

Political Feasibility: 6/10

Pennsylvania's global budgeting system shows that a program requiring voluntary agreement is politically feasible and does not need a legislative overhaul to be enacted (Knudson, 2021). Global budgets receive this positive score because although it may not require legislation to be enacted, both Sentara Norfolk and LewisGale Alleghany are members of the largest hospital lobbying group in Virginia, the VHHA (VHHA, n.d.).

Policy Alternatives

The Virginia Hospital and Healthcare Association is a powerful political force made up of over 110 healthcare providers throughout the state. The VHHA's lobbying efforts can be very successful and have been able to stop medical legislation before, killing a bill in February that would have added regulations on hospitals (Masters, 2022). Though this program is designed to not apply political pressure on either hospital, should implementation efforts run afoul of the VHHA they would likely be able to impede any program put forth. This receives a grade of 6 because it does not face political hurdles currently but would be politically infeasible if it runs afoul of the VHHA.

Alternative 3: Establish Regional Accountable Organizations

Over 90% of Virginia's Medicaid beneficiaries are members of one of the state's MCOs that are spread out over 7 regional health districts (KFF, n.d.; DMAS, 2018). These are different from an Accountable Care Organization which would be a contract between Virginia DMAS and a group of healthcare providers receiving monthly lump-sum payments to cover member services. This alternative proposes instituting three regional Virginia Medicaid-backed ACOs in different health districts. The goal of these regional accountable care organizations (RACs) is to reduce the costs of caring for these Medicaid beneficiaries while providing improved care. These RACs will be instituted in Virginia House District (HD) 1, HD 10, and HD 21 which are located in the Far Southwest, Northern/Winchester, and Tidewater health districts respectively which should help capture a diverse set of Medicaid users (DMAS, 2021; DMAS, 2018). This program selects these three HDs because together they should remove any location-specific variance that may appear if the program was in only one or two districts. For example, HD 1 and HD 21 both have roughly 80,000 citizens but HD 1's Medicaid population is 60% greater than HD 21. To control for these state-wide Medicaid disparities, this report analyzed the effect of all three and corrected for patient population sizes in the outcome matrix (discussed further below).

For these districts, Virginia DMAS should open up a competitive bid period of 6 months to find a group of healthcare providers who are willing to run RACs in these regions. RACs would be paid through the reimbursement rate on the cost savings they generate for the state. Healthcare providers who are members of a current MCO in each district will be offered a higher reimbursement rate in an attempt to avoid the cost of switching beneficiaries to a new provider. Virginia DMAS currently contracts with a financial services firm, Maximus, to carry out MCO customer services and enrollment processes, this contract would be shifted in these areas to help switch beneficiaries over to the new ACO program (DMAS, 2020). Virginia DMAS will then pay each RAC monthly sums to carry out benefit services for their members. These payments will be set at 95% of the MCO's current cost of caring for Medicaid users in each district. Each year the payments will decrease by 2% of what they were the past year while being adjusted for inflation. RACs will earn reimbursement rates from the state of 35%, 37% if they currently run an area MCO, of the cost savings they experience each month. The RACs will be responsible for 100% of the cost of exceeding their monthly stipend.

Cost Reduction: $888 million

Creating these Regional Accpuntable Care organizations would generate huge savings for the state over the next ten years. With a total of about $900 million, this program provides the greatest savings of any alternative by a wide margin (savings projections in Appendix C). The biggest contributor to these savings is the reduced

Medicaid growth rate that the program achieves by lowering the monthly payments to RACs. The key assumption that leads to these numbers is made by applying JLARC's estimate of 4.9% Medicaid spending growth to the RACs and their growth over the next 10 years (JLARC, 2020) (assumptions in Appendix C). If actual yearly spending growth is different from this then the program would generate significantly different revenues than estimated here. As it is, this provision generates about $1.4 billion in savings for Virginia over 10 years without considering programmatic costs. The largest cost is the reimbursement payments made to RACs for running the program. These reduce savings experienced by around $500 million over the period (program costs in Appendix D3). Still, this alternative is the most effective at reducing Medicaid's overall cost to the state, savings almost 4 times the next best alternative.

Cost-Effectiveness: 6/10 ($1,161 per treatment year)

Though this alternative sees the largest decrease in absolute Medicaid spending, $888 million, it also ranks moderately positive in terms of cost savings per treatment year, saving around $1150. The two main drivers of these cost savings are the reduced growth in Medicaid spending over time and the original resetting of the market to 95% of the year 0 costs of the program. Though this hard reset may be tough on the RACs, they more than makeup for it with 10-year reimbursement totals of over $500 million split between the three of them (Appendix C). One reason for the moderate cost-effectiveness number is that these RACs administer care to a very large population, over 760,000 Medicaid patient treatment years (about 7 times larger than the global budgets population). Yet, maintaining even these moderate cost-savings with the population it covers demonstrates how much money is being saved with this alternative.

Quality of Care: 6/10

The QOC Medicaid enrollees have received under other ACOs has been slightly better than the care received by status quo patients. ACOs have demonstrated some ability to create better care for chronic conditions and provide better screening for cancer though they have also shown no significant ability to decrease hospital readmission rates (Nichols, 2012). ACOs have failed to provide better care for mental health issues and have no demonstrated effects on broader population mortality rates. Overall, evidence supports the idea that ACOs do not majorly influence the overall QOC that patients receive but may have some small positive benefits.

Equity: 5/10

Put simply, this alternative should have little impact on the equity of those being affected by the policy change. To gain the massive savings seen here, this alternative sacrifices any real gains toward improving the equity of its enrollees. Though this alternative would provide the same, if not better, care for those who were already being provided services under MCOs, this program avoids spending money on improving overall health equity. For example, the RACs do not extend increased benefits to low-income workers or attempt to cover more disadvantaged populations than the previous MCOs did. This policy helps to create extremely beneficial Medicaid savings but it also leaves any positive increases in equity behind, resulting in a neutral grade of 5 on this criterion.

Policy Alternatives

Implementation: 2/10

Implementing this program would be the most difficult of any of the three policy alternatives. It would require the state to spend time creating a whole new type of program for an area where an already well-established system exists while also requiring contracting agencies to go through an extensive process of switching all of the current MCO patients to new system. Changing the healthcare coverage for tens of thousands of people requires massive infrastructure to not only track enrollee coverage but also inform and manage plans. The long-term sustainability of the program would require constant buy-in from local service providers, efficient management from the contracting organization, and a system to evaluate the reimbursement rates that need to be paid out to the RACs. Though most of these implementation problems will be faced by the RACs and not Virginia DMAS, acknowledging that the program will face difficulties in achieving its highest savings potential is important.

Political Feasibility: 7/10

While RACs face large implementation hurdles, the political feasibility of the alternative remains high as state Medicaid departments retain the authority to "require certain categories of Medicaid beneficiaries to enroll in managed care entities" which the RACs would fall under (DMAS, 2011). This allows the program to avoid most political hurdles that would have to be normally crossed with a new program, such as bypassing the state legislature in the creation of the new project. The RAC program does not receive a higher score for political feasibility because the Medicaid director, the person responsible for instituting this program, is accountable to Virginia's governor. Should the governor not want such a major program to go through, they could apply major pressure on the Medicaid director. While Virginia's current governor, Glenn Youngkin, has spoken negatively about expanding Virginia's Medicaid program, as a Republican, he may be open to these changes because of their cost reduction abilities (Faith & Freedom Coalition Governors Debate, 2021). As it is, Youngkin's inclination toward such Medicaid changes is uncertain but this program would face few other political constraints on enactment.

Recommended Policy Action and Strategies for Proper Implementation

Matrix

Graded Policy Alternatives

This matrix demonstrates how well each alternative performs on every criterion. For this table, the cost reduction and cost-effectiveness criteria are weighted to be worth more than the other criteria, at two and a half (2.5) and three and a half (3.5) times as much respectively. These cost criteria receive greater weights as Medicaid's financial impact is the main outcome of this report and using greater weights can emphasize this outcome quantitatively. Further, cost-effectiveness is given a weight of three and a half times as much as the other criterion because all alternatives are pilot programs of some form with differing patient populations, and over-weighting the per-capita criterion should help balance out these differences. With these weights in place, the total possible points earned for a program would be 100 (cost reduction values have been scaled to a 10 point scale, with a 1 representing $100 million in cost savings).

Alternatives:	Health Homes	Global Budgets	Regional Value Care
Cost Reduction	0.16	1.93	8.88
Cost-Effectiveness	4	9	6
Quality of Care	7	5	6
Equity	8	4	5
Implementation	4	3	2
Political Feasibility	6	6	7
Total	39.39	54.32	63.21

Policy Recommendation: Establish Virginia RACs

I recommend that the Commonwealth Institute advocates for the establishment of the three RACs as they are described in this project. It is clear from both the outcomes matrix and from the substantial savings they generate that this alternative would be best able to tackle Virginia's Medicaid spending issues. Though the program only establishes RACs in three of Virginia's HD, the program is still able to generate almost $900 million in savings over ten years. This greatly outperforms the savings generated by either the global budgets alternative or the Richmond Health Home. Though the global budget program outshines the RACs in terms of how cost-effective it is, the absolute value of the cost savings in this alternative more than makes up for it. Should this alternative create the level of savings that are estimated here it would set Virginia on the path toward reining in its runaway Medicaid spending growth.

Despite these savings, it is important to consider what this policy option would be giving up. RACs have limited track records in terms of QOC increases and would most likely not create demonstrable effects on the care Medicaid recipients receive. In addition, this policy leaves behind any serious considerations toward equity improvements. Improvements in the equitability of care or even the QOC are sacrificed in the name of pursuing hard-lined cost reduction. Though it should be acknowledged that this alternative does not decrease equity or QOC as some of the alternatives do. The one criterion that is truly the greatest tradeoff in search of savings is how implementable the policy is. Considering how important this would be for this policy alternative, an implementation plan is laid out below.

Implementation Issues and Strategies to Combat Them

Implementing RACs received a ranking of 2 out of 10, the lowest of any alternative. The reasons for this were touched on briefly above but this section will dive much deeper into both why implementation would be so difficult and the steps to overcome most of these challenges. The plan for implementing this program is fairly simple from the state's point of view as they only need to be involved in two ways. After deciding to pursue this program, Virginia needs to create a basic layout of what a RAC will be and then contract with healthcare companies to carry this plan out. After this, the only other time the state needs to be involved in the program is through the evaluation of the quality and cost metrics of the programs. Outside of these instances, the rest of the problems with implementation lie with the healthcare contractors themselves, which this policy does not maintain purview over. The largest challenges to properly instituting RACs include convincing managed care stakeholders to come to the policy table and creating extensive internal and technological systems. Moving forward, the Commonwealth Institute should advocate for Virginia DMAS to establish the program with the following measures in mind to alleviate some of these implementation challenges.

Perhaps the largest barrier to implementation is getting the most prominent stakeholders, current managed care companies, to not oppose the program. Even if Virginia DMAS chooses to institute this program and finds willing partners from new healthcare contracting companies, the old companies, including Aetna, Magellan, and UnitedHealth Care, could provide significant pressure on the few political avenues that would apply to this new managed care system (Lee, 2018). The current MCO companies, carry significant abilities to influence the state government, as can be seen through the $4 million Aetna, spent on lobbying last year (OpenSecrets, n.d.). As these programs would carry a risk of lost contracts, or higher costs associated with changing programs,

this report assumes there would be general opposition to the policy. Understanding these perspectives, this program tries to incentivize these organizations to contract with DMAS by providing them with higher reimbursement rates on savings.

Should the state be able to secure these companies' participation, another challenge to proper implementation of a RAC is producing the deliverable systems that are key in running the RAC. The deliverables that were found to be important in the process of implementing other states' ACO programs were population health data management systems, health information technologies (HIT), common cost metrics, and data transparency measures which could identify RAC best performers (Burke, 2011). These systems, especially the HITs, allow for the up-to-the-minute communication and care coordination between providers that are essential for ACO programs (Burke, 2011). The issue with delivering these systems is that the cost of creating and running them lies fully on the companies that the state would be contracting with. If these companies do not provide these high-quality deliverables, it will be harder to track RAC progress and outcome measures, hindering the possible savings that would have been generated. Setting common systems between the three RACs would require state intervention and agreement across companies. One way to try and overcome this barrier is to format the HIT system the state currently has MCOs use for their Medallion program (DMAS, 2017).

Though these two challenges represent the most pressing issues for implementing RACs, other things could go wrong and hurt the overall success of the program. One smaller issue is the level of leadership seen among the physician members of the RACs. Physician leadership can be a crucial part of how well healthcare changes are instituted at the point of care level (Sullivan, 2018). With poor leadership from the healthcare professionals, expenditures may be spent more frivolously and reduce the programmatic savings. Additionally, at the point of care level, customers may not be very cooperative with the new RACs and may refuse to join them when the programs change. Many public insurance enrollees do not properly understand what an ACO is which could push them to avoid the program (Joszt, 2020). Though it is unlikely that enough enrollees would refuse to switch to affect the overall cost-effectiveness of the program, it is worth monitoring. Though these should be considered secondary issues compared to delivery systems and ensuring stakeholder buy-in, they may play a role in how well the project is implemented.

Overall, this policy has a complicated path toward implementation. First of all, the Commonwealth Institute needs to lobby Virginia Medicaid to pursue the program. The state then needs to contract with companies to carry out this policy, but it loses significant control over the program once they do so. From there, the program also faces significant hurdles in achieving its full implementation. Considering stakeholder opposition, problems with creating information-sharing systems, and smaller issues such as lack of doctor leadership and consumer opposition, RACs will face both large upfront barriers to implementation as well as long-term sustainability issues. Though there are solutions to both of the major hurdles, program implementation relies heavily upon strong management from Virginia DMAS and powerful leadership from healthcare company leaders. Without this, implementation problems may seriously hinder how well this policy can be carried out and how much money it can save over the next ten years.

CONCLUDING THOUGHTS

Report Takeaways

Virginia's Medicaid program is consuming an increasing portion of the Commonwealth's budget every year. This has resulted in Virginia's Medicaid program costing too much money for the level of care it provides.

There are several policy paths that have be tried in the U.S. to reduce the financial burden the Medicaid program levies on states. Ranging from expanded ACO programs to state control of hospital budgets, there are many avenues Virginia could use to tackle its Medicaid spending. Yet, it is quite clear that establishing Regional Accountable Care Organizations would see the largest demonstrable gains for the state. If the evaluations made in the report hold true, RACs can provide the required upfront cost reductions while also sustaining long term cost-efficiency.

If the Commonwealth Institute can properly lobby Virginia DMAS to pursue the policy path laid out in this report, Virginia could see close to a trillion dollars in savings over the next decade. In this way, the RAC program represents an important first step in the fight against crushing levels of medical spending.

Appendix A: Calculations

Calculations for numbers produced in the background section on page 12:

- (1.53 million enrollees * 0.25 annual visits per person) – (1.53 million enrollees * 0.03 annual visits per person) = 336,600
- 336,600 ED visits * $ 1865 per ED visit = $627.7 million
- $627.7 million * Virginia's FMAP (0.4945) = $310.42 million in savings

Appendix B: Criteria

In consideration of the alternative policy paths that are suggested to improve the cost of Virginia's Medicaid program, the following evaluative criteria are used: Cost Reduction, Cost-Effectiveness, Quality of Care, Equity, Implementation, and Political Feasibility. Policy options receive grades between 1 and 10 to accurately display where they fall in each category. Important to understand this scale, a grade of 5 is a neutral evaluation while any grade below this is a poor ranking and any number above this represents a strong showing for an alternative. When considering cost reduction, the actual savings number was adjusted to fit on a ten-point scale with a 1 representing $100 million and so on.

Cost Reduction: *Is this Policy able to Reduce the State's Overall Spending on the Medicaid Program?*

Reducing the fiscal impact of the Medicaid program is a crucial goal for this policy project and cost reduction tries to accurately measure how well each proposed alternative can do this. Cost reduction considers the total savings generated by a program without taking any program effectiveness measures into account. This criterion is important because the end goal of reducing Medicaid costs does not reside in how many patients are treated but in how much spending is cut over the next decade. The scope of cost ends outside of the program and benefits to the external healthcare system are not considered.

Cost-Effectiveness: *Does this Policy Adequately Use Virginia's Finite Resources?*

Cost-effectiveness is measured as the change in total Medicaid expenditures compared to the benefits gained. This measure. This cost-effectiveness is measured by the total dollars saved for the program per treatment year (where treatment year represents one year of health treatments for a Medicaid patient). Without quantifying health outcomes for a program, which is done under a further criterion, cost savings by treatment year evaluate how cost-effective a program is while also ensuring those cost savings are not generated by cutting coverage.

Quality of Care: *How Well Does this Policy Treat Patients under its Care?*

Quality of care (QOC) is hard to correctly evaluate but is a driving factor in determining the strength of a policy option. Though CMS lays out the quality measures discussed in the background, it is impossible to grade how well these specific alternatives would do on these measures in the future. As a result, these alternatives receive grades based on how similar programs in the literature performed regarding QOC. Specifically, QOC will be measured on a standard of evaluating whether or not past experiences suggest a program would positively or negatively influence the QOC Medicaid enrollees to receive.

Equity: *Are Patients Receiving Every Service or Treatment they Require?*

Equity regarding healthcare services considers the ability of all patients, especially those of lower incomes and

Appendix B: Criteria

people of color, to receive similar care to what they would have been able to under the status quo in Virginia. This can be tricky to evaluate, but it ensures that alternatives that raise QOC or lower cost by restricting who can access treatment are evaluated as worse policies. Equity grades will rely on past experiences from similar programs, how programs would be expected to affect treatments and patients of lower income or similar considerations of a policies effect on historically marginalized communities.

Implementation: *Is the Policy Option Easily Implementable for the State?*

Medicaid policies can be incredibly hard to implement across diverse states and communities. Those policies that are easier to implement will be considered stronger policy options and are more likely to be recommended. Ease of implementation will be considered only at the state and local levels.

Political Feasibility: *How likely is the passage of a recommendation in Virginia's state legislature?*

Political feasibility considers the viability of a recommendation in Virginia's political system as this has direct implications for how likely a recommendation would be able to proceed to the implementation step. This political system includes the Virginia state legislator, Virginia executive branch, and state agencies. To evaluate this, alternatives will be judged on their ability to garner political support, rally stakeholders, and avoid strong opposition.

Appendix C: Cost Calculations

Major assumptions made in the calculation of the following cost estimates.

Timeframe	10 years
Richmond City Population Growth Rate	1.09%
Total Patient Population in Year 0	1700
Super User Cost Per Capita without Health Homes	$95,039
Super User Cost Per Capita with Health Homes	$94,177
Healthcare Discount Rate	0.04
Medicaid Per Capita Growth Rate	0.049
Reimbursment Payments to Health Home	0.1
Virginia's First 8 Quarters Share of Spending on Medicaid (1 - FMAP)	0.1
Virginia's Normal Share of Spending on Medicaid (1 - FMAP)	0.5
Total Personnel Costs	$229,003
Patient Website	$150,000
Yearly Website Maintence	$3,210
Annual Reimbursement Per Patient	$660
Annual Rent for Adminstrative Office Space	$21,942

Appendix C: Cost Calculations

10-year Projected Cost Savings of Richmond's Health Home Program (Million USD)

10-Year Treatment Year Population Total: 19,753

Year	Cost to Treat without Health Homes	Cost To Treat with Health Homes	Programmatic Cost Savings	Treatment Population
2023	$161.56	$160.26	$1.29	1,700
2024	$171.32	$169.92	$1.40	1,718
2025	$181.68	$180.76	$0.91	1,737
2026	$192.66	$191.63	$1.03	1,756
2027	$204.31	$203.15	$1.15	1,775
2028	$216.65	$215.37	$1.27	1,794
2029	$229.74	$228.34	$1.41	1,814
2030	$243.63	$242.09	$1.54	1,834
2031	$258.35	$256.66	$1.68	1,854
2032	$273.96	$272.13	$1.83	1,874
2033	$290.52	$288.53	$1.99	1,894
Total	$2,424.43	$2,408.89	$15.5	19,753

Appendix C: Cost Calculations

Guide to how the cost calculations for the Richmond health home alternative were made.

- Cost to treat without health homes:
  - To find this estimate, this report multiplies the yearly patient population by the cost to treat super users. The cost to treat super users used here is the median between a high estimate of $113,000 found in a health affairs study and the assumption that 5% of Medicaid users consume 50% of spending (which gives a low-end estimate of $77,000) (Johnson, 2015).
- Cost to treat with health homes:
  - To find this estimate, the report does the same calculation as above but reduces the cost of treating super uses by around $870 a year if they are in a health home. This report assumes that the health home will decrease the cost of super-users by this much based on studies looking at cost savings generated by health homes (Unützer, 2008). In addition to this calculation, some operations costs, such as hiring workers for the home, are added onto the cost of treating super-users but are discounted by the rate which will be reimbursed by the federal government under Virginia's Medicaid FMAP (originally 90% then 50.4% after 8 quarters) (CMS, n.d.; KFF, n.d.).
- Cost Savings:
  - Cost savings are calculated by taking the difference between the total cost to treat super-users without a health home and the total cost to treat them with a health home. To find the cost-effectiveness of the program, the total cost savings are reduced by the total population treatment years.
- Patient treatment years:
  - Patient population is found by taking the median between 2% and 5% of the Richmond City HD and then tied to the growth rate found in census data (DMAS, n.d.; Census; n.d.). Even though it is likely most users would stay in the program for multiple years, each year of patient treatment is counted again. This is why the outcome is treatment years rather than patient population.

Appendix C: Cost Calculations

Major assumptions made in the calculation of the following cost estimates.

Timeframe	10 years
Norfolk Area Population Growth Rate	1.28%
Alleghany Area Population Growth Rate	0.67%
Total Sentara Norfolk General Hospital Patient Population in Year 0	27189
Total LewisGale Hopsital Alleghany Patient Population in Year 0	1,679
LewisGale Hospital Alleghant Patient Cost per Capita	$19,086.56
Sentara Norfolk General Hospital Alleghant Patient Cost per Capita	$37,217.34
Social Discount Rate	0.03
Uncapped Hospital Spending Growth Rate	0.0505
Capped hospital Spending Growth Rate	0.037
First Two Years Savings Reimbursment Rate	0.3
Third Year Savings Reimbursment Rate	0.15
Medicaid's Share of Hospital Expenditures	0.2175
Mediacids Share of Admissions	0.272

Appendix C: Cost Calculations

10-year Projected Cost Savings of Virginia's Global Budgets Program (Million USD)

10-Year Treatment Year Population Total: 91,957

Year	Cost to Treat without Global Budgets	Cost To Treat with Global Budgets	Programmatic Cost Savings	Treatment Population
2023	$227.1	$227.1	$0	7,852
2024	$241.4	$239.2	$2.1	7,950
2025	$256.6	$252.1	$4.5	8,049
2026	$272.8	$265.6	$7.2	8,149
2027	$290.0	$279.9	$10.1	8,251
2028	$308.3	$294.9	$13.3	8,353
2029	$327.8	$307.2	$20.56	8,457
2030	$348.5	$323.1	$25.3	8,563
2031	$370.5	$339.8	$30.6	8,669
2032	$393.8	$357.5	$36.3	8,777
2033	$418.7	$376.0	$42.7	8,887
Total	$3,455.7	$3,262.7	$192.9	91.957

Appendix C: Cost Calculations

Guide to how the cost calculations for the hospital global budgets alternative were made

- Cost to treat without global budgets:
  - The total cost to treat these patients without global budgets is found by taking the FY20 expenditures for both hospitals extrapolating them across ten years by increasing them at a rate of 5% and increasing them by total population growth as well (Virginia Health Information, n.d.; DMAS, n.d.). Finally, these numbers each year were multiplied by 0.21, which came from a study of Medicaid's share of hospital expenditures done by the Center for American Progress (CAP, n.d.).
- Cost to treat with global budgets:
  - The total cost to treat these patients under global budgets policy was calculated in the same way as above but the yearly cost growth was capped at 3.7%, a median of the growth rates set in the Maryland and Pennsylvania global budget experiments (Maryland, n.d.; Knudsen, 2021).
  - On top of this calculation, reimbursement payments to the hospitals were found by multiplying cost savings by the savings rate set in the program. Combined, these two calculations represent the cost to treat this patient population with global budgets.
- Patient treatment years population:
  - The patient population is found by using Virginia health Information data on the hospital's patients treated, extrapolated at population growth rates, and multiplied by .27 each year. This number comes from a VCU study on the percentage of hospital admissions that are covered by Medicaid (Cunningham, 2020).

Appendix C: Cost Calculations

Major assumptions made in the calculation of the following cost estimates.

Timeframe = 10 Years	10 Years
Reimbursement Rate for RAC in House District 1	0.36
Reimbursement Rate for RAC in House District 10	0.36
Reimbursement Rate for RAC in House District 21	0.36
House District 1 Pop Growth Rate	-1.01%
House District 10 Pop Growth Rate	1.67%
House District 21 Pop Growth Rate	0.49%
House District 1 Year 0 Medicaid Population	30,939
House District 10 Year 0 Medicaid Population	17,136
House District 21 Year 0 Medicaid Population	20,940
Annual Medicaid Spending Growth Rate	0.049
Annual Regional Value Care Payment Decrease	0.02

Appendix C: Cost Calculations

10-year Projected Cost Savings of Virginia's Regional Accountable Care Program (Million USD)

10-Year Treatment Year Population Total: 764,783

Year	Cost to Treat without RACs	Cost To Treat with RACs	Programmatic Cost Savings	Treatment Population
2023	$677.6	$655.9	$21.6	69,015
2024	$711.6	$680.5	$31.0	69,091
2025	$747.3	$706.3	$41.1	69,176
2026	$785.1	$733.2	$51.9	69,270
2027	$824.7	$761.1	$63.5	69,372
2028	$866.5	$790.4	$76.1	69,482
2029	$910.5	$821.0	$89.5	69,602
2030	$956.9	$852.9	$103.9	69,730
2031	1,005.7	$886.3	$119.4	69,867
2032	$1,057.7	$921.2	$136.1	70,012
2033	$1,111.5	$957.6	$153.9	70,167
Total	$9,655.1	$8,766,7	$888.2	764,783

Appendix C: Cost Calculations

How these cumbers were calculated:

- Cost to treat without Regional Accountable Care Organizations:
  - The total cost to treat patients without the RACs was calculated by multiplying the average cost to cover a Medicaid enrollee in Virginia, data which was found on Medicaid's website, by the total Medicaid enrollment population in each HD (Medicaid, n.d.; DMAS, 2018). The cost to cover enrollees grew at the rate of 5% found in JLARC's evaluation of the program (JLARC, 2020). The sum of all three HD was taken and represented the total cost.
- Cost to treat with Regional Accountable Care Organizations:
  - The total cost to treat patients under the RAC program was calculated in the same way as was calculated above but the cost to cover enrollees was originally set at 95% of the cost found above and increased at the slower capped rate of growth established by the program (described in policy alternatives section).
  - Reimbursement payments to the RACs for generating these cost savings were added on top of these initial costs to cover the patient population. This analysis assumed that every RAC was run by a previous MCO company because of the higher reimbursement rates. The companies were paid 36% of all cost savings generated by the program each year.
- Patient treatment years population:
  - The total Medicaid enrollee population for these HDs were reported by Virginia Medicaid and these enrollee totals were increased at the rate of HD population growth (which was found on the U.S. Census website for each HD) (Census, n.d.).

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