Applied Policy Project

Medicaid Resource Limits and the Economic Health of Virginians in Need of Long-Term Care

Prepared for the Medicaid and CHIP Payment and Access Commission (MACPAC)

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Disclaimer

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Client

The Medicaid and CHIP Payment and Access Commission (MACPAC) is a non-partisan legislative branch agency that provides policy and data analysis and makes recommendations to Congress, the Secretary of the U.S. Department of Health and Human Services, and the states on a wide array of issues affecting Medicaid and the State Children's Health Insurance Program (CHIP).

Honor Pledge

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

Conor Boyle

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Executive Summary

To receive long-term care benefits through Medicaid, elderly Virginians must meet a variety of eligibility criteria. These criteria, which include limits on monthly income and total financial resources, harm the economic well-being of individuals in need of long-term-care. In particular, resource limits – which set the maximum level of assets that a Medicaid recipient may possess at $2,000 – disincentivize household saving and limit the financial safety net available to long-term care patients.

Savings and a financial safety net are important because Medicaid long-term care benefits do not cover all expenses that patients face. Whether living in a nursing home or receiving home and community based services (HCBS), Medicaid long-term care patients must pay for medical expenses such as new glasses, dentures, or hearing aids, as well as basic needs like clothing, transportation, and personal hygiene. HCBS patients must also pay for home maintenance, utilities, and food. These expenses can be extremely difficult for patients to cover given the low level of monthly income and safety net resources allowed under current Medicaid rules.

To address the problem of Medicaid resource limits harming Virginians' economic well-being, this APP compares four potential policies. These policy alternatives are:

1. allowing present trends continue.
2. increasing the Medicaid personal needs allowance and monthly maintenance needs allowance.
3. increasing Medicaid resource limits from $2,000 to $4,000 for an individual.
4. increasing the Medicaid community spouse resource limit to $130,000.

Each alternative was evaluated for its impact on Virginians' pre-retirement savings, impact on Medicaid long-term care patients' financial safety net, total cost, and equity. After analyzing each alternative with these criteria, this APP recommends Option 3 – increasing Medicaid resource limits from $2,000 to $4,000 for an individual. Option 3 would increase pre-retirement savings in Virginia by about $59 million over the next 10 years. It would also increase the financial safety net available to Medicaid long-term care patients by about $280 million dollars over that same time period. In order to create these benefits, government spending would have to increase by about $280 million dollars. Additionally, the lowest-wealth Virginians would not significantly benefit from this change.

As a result, Option 3 would dramatically increase savings and allow Medicaid long-term care patients more ability to cover necessary expenses. While Virginia policymakers have not shown recent interest in this policy area, this analysis strives to show that Medicaid resource limits represent an important problem with viable solutions that should be on the political agenda.

Problem Definition

The financial requirements for Medicaid eligibility harm elderly Virginians' economic well-being. Especially for elderly individuals in need of long-term care, these rules disincentivize saving for retirement and leave Virginians who receive care and their spouses with an insufficient financial safety net.

To be eligible for Medicaid coverage, low-income Virginians who are age 65 or older must meet strict resource limits – $2,000 for an individual – that do not apply to Virginians younger than 65. These resource limits complicate the administrative process of determining a person's Medicaid eligibility, create a disincentive for Virginians in need of long-term care to save for old age, and reduce elderly Virginians' ability to use personal savings as a safety net.

Glossary of Terms and Acronyms

ABD – Aged, Blind, and Disabled

ACS – American Community Survey

HCBS – Home and Community Based Services

HMO – Health Maintenance Organization

JLARC – Joint Legislative Audit and Review Commission

LTSS – Long Term Services and Supports

MACPAC – Medicaid and CHIP Payment and Access Commission

MAGI – Modified Adjusted Gross Income

MMNA – Monthly Maintenance Needs Allowance

NPV – Net Present Value

PNA – Personal Needs Allowance

SIPP – Survey of Income and Program Participation

SSI – Supplemental Security Income

Background

Medicaid plays an outsize role in paying for long-term care.

Medicaid is one of two major health programs run by the federal government and is generally intended to provide health coverage to low-income individuals. The other major program, Medicare, generally provides health coverage to individuals ages 65 or older and the disabled. Although Medicare coverage is primarily intended for the elderly, it is actually Medicaid that plays the key role in paying for long-term care. Unlike Medicare, which will pay for only 100 days in a skilled nursing facility, Medicaid coverage does not include a maximum level or duration of long-term care (MACPAC, 2011). But while Medicare is available to all elderly Americans, Medicaid recipients must meet strict eligibility requirements.

The federal government defines long-term care, sometimes referred to long term services and supports (LTSS), as "a range of services and supports" designed to provide "assistance with the basic personal tasks of everyday life" (U.S. Department of Health and Human Services, 2017). The sheer expense of long-term care helps to explain why Medicaid coverage in this area is so important. According to a survey by Genworth Financial, the median annual cost of a semi-private nursing home room in Virginia was almost $90,000 in 2018 (Genworth, 2018). The median annual cost of a home health aide over the same period was almost $50,000. As discussed above, Medicaid is primarily designed to provide health coverage to low-income individuals. But few people have enough financial resources to comfortably pay out-of-pocket for an extended stay in long-term care. As a result, many individuals become low-income as a result of needing long-term care (Weiner et al., 2013).

Low levels of savings among many Americans also contribute to the key role played by Medicaid in paying for long-term care. In 2018, the Federal Reserve estimated that 40 percent of U.S. adults did not have sufficient savings to cover a $400 unexpected expense and that 25 percent of non-retired adults had no retirement savings or pension at all (Board of Governors of Federal Reserve System, 2018). Considering the high cost of long-term care discussed previously, this lack of savings means many individuals have no ability to pay for any level of long-term care out-of-pocket. Furthermore, expensive long-term care leads many elderly Virginians who had not previously received Medicaid benefits to rely on Medicaid. The majority of Virginians – about 60% – currently receiving long-term care use Medicaid to pay for services (Kaiser Family Foundation, 2017). Nationally, Medicaid accounts for 51% of all long-term care spending (Kaiser Family Foundation, 2015). Clearly, Medicaid plays an outsize role in paying for long-term care.

Virginia's Medicaid program offers two primary "pathways" through which elderly individuals in need of long-term care can become eligible for Medicaid benefits.

In Virginia, individuals must be either "categorically needy" or "medically needy" in order to

qualify for Medicaid coverage.[1] Categorically needy individuals must fulfill all of the program's non-financial eligibility requirements (such as U.S. citizenship and Virginia residency) and meet the definition of a "covered group" (Virginia Department of Medical Assistance Services, 2018b). For individuals in need of long-term care, the most applicable covered group is usually the 300% SSI group. This cohort consists of aged, blind, and disabled (ABD) individuals in need of care in either a medical institution or home and community based services (HCBS) and whose monthly income does not exceed 300% of the maximum monthly Supplemental Security Income (SSI) benefit (a threshold of $2,313 per month). This first pathway to Medicaid coverage is largely used by individuals who were low-income before they needed long-term care.

In contrast to categorically needy individuals, medically needy individuals do not meet the definition of any covered group. Instead, medically needy individuals are those who meet the non-financial eligibility requirements and have medical spending high enough that when medical expenses are subtracted from their monthly income, their income falls below the maximum level to qualify for Medicaid (Virginia Department of Medical Assistance Services, 2018b). The process of subtracting medical expenses from an individual's income is referred to as a "spenddown." This second pathway to Medicaid coverage, the ABD medically needy group, is primarily used by individuals who were not low-income before they needed long-term care but who use spenddown to qualify for benefits.

Long-term care benefits can be used for care either in a nursing home or through HCBS. In recent years, both Virginia and the federal government have placed significant emphasis on shifting long-term care delivery away from nursing homes and towards HCBS, which are dramatically less expensive than traditional nursing services. Patients can generally choose which form of long-term care they prefer to receive.

Limits on financial assets, referred to as "resource limits," can be a significant barrier to receiving Medicaid coverage.

As mentioned in the previous section, individuals must meet a variety of financial criteria in order to be eligible for Medicaid coverage. These financial criteria include limits on both monthly income and the total level of assets, referred to as resources, available to the individual (Virginia Department of Medical Assistance Services, 2018b). For many elderly individuals, the income limit is easier to meet because they are no longer working and can use the spenddown provision to decrease their income by paying for long-term care. However, the resource limits can stand as a significant barrier to receiving Medicaid coverage.

[1] A diagram outlining Medicaid eligibility pathways and eligibility requirements can be found in Appendix B.

Both the categorically needy and medically needy pathways set the maximum level of resources at $2,000 for an individual. Resources which count against the limit include cash on hand, the value of checking and savings accounts, stocks and bonds, land which is not connected to the individual's place of residence, some vehicles, and some other categories of property (Thompson, 2012).

Medicaid resource limits are set at $2,000 for an individual.

Resources include:

- **Cash on hand**
- **The value of bank accounts**
- **The value of other savings**
- **Stocks and bonds**
- **Real estate other than an applicant's home**
- **Some vehicles**

Resource limits have not changed dramatically since the 1980s. Unlike Medicaid income limits, which are indexed to inflation and increase annually, Virginia's resource limits for the 300% SSI and ABD medically needy pathways have not changed since the mid-1980s (Bruen et al., 1999). Virginia has kept its Medicaid resource limit equal to the SSI resource limit since that time period, and the SSI resource limit was most recently set at $2,000 for an individual and $3,000 for a couple in 1984 (Social Security Administration, n.d.). If resource limits had been indexed to inflation, Virginia would now allow Medicaid recipients a maximum of $4,890 in resources – more than double the current $2,000 limit.

Since 2013, as a result of a change made in the federal Affordable Care Act, most Medicaid applicants in Virginia are not subject to resource limits (Virginia Department of Medical Assistance Services, 2018b). Resource limits now only apply to Medicaid applicants who are elderly or who need long-term care. The Virginia Department of Medical Assistance Services (DMAS) determines eligibility for individuals who are adults ages 19 to 64, pregnant women, newborns, children in foster care, children younger than 21, and households applying for Medicaid through the Low Income Families With Children pathway using the Modified Adjusted Gross Income (MAGI) methodology. MAGI is based on tax rules set by the federal Internal Revenue Service and focuses solely on individual or household income rather than an individual's income and resources. Virginians applying for Medicaid coverage through the ABD pathway and anyone in need of long-term care are still subject to a resource limit of $2,000 for an individual and $3,000 for a couple. Accordingly, elderly Virginians in need of long-term care face barriers to receiving Medicaid benefits that other, younger Virginians do not experience.

Medicaid sets a different resource limit when only one member of a couple needs long-term care. In this situation, Medicaid eligibility requirements include specific provisions to protect income and resources available to the so-called "community spouse." At the time that the individual in need of long-term care first applies for Medicaid coverage, the couple's income and assets are split equally between the two partners. The community spouse is entitled to retain a certain level of income and resources in order to ensure that they are not forced into poverty in order to pay for the other spouse's long-term care. In Virginia in 2018, the

Resource limits work differently for married couples when one member needs long-term care but the other member will continue to live in the community.

The so-called "community spouse" may retain up to $123,600 in financial resources and can receive approximately $3,000 in monthly income.

community spouse was entitled to retain up to $123,600 in assets and approximately $3,000 in monthly income (Kaiser Family Foundation, 2016).

Resource limits are administratively complex but are effective in reducing state spending on long-term care costs through Medicaid.

As the above sections may make clear, Medicaid resource limits are extremely complex. The Virginia Medicaid Manual chapter on resource limits is more than 250 pages long, and the chapter on long-term care (which also includes rules related to resources) is 350 pages long (Virginia Department of Medical Assistance Services, 2018b). Determining whether an applicant's resources meet the requirements is a time-consuming process for DMAS, as state employees may have to verify things like an applicant's bank balances, the value of assets owned by the applicant, and whether the applicant recently sold any assets. Many elderly individuals hire attorneys to help guide them through the many forms and verification requirements (Thompson, 2012). As a result of this complex system and focus on verification, resource limits are an important form of administrative cost.

Limited evidence exists about the actual administrative cost of enrolling an individual in Medicaid. Using expenditure reports from New York state in 2001, one study found the average cost of enrolling an individual in Medicaid coverage or a child in Children's Health Insurance Program coverage was about $220 (in 2002 dollars) after removing marketing and outreach costs. (Fairbrother et al., 2004). The authors found that the number of staff hours required to complete an application, gather necessary documents, answer applicants' questions, and ensure that calculations were done correctly contributed to this high figure. It should be noted that the researchers used data from Health Maintenance Organizations (HMOs), a form of insurance provider, because HMOs played a larger role in New York's Medicaid system than they did in Virginia's system at the time.

The same researcher conducted additional research on the subject of administrative costs related to Medicaid enrollment using data from California in 2003. In that study, he found that California counties spent an average of $125 per enrolled individual to both conduct outreach about Medicaid and determine Medicaid eligibility (Fairbrother, 2005). This study did not separate out the cost of outreach efforts from the cost of determining eligibility. Additionally, both of the aforementioned studies are limited by the fact that they estimate administrative costs on a per-*enrollee* basis, not a per-applicant basis.

The above evidence shows that states incur substantial administrative costs when determining an applicant's Medicaid eligibility, and that verifying an applicant's resources in order to ensure compliance with resource limits is a significant component of those costs. While

expensive in this regard, resource limits also help a state to limit the amount it spends on long-term care costs through Medicaid. Without a resource limit, virtually all elderly individuals in need of long-term care would be immediately eligible for Medicaid benefits as a result of the spenddown provision. When calculating an applicant's eligibility through spenddown, DMAS subtracts the individual's monthly medical costs from their income. Resources are *not* factored into this calculation. As a result, an individual with long-term care costs that exceeded their income would be allowed to receive Medicaid benefits even if they had hundreds of thousands of dollars' worth of resources saved up and could comfortably pay for long-term care out-of-pocket.

With a resource limit, though, elderly individuals in need of long-term care are required to use savings and investments to pay for their care until their resources fall below the $2,000 limit (or the $123,600 limit if the individual has a community spouse). As a result, resource limits are effective methods of delaying the date at which an individual may begin to receive Medicaid long-term care benefits. Resource limits also help ensure that the initial burden of long-term care spending falls onto individuals receiving care rather than on Medicaid.

Strict limits on resources impact individuals' financial decisions throughout their lifetimes. People respond to financial incentives created by Medicaid resource limits. In an influential paper, Gruber and Yelowitz (1999) found that being eligible for Medicaid has a "sizable and significant negative effect" on the wealth held by individuals and households. They explored two potential mechanisms that might create this effect. First, Medicaid-eligible individuals might save less *after* they gain Medicaid eligibility because they no longer need to use their savings as a form of "self-insurance" against potential future healthcare costs. Second, Medicaid resource limits might incentivize individuals to save less *before* gaining Medicaid eligibility in order to ensure that they can qualify for the program. Their analysis found evidence that both of these mechanisms served to decrease the savings of Medicaid-eligible Americans. Gruber and Yelowitz estimated that being eligible for Medicaid decreased a household's wealth by 16.3 percent in 1993.

Even more interestingly, Gruber and Yelowitz found that Medicaid eligibility had a larger negative effect on wealth in states that included resource limits as part of their eligibility criteria. Their results estimate that for each $1,000 increase in the estimated value of Medicaid to a household (which varies depending on the year, a household's size, as well as the age and sex of its members), wealth decreased by 1.81 percent in states that did not have a resource limit but by 4.37 percent in states with a resource limit. The negative effect of resource limits is particularly relevant to the elderly, since they are the only group of Medicaid applicants still required to meet these limits.

A more recent paper by Greenhalgh-Stanley (2015) studied the impact of Medicaid resource limits specifically on the elderly. Greenhalgh-Stanley studied Medicaid reforms in the 1980s and used the quasi-random assignment of whether a woman was widowed just before or just after the reforms to estimate the impact of increasing community spouse resource limits on elderly women's savings (Greenhalgh-Stanley, 2015). She found that every $1,000 increase in the community spouse resource limit led to an increase of $200 in median total wealth, $40 in financial wealth, and $270 in home equity held by community spouses. While these estimates are based on a different approach, this finding adds credence to the claims made by Gruber and Yelowitz that elderly individuals alter their saving and other financial decisions in light of Medicaid's eligibility criteria.

Medicaid resource limits have a "sizable and significant negative effect" on household wealth (Gruber and Yelowitz, 1999).

The incentive to meet these criteria has led to a cottage industry of financial planners who work to repackage elderly individuals' financial resources in order to fall below the thresholds. Financial planners explicitly acknowledge strategies used to help individuals with assets that exceed eligibility criteria qualify for Medicaid. Industry sources like *The CPA Journal* highlight these strategies, with articles such as "Medicaid Qualifying Strategies When There Is No Time to Plan: How a Financial Planner Can Intervene in a Crisis" (Davidoff, 2018). Recommended strategies include paying off debts and prepaying for burial arrangements to help spend savings, transferring assets between spouses before applying for Medicaid, and purchasing assets that do not count towards resource limits. The public nature of these articles suggests that seniors know about resource limits when making financial decisions. Additionally, the federal government has changed Medicaid rules several times in order to make it more difficult for Medicaid applicants to transfer their assets in order to become eligible for Medicaid benefits (Colello, 2017). The necessity of these new rules further shows that elderly individuals do recognize and respond to the incentives created by Medicaid resource limits.

Medicaid coverage and associated resource limits have different effects across the income distribution.

On average, elderly individuals have lower household incomes but higher levels of assets, including both home equity and financial assets such as stocks and bonds, than do non-elderly individuals and households (Alecxih and Kennell, 1994). But within the elderly population, there is significant heterogeneity in the level of annual income received and assets held. To study whether the effects of Medicaid coverage and Medicaid resource limits on household net worth varied across the income distribution, Maynard and Qiu (2009) extended the analysis conducted by Gruber and Yelowitz. They found that households well below and well above resource limit thresholds did not meaningfully change their savings behavior in response to changes in resource limits, but that households near the threshold dramatically lowered their savings (Maynard and Qiu, 2009). This finding demonstrates that Medicaid coverage and

resource limits have different effects across the income distribution. While resource limits might not dramatically impact the behavior of the poorest and richest Virginians, households closer to the median income may face much larger incentives related to savings.

Having a financial safety net improves the lives of long-term care patients.

To be eligible for long-term care benefits through Medicaid, Virginians are required to pay the state almost their entire income each month. This payment helps to offset some of the costs of care, but it dramatically limits the financial resources available to long-term care recipients. Medicaid long-term care patients in nursing homes may only retain $40 of income through a monthly personal needs allowance (PNA), while long-term care patients receiving HCBS may retain $1,213 per month through a monthly maintenance needs allowance (MMNA) (Virginia Department of Medical Assistance Services, 2018b). Particularly for nursing home residents, the PNA represents a small fraction of the Social Security, SSI, or pension benefits that most long-term care patients receive.

Despite receiving only limited financial resources through the monthly PNA, individuals receiving long-term care face expenses that are not covered by Medicaid benefits. Most significantly, neither Medicaid nor Medicare (which virtually all long-term care patients are also eligible for) cover the cost of routine dental care, dentures, routine eye exams, eyeglasses, or hearing aids (Virginia Department of Social Services, 2009). Instead, patients may deduct such expenses from the portion of their income paid to Medicaid each month. The deduction process can be time-consuming, as more expensive deductions require approval from the DMAS.

However, medical expenses are not the only things that long-term care recipients may need to spend money on. Medicaid does not cover basic living expenses like clothing, shoes, haircuts, snacks, or transportation, and many long-term care patients also wish to do things like purchase books or pay for a cell phone to communicate with family. For patients receiving HCBS, paying for groceries, utilities, home maintenance, and other upkeep is also difficult with the limited resources available through the MMNA. If an individual's monthly allowance is not enough to cover these expenses, they may be required to dip into savings. As discussed previously, individuals receiving Medicaid long-term care benefits may retain a maximum of $2,000 in savings due to the resource limit. Combined with the low PNA and MMNA, this low resource limit may prevent long-term care patients from fulfilling basic needs.

Medicaid does not pay for everything long-term care patients need. Patients must cover the cost of:

- New eyeglasses
- Dentures
- Hearing aids
- Haircuts
- Clothing
- Transportation
- Snacks
- Books and other entertainment
- Cell phones and other forms of communication

The living expenses described above challenge the stereotypical image of long-term care patients as bedridden or entirely reliant on care. In reality, many long-term care patients continue to participate in their communities, and all long-term care patients have personal needs that Medicaid does not meet. Having enough money to cover these expenses allows long-term care patients to remain part of a community, whether living in a nursing home or in their own home with HCBS. The social interaction associated with being part of a community has significant health benefits. Evidence suggests that regular social interaction both reduces the rate of cognitive decline for elderly individuals and reduces their likelihood of developing a disability (James et al., 2011a; James et al., 2011b). Providing long-term care patients with enough financial resources to remain active, even if that activity is simply getting a haircut or going to church, may have large impacts on patients' quality of life.

Little evidence exists as to whether Medicaid LTSS or a financial safety net improve the health of elderly long-term care patients.

A significant and growing body of research studies the impact of receiving Medicaid on non-elderly adult patients' health outcomes. Many of the best recent studies on this subject use experimental evidence from Oregon's 2008 Medicaid expansion. Using a lottery to determine which households would participate in the expanded Medicaid coverage, a team of researchers estimated the causal impact of Medicaid on recipients' self-reported level of health. Their analysis, which used data collected approximately one year after participants began receiving Medicaid benefits, found that receiving Medicaid coverage increased recipients' self-reported level of health by about 0.2 standard deviations (Finkelstein et al., 2012). This estimate included assessments of both physical and mental health, and the authors noted that "self-reported physical health measures could reflect a more general sense of improved well-being rather than actual improvements in objective health."

Another team of researchers, also using the random assignment created by Oregon's lottery, estimated the impact of Medicaid on clinical outcomes including blood pressure, cholesterol, and depression. They found that Medicaid did not significantly affect the likelihood of having hypertension, high cholesterol, or symptoms associated with diabetes (Baicker et al. 2013). This evidence suggests that the gains in self-reported health found by Finkelstein et al. may not reflect real improvements in participants' physical health. However, Baicker et al. found that Medicaid did reduce the chance of being diagnosed with depression, which could account for some of the improvement in self-reported health. Viewed together, recent experimental evidence seems to suggest that Medicaid coverage does not substantially affect physical health but may lead to improvements in participants' mental health.

Crucially, it should be noted that the study populations for both the Finkelstein and Baicker studies consisted of people younger than age 65, and none of the participants in the Oregon Medicaid expansion received Medicaid long-term care benefits. As such, evidence from these

studies may not be particularly useful when studying the effect of Medicaid long-term care coverage on elderly patients' health outcomes. However, there may not be better evidence on this specific topic and population.[2] A similar dearth of evidence exists related to the effect of savings or other financial resources on health outcomes for long-term care patients. Accordingly, it is difficult to draw any conclusions about the impact that receiving Medicaid long-term care or having a financial safety net may have on an elderly individual's health.

[2] I did not find a single paper studying the impact of Medicaid long-term care coverage on patient health outcomes while researching for this APP.

Evaluative Criteria

The following evaluative criteria will be used to address tradeoffs between each of the proposed policy alternatives:

1. Impact on pre-retirement savings
2. Impact on post-Medicaid safety net
3. Cost
4. Equity

Impact on pre-retirement savings

This criterion will estimate how much each policy is likely to increase or decrease individuals' average savings before they retire. To do so, it will primarily rely on estimates from Maynard and Qiu (2009) and Greenhalgh-Stanley (2015). These papers provide estimates of the impact of Medicaid resource limits on the net worth of individuals and community spouses, respectively. To calculate the impact of one policy alternative on pre-retirement savings levels in Virginia, the Maynard and Qiu estimate of resource limits' impact on net worth will be multiplied by the number of Virginians projected to become eligible for Medicaid long-term care coverage over the next decade. To calculate the impact of another policy alternative, the Greenhalgh-Stanley estimate of community spouse resource limits' impact on net worth will be multiplied by the number of married couples likely to benefit from the change over the next decade.

Impact on post-Medicaid safety net

This criterion will estimate how much each policy is likely to increase or decrease the average amount of resources that individuals have after receiving Medicaid coverage. All three of the non-status quo policy alternatives considered in this project (discussed in the next section) could impact an individual's post-Medicaid safety net. However, as mentioned previously, not all Virginians will have sufficient pre-Medicaid savings to increase their safety net by the full amount allowed by each policy option. For example, an elderly individual with only $500 in savings would not be able to take advantage of a $2,000 increase in Medicaid resource limits. To estimate an effect of each alternative on the average post-Medicaid safety net, this project will use data from the Survey of Income and Program Participation (SIPP), a federal survey which includes measures of household wealth and savings.

Cost

This criterion will estimate how much each policy is likely to increase or decrease Virginia state spending on Medicaid. To do so, it will estimate the effect of each alternative on the timing of patients' Medicaid enrollment and then multiply that change by the average level of spending per long-term care enrollee. Because all of the policy alternatives considered in this paper consist of relatively minor administrative changes, this cost analysis assumes that administrative and implementation costs of each alternative will not change relative to the

baseline. Administrative and implementation costs will be discussed in more detail in the next section.

Equity

This criterion will estimate whether each alternative is likely to disproportionately impact high-wealth or low-wealth Virginians. As discussed in the previous criterion, the proposed policy alternatives may have dramatically different impacts on individuals across the income distribution. Increasing resource limits benefits higher-wealth individuals who have the assets available to take advantage of these higher thresholds. By contrast, all individuals in long-term care reap the benefits of increases in allowable monthly income. This criterion will score each option on a scale of Low, Medium, and High. A score of High reflects an alternative that is most equal across the wealth distribution, while a score of Low reflects an alternative that is least equal across the wealth distribution.

Note on Weighting

Unlike some policy analyses, this paper will not attempt to calculate a score for each policy alternative by taking a weighted average of the four criteria. As a result, no weights are used in this analysis. Instead, evaluative criteria will solely demonstrate the relative tradeoffs between alternatives.

Policy Alternatives

The following policy alternatives will be considered in this analysis:

5. Let present trends continue.
6. Increase monthly personal needs allowance to $70 and the monthly maintenance needs allowance to $2,199.
7. Increase the 300% SSI categorically needy and ABD medically needy resource limits to $4,000 for an individual.
8. Increase the community spouse resource limit to $130,000.

Option 1 – Let present trends continue.

Summary of Option 1 (all figures in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High

This alternative represents a continuation of the status quo. It would leave resource limits for both the 300% SSI and ABD medically needy pathways unchanged at $2,000 for an individual, where the limits have been since the mid-1980s. Analyzing the status quo serves as a baseline against which the other three options can be compared.

Pre-Retirement Savings

Because resource limits would remain at $2,000, Virginians would not have new incentives to alter their pre-retirement saving habits. Instead, Virginians would continue to save for retirement at their current rates. As a result, pre-retirement savings are not projected to increase or decrease from current trends under a status quo policy, leading to an impact on pre-retirement savings of $0.

Post-Medicaid Safety Net

There would be a similar effect on long-term care recipients' post-Medicaid safety net under this alternative. With resource limits remaining at $2,000, long-term care patients would continue to be allowed only $2,000 in savings to use as a financial safety net after receiving Medicaid LTSS coverage. While the real value of this safety net may decrease each year due to inflation, the nominal value (which this analysis focuses on) would not change. Accordingly, allowing present trends to continue is projected to change Medicaid long-term care patients' financial safety net by $0.

Cost

If present trends are allowed to continue, Virginia would not be required to spend more on Medicaid coverage for long-term care recipients. Instead, individuals in need of long-term care who met the income and other eligibility criteria would continue to spend their own resources

on care until they held less than $2,000 in Medicaid-countable assets. As such, additional Medicaid costs at the state level would be $0.

Equity

Allowing present trends to continue scores High on the equity criterion. The status quo does not significantly advantage either high- or low-wealth households, as all Virginians are held to the same resource limits. Wealthier individuals may have more difficulty meeting resource limits, but that difficulty reflects Medicaid's emphasis on providing coverage to low-income individuals who could otherwise not afford care. No households would disproportionately benefit as a result of allowing present policy trends to continue.

Option 2 – Increase monthly personal needs allowance (PNA) and monthly maintenance needs allowance (MMNA).

Summary of Option 2 (all figures in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High

Under this alternative, DMAS would increase the maximum PNA from $40 to $70 for nursing home patients and increase the maximum MMNA from $1,210 to $2,199 for HCBS patients. These changes would more closely align Virginia's monthly personal needs allowance with levels found in neighboring states like Maryland, West Virginia, and the District of Columbia (Kaiser Family Foundation, 2016).

	Nursing Home PNA	HCBS MMNA
Virginia	$40	$1,210
District of Columbia	$70	$2,199
Maryland	$77	$77*
North Carolina	$30	$903
Tennessee	$50	$2,199
West Virginia	$50	$2,199

*Maryland allows HCBS recipients to deduct shelter costs from income

Pre-Medicaid Savings

No evidence currently exists on the impact of increasing the PNA and MMNA in these states. It is unlikely that this policy alternative would affect individuals' pre-retirement savings, however, because the PNA and MMNA are subtracted from a patient's *income* rather than their savings. It is possible that individuals could alter their incomes by investing in annuities or other financial vehicles that provide monthly benefits, but the relatively limited scale of the

proposed PNA and MMNA changes and the small number of wealthy individuals who receive Medicaid long-term care benefits means that any effect caused by this type of investment is likely minimal. Short of this potential effect, it is unlikely that individuals would respond to changes in PNA or MMNA by changing their pre-retirement savings behavior. As a result, Option 2 would increase pre-retirement savings by $0.

Post-Medicaid Safety Net

By increasing the PNA and MMNA, thereby allowing long-term care patients to retain more income instead of paying that income to Medicaid, this alternative would provide a larger post-Medicaid safety net to patients receiving long-term care. Patients could spend that income on expenses that they might otherwise be forced to use savings to cover or could save that income to build up their post-Medicaid safety net. Over the next 10 years, the value of additional financial resources available to long-term care patients as a safety net is approximately $417.9 million. This increase was calculated by multiplying the value of the PNA and MMNA by the number of patients projected to receive Medicaid nursing care and HCBS care, respectively. More specific details on the calculation of this figure can be found in Appendix D, or in the supplementary materials available online.

Cost

Because Medicaid long-term care recipients are required to pay their entire monthly income, less the PNA or MMNA, to Medicaid each month, increasing the PNA and MMNA would require the state to increase its monthly contribution towards individuals' long-term care to cover the difference in spending. In essence, each dollar retained by long-term care patients through the PNA and MMNA is a dollar that Virginia's Medicaid program must spend instead. As a result, increasing these allowances represents a transfer from the state to long-term care patients. Therefore, the increase in state spending is also projected to increase costs to Virginia's Medicaid program by $417.9 million.

Equity

The benefits of increasing the PNA and MMNA would be available to almost all Medicaid long-term care patients in Virginia, without regard to a patient's wealth. Any nursing home patient with more than $70 in monthly income would receive the full benefit, as would HCBS patients with more than $2,200 in monthly income. Some low-income HCBS patients do not receive more than $2,200 per month and would not be able to fully benefit from the increase in MMNA. Still, an increase in MMNA would significantly increase the financial resources at their disposal. This alternative would also provide benefits to both current long-term care patients and new Medicaid LTSS applicants. Accordingly, it does not favor new patients over patients previously receiving care. The equal treatment of high- and low-wealth Virginians, as well as the fact that benefits accrue to both new and previous long-term care patients, mean that Option 2 scores High on the equity criterion.

Option 3 – Increase the 300% SSI and ABD resource limits to $4,000 for an individual.

Summary of Option 3 (all figures in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium

With this alternative, DMAS would increase the resource limit for both the 300% SSI and ABD medically needy pathways from $2,000 to $4,000. Such a policy change would put Virginia in line with the District of Columbia, Mississippi, Nebraska, New Jersey, and Rhode Island, all of which increased Medicaid resource limits to $4,000 for one or both of these pathways in recent years (Kaiser Family Foundation, 2016). Increasing the resource limit for these pathways is projected to both incentivize Virginians to save more for retirement and allow individuals in need of long-term care to retain more of their financial resources when becoming eligible for Medicaid benefits.

Pre-Medicaid Savings

As discussed in the Background and Evaluative Criteria sections, empirical research has found that Medicaid resource limits decrease household saving levels (Gruber and Yelowitz, 1999; Maynard and Qiu, 2009). In their research, Maynard and Qiu (2009) found that in states with a resource test, every dollar of Medicaid benefits an individual received decreased that individual's savings by about 2.5 percent. In states with no resource test, that decrease was about 1.8 percent. Using Medicaid enrollment and expenditure data, this APP estimates that Virginia spends an average of $38,137 per Medicaid long-term care patient each year.[3] It also estimates that about 21,000 new individuals will enroll in Medicaid long-term care coverage each year. With these figures and the Maynard and Qiu estimates, this APP projects that increasing the resource limit from $2,000 to $4,000 would incentivize the average Virginia household to save an additional $286 for their retirement. Statewide, the value of this increased pre-retirement saving is projected to be $58.5 million over a 10-year period.

Post-Medicaid Safety Net

In addition to incentivizing savings, Option 3 allows Medicaid long-term care applicants to retain up to $4,000 of resources rather than the previous limit of $2,000. As a result, individuals receiving long-term care would be permitted to have a larger financial safety net after they begin receiving Medicaid benefits. However, not all elderly Virginians have enough in savings and other Medicaid-countable resources to benefit from this increase. As previously mentioned in this paper, 25 percent of Americans have no retirement savings whatsoever. These very low-wealth individuals, as well as Virginians in need of long-term care who have

[3] Information about this estimate can be found in Appendix C and in the online supplemental resources.

less than $2,000 in resources, would not be able to take advantage of a higher resource limit. An analysis of SIPP data found that more than 30% of elderly Virginians fall into this low-wealth category.[4] Medicaid long-term care applicants with resources between $2,000 and $4,000 would also be able to retain only a portion of the increase from this change rather than the full additional $2,000.

To estimate the value of additional resources available to long-term care patients as a financial safety net, this analysis multiplied the projected number of new Medicaid long-term care enrollees by the percentage of Virginians who held enough resources (after accounting for the projected $286 increase in savings) to benefit from the higher resource limit. It found that the average Medicaid enrollee would be able to retain an additional $1,366 in resources as a safety net. Over 10 years, the value of the additional safety net resources held by Medicaid long-term care patients is projected to be $279.3 million.

Cost

When elderly individuals in need of long-term care are permitted to retain additional resources, they become eligible for Medicaid long-term care benefits more quickly. Rather than being forced to spend their savings and other assets on long-term care until they held only $2,000, Option 3 would allow Medicaid long-term care applicants to become eligible for benefits when they held $4,000 in assets. This difference may seem minimal, since the categories of people who could become eligible for Medicaid LTSS benefits do not change. The same applicants for Medicaid long-term care coverage would simply become eligible slightly sooner. A resource limit of $4,000 would allow nursing home patients to become eligible for Medicaid coverage approximately two weeks earlier than they would with a $2,000 limit, and HCBS patients would become eligible about three weeks earlier.

By increasing the resource limit from $2,000 to $4,000, Virginia's Medicaid program would essentially take on the cost of paying for those two or three weeks of nursing home or HCBS care, respectively. While two weeks of care may not sound particularly expensive, Medicaid would end up paying for care approximately equal to the value of resources retained by individuals. As with Option 2, this policy change represents a transfer of costs from long-term care patients onto Medicaid. Over a 10-year period, the cost of this additional Medicaid spending would be $279.3 million, equal to the increase in post-Medicaid safety net resources.

Equity

The above analysis highlights the fact that lower-wealth individuals would not be able to reap the full (if any) benefits from this policy change. This lower-wealth group makes up more than 30 percent of Virginia's elderly population and would benefit almost exclusively from the $286 in additional pre-retirement savings. The 70 percent of Virginians with more than $4,000 of

[4] Information about this 30% figure can be found in Appendix F.

Medicaid-eligible resources would receive this $286 benefit as well as the full $2,000 in additional post-Medicaid safety net resources. While this higher-wealth group still represents the broad majority of Virginians, the disparity in benefits across the income distribution should still be noted.

Additionally, this policy change would only apply to individuals who apply for Medicaid long-term care *after* this policy was implemented. Patients previously receiving long-term care through Medicaid would not benefit, as they cannot alter their pre-retirement savings behavior and were already required to spend their financial resources until they held less than $2,000. The fact that a large majority of long-term care applicants could benefit from this policy, as well as the fact that benefits for all applicants would not exceed $2,286, support this alternative's projected equity. However, this alternative would have differential effects across the wealth distribution and would only benefit new Medicaid LTSS applicants. As such, Option 3 scores Medium on the equity criterion.

Option 4 – Increase the community spouse resource limit to $130,000.

Summary of Option 4 (all figures in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

Under this alternative, DMAS would increase the maximum level of resources that a community spouse may retain from $123,600 to $130,000. At this level, Virginia would have the highest community spouse resource limit in the nation (Kaiser Family Foundation, 2016). Increasing the community spouse resource limit could lead to both increased pre-retirement savings and an increased post-Medicaid financial safety net for married Virginians receiving LTSS and their partners.

Pre-Medicaid Savings

As was the case with Option 3, empirical research has found that Medicaid resource limits decrease the saving behavior of married couples. Greenhalgh-Stanley (2015) found that raising the community spouse resource limit by $1,000 increased the community spouse's median total wealth by $200, financial wealth by $40, and home equity by $270. Since only Medicaid long-term care applicants who are married stand to benefit from changing the community spouse resource limit, this analysis multiplied the number of projected Medicaid long-term care applicants by the percentage of LTSS applicants likely to be married, for a total of about 4,100 potential beneficiaries. It then used the proposed increase in the community spouse resource limit ($6,400) and the Greenhalgh-Stanley figures to estimate that the average household benefitting from an increase in the community spouse resource limit would save an additional

$3,000 for retirement. Over a 10-year period, this policy change would increase the value of pre-retirement savings in Virginia by $33.0 million.

Post-Medicaid Safety Net

This alternative would allow community spouses to retain more of their resources when their partner becomes eligible for Medicaid LTSS coverage. In doing so, it would provide more of a safety net for community spouses who would actually retain the financial resources and would provide an indirect form of additional safety net for spouses receiving long-term care, who would likely benefit from the increased resources available to their partner.

As stated above, this APP estimates that about 4,100 Medicaid long-term care applicants each year have a community spouse who could benefit from resource protections. However, unlike the $2,000 resource limit for individuals, which is relatively low, the current community spouse resource limit is relatively high at $123,600. Only those community spouses with more than $123,600 in Medicaid-countable resources would receive any benefit from increasing the community spouse resource limit. Using savings data from the SIPP, this analysis estimates that the number of Medicaid long-term care applicants who have community spouses with enough resources to benefit from the proposed increase is only about 1,100 each year. While those 1,100 community spouses would be able to increase their post-Medicaid safety net by $6,400, the vast majority of Medicaid LTSS applicants would receive no benefit from this policy. In total, the value of additional safety net resources available to long-term care patients and their community spouses is $70.2 million over a 10-year period.

Cost

As with Option 3, increasing the community spouse resource limit would allow some long-term care patients to become eligible for Medicaid benefits more quickly. While relatively few Medicaid applicants stand to benefit from this policy change – just an estimated 1,100 applicants, as discussed in the section above – the $6,400 increase in the community spouse resource limit would transfer a large amount of spending from each of these beneficiaries to Virginia's Medicaid program. Increasing the community spouse resource limit would allow these applicants' community spouses to retain additional resources rather than using them to pay for their partner's long-term care. Using the $6,400 in transferred spending and the projected number of married Medicaid applicants with more than $123,600 in resources, this analysis projects that the cost of additional spending created by Option 4 would be $70.2 million over a 10-year period – equal to the value of additional safety net resources allowed by this alternative.

Equity

Even more than Option 3, this alternative would disproportionately benefit certain higher-wealth Virginians. By targeting additional resource protections for community spouses, Option 4 would only provide benefits to married Medicaid long-term care applicants. Due to

the already-high threshold of $123,600 for the community spouse resource limit, an increase to $130,000 would solely benefit high-wealth married applicants. Using SIPP data, this APP estimates that only 27 percent of married, elderly Virginians hold enough resources to benefit from this policy change. And as with Option 3, this change would only apply to new Medicaid long-term care applicants. Community spouses of patients currently receiving long-term care would already have been required to spend their financial resources to pay for their partner's care. Option 4 disproportionately benefits particular groups in all three of these areas, and therefore scores Low on the equity criterion.

Outcomes Matrix (all figures in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

The above outcomes matrix displays the projected impact of all four policy options on each of the evaluative criteria considered in this analysis.

Note on Costs and Benefits

The analysis conducted in this APP does not represent a formal cost-benefit analysis. It does not attempt to identify and monetize every cost or benefit associated with these policy alternatives. For example, a formal cost-benefit analysis would likely place a dollar figure on the potential health benefits caused by long-term care patients having enough of a financial safety net to participate more fully in their communities. It might also place a dollar figure on the number of staff hours needed to update the Virginia Medicaid manual and associated forms to reflect the changes made by each alternative. While this APP identifies important tradeoffs between the proposed policy alternatives and their likely large-scale effects, a more formal cost-benefit analysis could be a useful next step in assessing any of these policies.

Recommendation

This APP recommends Option 3 – increasing the 300% SSI categorically needy and ABD medically needy resource limits to $4,000 for an individual. Option 3 incentivizes the largest increase in pre-retirement savings, at a value of approximately $58.5 million over the next 10 years. Virginia households would save an average of $286 more for their old-age expenses. Admittedly, $286 represents a very marginal change in savings at the household level. On the state level, though, this marginal per-household increase adds up to a significant change in savings. Option 3 would also provide the second-largest increase in additional financial safety net resources available to Medicaid long-term care patients, who would be able to retain an additional $279.3 million over the same time period. This large increase in safety net resources for LTSS patients has both positive and negative impacts. On the positive side, having a larger safety net would enable individuals receiving Medicaid long-term care benefits to better cover expenses like a new pair of eyeglasses or dentures, would allow them the financial latitude to more fully participate in their communities, and more closely reflects the real value of resource limits when they were last updated in the mid-1980s.

On the negative side, Option 3 would create a larger financial safety net for Medicaid LTSS patients by transferring long-term care costs from patients to Medicaid. As a result, increasing Medicaid resource limits for these two pathways would require the state to take on an amount equal to the increased financial safety net – $279.3 million – in new Medicaid spending. That $279.3 million would have to come from somewhere in the state budget, and Virginia would likely have to raise taxes or cut other forms of spending in order to accommodate the several hundred million more dollars in projected Medicaid spending.

Furthermore, increasing resource limits for these pathways would not benefit all Medicaid long-term care patients in Virginia. The more than 30 percent of elderly Virginians with less than $2,000 in Medicaid-countable resources would not benefit from an increase in resource limits. Similarly, this policy change would exclusively benefit new enrollees in Medicaid long-term care coverage, as patients previously receiving long-term care through Medicaid would already have been required to comply with the old resource limit of $2,000. With that being said, increasing the 300% SSI and ABD resource limits to $4,000 would impact more than 70% of Medicaid long-term care applicants – more than 14,000 individuals in the first year alone.

The other alternatives considered in this APP also have strengths and weaknesses. Allowing present trends to continue is the lowest-cost option but offers no potential benefits in the form of increased saving or safety net resources. Increasing the PNA and MMNA would most dramatically increase the financial resources available to Medicaid long-term care patients, but would cost the state about $135 million more than Option 3 and would not incentivize pre-retirement saving. Increasing the community spouse resource limit would increase savings by $33 million but would be the least equitable of the four alternatives. On balance, this APP

finds that increasing the 300% SSI and ABD resource limits from $2,000 to $4,000 would be the best policy for the Virginia Department of Medical Assistance Services to pursue.

The Impact of Increasing Medicaid LTSS Resource Limits to $4,000

Individuals save more, Medicaid pays more

PRE-RETIREMENT SAVINGS	**$59 million increase over 10 years** Increasing Medicaid resource limits incentivizes people to save more for old age and long-term care. A resource limit of $4,000 would increase savings by about $285 per household, for a total of $59 million across Virginia.
POST-MEDICAID SAFETY NET	**$280 million increase over 10 years** Increasing resource limits allows people to keep more in savings when receiving Medicaid. A limit of $4,000 would allow the average Virginian to retain $1,400 in additional savings, for a total of $280 million statewide.
COST	**$280 million increase over 10 years** When people retain their savings, Medicaid must step in to pay the cost of long-term care that individuals otherwise would have paid for. Every dollar that Virginians keep is a dollar Medicaid must spend on long-term care.
EQUITY	**The poorest 30% of Virginians will not benefit** More than 30% of elderly Virginians have less than $2,000 in Medicaid-countable resources, meaning they will not benefit from this policy change.

Implementation

If Option 3 were to be implemented, DMAS would be the state agency tasked with putting this policy change into practice. Implementation would likely be a relatively easy process and would primarily occur through a regulatory change to alter Virginia's Medicaid rules. Medicaid long-term care applicants would still be required to meet resource limits, and DMAS employees would still be required to verify the value of applicants' resources. The only difference in implementation would be that DMAS employees would verify that applicants held less than $4,000 in Medicaid-countable resources rather than the previous level of $2,000.

Political Feasibility

It is important to note that none of the policy alternatives – including the recommended alternative, Option 3 – are politically feasible in Virginia today. The state legislature has not considered a bill to alter Medicaid resource limits since 2006, and that legislation was designed to make resource limits *stricter* by updating limitations on asset transfers. The Joint Legislative Audit and Review Commission (JLARC), the policy analysis arm of the Virginia state legislature, did not address resource limits in a 2016 document on managing Medicaid spending at the state level. DMAS, which would be responsible for implementing any of the four policy alternatives, has been similarly quiet on the subject of resource limits. Evidently, there is a lack of political will to make policy changes in this arena. However, the lack of political feasibility does not mean that these alternatives are unimportant. Each of the policies outlined in this APP – and in particular, Option 3 – could provide some benefit to Virginians receiving Medicaid long-term care benefits. Careful analysis of these alternatives is valuable so that when political interests change and policymakers one day wish to address Medicaid resource limits, they do so in a way that best takes into account a policy's impact on pre-retirement savings, effect on the safety net available to Medicaid long-term care patients, cost, and equity.

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Appendices

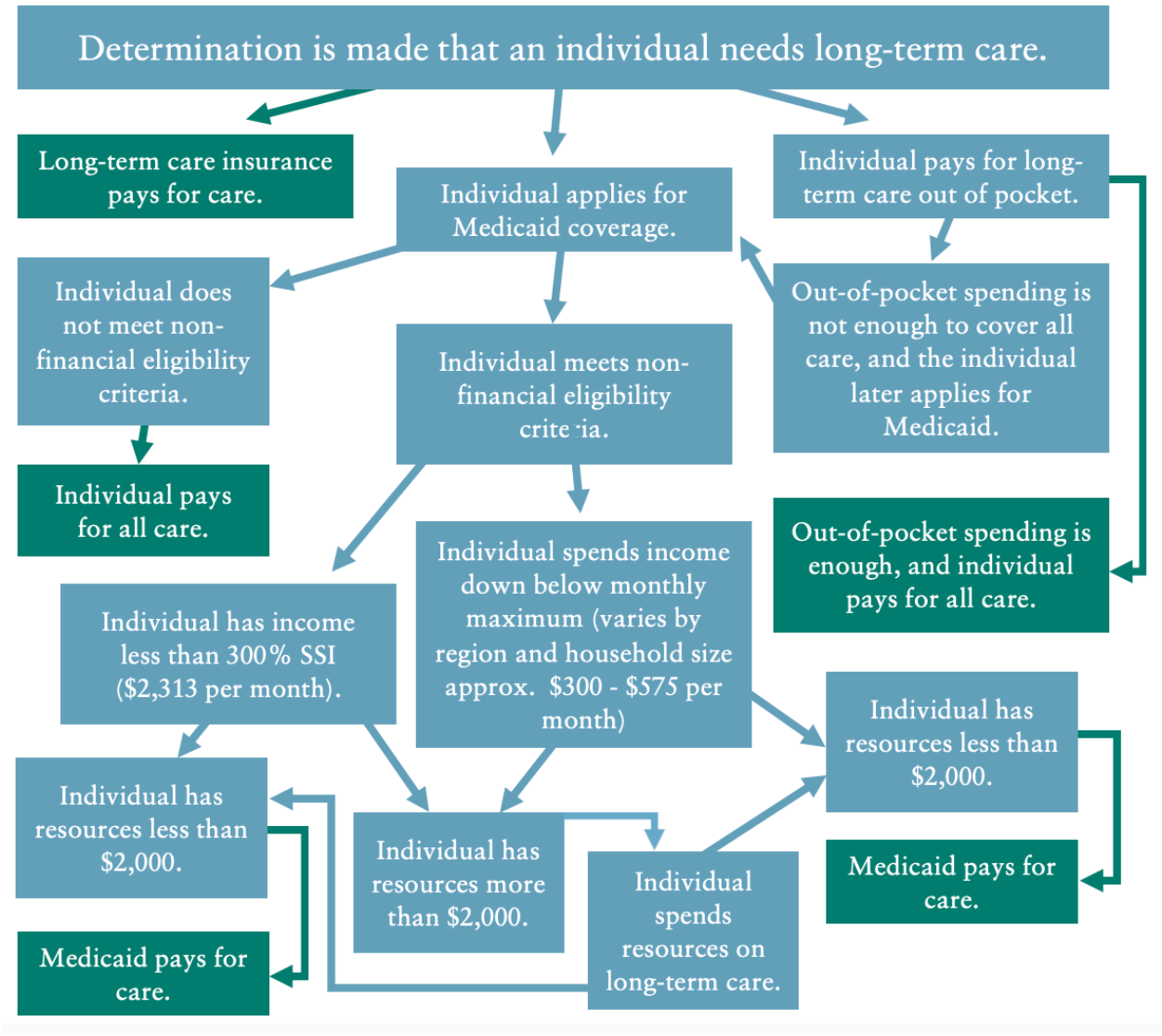
Appendix A. Online supplementary materials.

Online supplementary materials for this APP include a cost analysis spreadsheet, SIPP data and the accompanying Stata do-file used for analysis, and a comparison of SIPP data to American Community Survey (ACS) data. The online materials can be found using the links below, or at https://tinyurl.com/BoyleAPP.

Link: Cost analysis spreadsheet

Link: SIPP data, Stata do-file, and ACS comparison

Appendix B. Diagram of typical financing paths for Virginians in need of long-term care.



Appendix C. Pre-retirement savings calculations.

The Cost Analysis spreadsheet available through the online supplementary materials provides the most in-depth explanation of the calculations I used to estimate pre-retirement savings. These calculations relied primarily on enrollment and cost data from a 2016 report conducted by the Virginia Joint Legislative Audit and Review Commission (JLARC) on controlling Medicaid costs (Molliet-Ribet et al., 2016). DMAS also provides data on costs and enrollment in Medicaid, and this data is three years more up-to-date than the JLARC data (Virginia Department of Medical Assistance Services, 2018a). The reported costs and enrollment are similar from both sources, though, and the JLARC figures more easily separate out long-term care costs from other forms of Medicaid spending. As a result, I use the JLARC figures in all estimations.

Key enrollment figures used in estimating pre-retirement savings are listed in the table below.

Number of elderly LTSS recipients (2015)	61,746
Number in institutional care (2015)	19,332
Number in HCBS (2015)	42,414

Option 3 used the Maynard and Qiu (2009) estimates of the impact of resource limits on household savings to calculate the change in savings caused by an increase in the resource limit. Maynard and Qiu's analysis only compared states with resource limits to states without resource limits. As a result, their analysis represents a removal of the resource limit entirely rather than an increased of $2,000. My analysis likely overestimates the impact of changing the resource limit on household savings. Appendix H includes a sensitivity analysis in which the impact of changing resource limits on household savings is reduced by one-half.

Option 4 uses marriage data from the 2013-2017 American Community Survey 5-year estimates to estimate the number of Medicaid long-term care applicants who are likely to have a community spouse (U.S. Census Bureau, 2018). The baseline estimate relies on the percentage of Virginians currently living in nursing homes who are married, which is approximately 20%. I argue that focusing solely on Virginians who currently live in nursing homes gives a more representative figure for the elderly population in need of long-term care. However, Appendix H includes a sensitivity analysis in which the percentage of Medicaid long-term care applicants who have a community spouse is assumed to be equal to the overall, percentage of non-institutionalized married Virginians.

Option 4 also uses the Greenhalgh-Stanley (2015) estimate the impact of resource limits on community spouse wealth. This study used a population of community spouses whose husbands were receiving long-term care through Medicaid. As such, is likely more

representative of the target population for this APP. For completeness, appendix H also includes a sensitivity analysis in which the Greenhalgh-Stanley estimates are assumed to be only half as large.

Appendix D. Post-Medicaid safety net calculations.

As was the case in Appendix C, the best source of information about the post-Medicaid safety net calculations is the Cost Analysis spreadsheet available online.

To calculate an estimate for Option 2, I multiplied the increase in the PNA by the percentage of Medicaid long-term care patients currently residing in a nursing home, multiplied the increase in the MMNA by the percentage of Medicaid long-term care patients currently receiving HCBS, and added those figures together to get a weighted average of the per-person cost of increasing the PNA and MMNA. I then multiplied that per-person weighted average by the projected number of Medicaid long-term care recipients in each of the next 10 years to get a total estimate of the increase over that time period.

To calculate an estimate for Option 3, I divided the number of patients receiving Medicaid LTSS benefits by the total number of Medicaid beneficiaries in Virginia. These figures came from the 2016 JLARC estimates. I estimated that about 7% of all Medicaid patients in Virginia receive LTSS benefits. I then used data from the Centers for Medicare and Medicaid Services (CMS) to estimate that approximately 280,000 people applied for Medicaid in Virginia in 2018 (Centers for Medicare and Medicaid Services, n.d.). Multiplying the 7% of Medicaid patients who receive LTSS by the 280,000 total applicants gave me an estimated number of annual Medicaid LTSS applicants of 20,803. Using data from the SIPP, as explained in Appendix F, I estimated that approximately 68% of Virginians would have more than $2,000 worth of Medicaid-countable resources after increasing their savings for $286. I assumed that each of these 68% of applicants would be able to receive the full $2,000 dollars-worth of benefit. I multiplied $2,000 dollars by the 68% of Virginians would be expected to benefit from this increase in post-Medicaid safety net, projecting that the average Medicaid long-term care enrollee would be able to retain $1,366 in additional safety net resources. Finally, I multiplied this her and Rowley increasing safety net resources by the total number of new enrollees projected for Medicaid long-term care benefits.

Option 4 was calculated in much the same way as Option 3. Using ACS data on marriage rates and CMS data on Medicaid applicants, I estimated that about 4,100 Medicaid long-term care applicants each year would have a community spouse. Using SIPP data on Medicaid-countable resources, I then estimated that only about 1,100 of these applicants would have enough resources to benefit from Option 4's change in the community spouse resource limit. From there, I estimated that the expected value of increasing the community spouse resource limit for the average Virginia Medicaid long-term care applicant was $343.

Appendix E. Cost calculations.

As discussed in the Policy Alternatives section, I argue that each dollar in additional post-Medicaid safety net resources is a dollar that Virginia's Medicaid program must pay towards patients' care. As a result, my cost calculations are identical to the post-Medicaid safety net calculations found in Appendix D.

Appendix F. SIPP calculations.

To calculate the percentage of Virginians who hold enough Medicaid-countable resources to be impacted by Options 3 and 4, I used data from the 2014 Survey of Income and Program Participation (SIPP) wave 1. The SIPP is a national survey conducted by the U.S. Census Bureau which provides one of the only nationally-representative estimates of household wealth holding. 2014 was the most recent year in which SIPP was conducted. I downloaded 2014 SIPP wave 1 data in Stata format from the National Bureau of Economic Research (U.S. Census Bureau, 2017). A Stata version of the dataset which I used is available in the online supplementary materials (Appendix A). The full SIPP dataset can be downloaded either from the U.S. Census Bureau, or from NBER in a variety of file formats.

To set up the dataset, I used a probability weight with the *wpfinwgt* variable and stratified using the *gvarstr* variable. I then dropped from the dataset all individuals who did not reside in the state of Virginia.

To validate whether the SIPP data was properly weighted and representative of Virginia's population, I compared several results from my SIPP analysis to figures from the 2013-2017 ACS 5-year estimates. I knew that these ACS estimates would be representative of Virginia's population and would serve as a good benchmark to compare against. The results of that validation are displayed in the table below.

	ACS	SIPP
Percentage of Population Under 18	22.5%	23.4%
Percentage of Population Under 65	86.2%	86.6%
Percentage of Population (White)	63.1%	65.4%
Percentage of Population (Black)	18.9%	19.2%
Percentage of Population (Hispanic)	8.7%	6.9%
Percentage of Population (Asian)	6.0%	7.4%
Percentage of Population (Other)	3.3%	1.0%
Percentage of Population (Married)	52.4%	54.3%
Percentage of Population Receiving Medicaid	12.0%	9.9%

*Differences in population figures may be due to differences in the way that the ACS and SIPP define racial and ethnic categories.

The ACS and SIPP figures were similar enough that I felt confident in moving forward with the analysis. I then used six SIPP variables which captured a household's wealth in variety of categories to create a single variable representing the total dollar value of a household's Medicaid-countable assets. Those six variables are listed and defined below, using definitions from the SIPP online e-codebook (U.S. Census Bureau, n.d.).

1. *THVAL_BANK* – household-level sum of value of assets held at financial institutions
2. *THVAL_STMF* – household-level sum of value of stocks and mutual funds

3. *THVAL_BOND* – household-level sum of value of other interest-earning assets
4. *THVAL_RENT* – household-level sum of value of rental properties
5. *THVAL_RE* – household-level sum of value of other real estate
6. *THVAL_OTH* – household-level sum of value of other assets

The assets measured by each of the six variables count towards Medicaid resource limits. As such, this new variable serves as a strong proxy for measuring the percentage of Virginians who have resources that would be affected by Medicaid resource limits. The percentage of Virginians projected to have Medicaid-countable resources less than $2,000 and $4,000 are listed in the table below. I used these projections throughout the calculation done in the previous two appendices.

Medicaid-countable resources	Percentage of Virginians
$2,000 or less	32.7%
$2,000 or less (after $286 increase)	31.7%
$4,000 or less	38.7%
$4,000 or less (after $286 increase)	37.7%

Appendix G. Discounting.

All pre-retirement savings, post-Medicaid safety net, and cost results given in this APP represent a net present value (NPV). When calculating an NPV, costs and benefits are discounted. The purpose of this discounting is to reflect the fact that costs and benefits which accrue in future years are less valuable than costs and benefits which accrue in the present. I used a discount rate of 3% when making NPV calculations, which is a fairly standard rate used in many cost-benefit analyses. Appendix H – sensitivity analysis – includes a table which shows how the result of this APP change if the discount rate was 7% instead of 3%.

Appendix H. Sensitivity analysis.

The following appendix demonstrates the sensitivity of this APP's results to changes in assumptions used in the calculations of savings, safety net increases, and costs. All of the following tables can also be found in the online supplementary materials.

Under Baseline Assumptions (in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

With 7% Discount Rate (in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$354.6	$354.6	High
Option 3: Increase SSI and ABD resource limits	$49.6	$237.0	$237.0	Medium
Option 4: Increase community spouse resource limit	$28.0	$59.6	$59.6	Low

With 3.9% Enrollment Growth Rate (in millions of dollars)

	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$442.4	$442.4	High
Option 3: Increase SSI and ABD resource limits	$61.9	$295.6	$295.6	Medium
Option 4: Increase community spouse resource limit	$34.9	$74.3	$74.3	Low

With 52.4% of Medicaid LTSS Applicants Currently Married (equal to percentage of adult Virginians who are married) (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$38.5	$186.0	$186.0	Low

With 58.3% of Medicaid LTSS Applicants Holding Assets of More than $2,000 after $286 increase (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$238.4	$238.4	Medium
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

With 78.3% of Medicaid LTSS Applicants Holding Assets of More than $2,000 after $286 increase (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$320.1	$320.1	Medium
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

With 37.1% of Married Medicaid LTSS Applicants Holding Assets of More than $130,000 (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$45.1	$96.0	$96.0	Low

With a 50% Decrease in the Maynard and Qiu Estimate of the Impact of Increasing the Resource Limit (from a $286 average household increase to a $143 average household increase) (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$29.2	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$33.0	$70.2	$70.2	Low

With a 50% Decrease in the Greenhalgh-Stanley Impact of Increasing the Resource Limit (from a $3,008 average household increase to a $1,504 average household increase) (in millions of dollars)				
	Pre-Retirement Savings	Post-Medicaid Safety Net	Cost	Equity
Option 1: Present Trends Continue	$0	$0	$0	High
Option 2: Increase monthly PNA and MMNA	$0	$417.9	$417.9	High
Option 3: Increase SSI and ABD resource limits	$58.5	$279.3	$279.3	Medium
Option 4: Increase community spouse resource limit	$16.5	$70.2	$70.2	Low