COMMONWEALTH of VIRGINIA

Department of Medical Assistance Services

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September 27, 2021

MEMORANDUM

TO: The Honorable Janet D. Howell
Chair, Senate Finance Committee

The Honorable Luke E. Torian
Chair, House Appropriations Committee

The Honorable Mark D. Sickles
Vice Chair, House Appropriations Committee

FROM: **Karen Kimsey**
Director, Virginia Department of Medical Assistance Services

SUBJECT: Estimating the Impact of Virginia's Increasing Minimum Wage on Medicaid Costs

This report is submitted in compliance with the Virginia Acts of the Assembly – 317 CC, which states:

Out of this appropriation, $300,000 from the general fund and $300,000 from nongeneral funds the first year is provided to the Department of Medical Assistance Services to contract with a consultant with expertise in health care rate setting to thoroughly analyze current Medicaid rates for services likely impacted by an increase in the state minimum wage. The consultant shall take into account the timeline of future minimum wage rate increases consistent with state law and analyze such impact on various Medicaid providers and their ability to serve Medicaid enrollees. The consultant shall develop recommendations that may include benchmark rates or rate ranges that will better inform the General Assembly on potential rate changes in the future. The department shall report the findings and recommendations of the consultant to the Department of Planning and Budget, and the Chairs of the House Appropriations and Senate Finance and Appropriations Committees by December 1, 2020

Should you have any questions or need additional information, please feel free to contact me at (804) 786-8099.

KK/JM
Enclosure
Pc: The Honorable Daniel Carey, M.D., Secretary of Health and Human Resources

HMA

HEALTH MANAGEMENT ASSOCIATES

Estimating the Impact of Virginia's Increasing Minimum Wage on Medicaid Costs

PREPARED FOR

VIRGINIA DEPARTMENT OF MEDICAL ASSISTANCE SERVICES

JUNE 30, 2021

Research and Consulting in the Fields of Health and Human Services Policy, Health Economics and Finance, Program Evaluation, Data Analysis, and Health System Restructuring

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Summary

In 2020, the Virginia General Assembly passed and the Governor approved legislation to increase the Commonwealth's minimum wage in a series of steps until reaching $15 per hour in 2026. The substantial increase in the minimum wage will improve the financial circumstances of lower-wage workers across the Commonwealth, including healthcare workers providing essential services to Medicaid enrollees. Recognizing that higher wages will increase Medicaid providers' costs, the Assembly directed the Department of Medical Assistance Services (DMAS) to study the potential impacts. DMAS contracted with the Burns & Associates division of Health Management Associates (HMA-Burns) to assist with the study.

This study included several key topics:

- *Researching the impacts of an increasing minimum wage*. In addition to the obvious impacts on the wages of lower-income workers, this research also considered other impacts to these workers, such as access to health insurance, as well as larger societal benefits such as improved public health and reduced reliance on public benefits.
- *Quantifying the impact of a rising minimum wage on current wages.* Research has consistently found that an increasing minimum wage does not only affect those workers earning the minimum wage. There are also 'spillover' effects as the wages of lower-income workers earning above the minimum wage are increased to remain competitive.
- *Projecting the costs of Virginia's rising minimum wage.* This analysis considered increased costs both by provider type and for the Medicaid program in total.

Virginia's Medicaid program covers a wide range of healthcare services such as in-home personal assistance, inpatient and outpatient hospitalization, office-based physician services, community-based behavioral healthcare, nursing facilities and other residential care, and prescription drugs. Services are delivered through a diverse network of thousands of providers that range from large hospital systems to independent practitioners. The impact of the increasing minimum wage will vary by provider type based on the extent to which a provider relies on lower-wage workers. For example, the additional expense will be significant for a personal assistance provider where most caregivers earn low wages, but the cost will be modest for a therapy practice where most employees are highly paid.

To accommodate the diversity of providers, the study separately analyzed the impact for different types of providers. Information was collected through a provider survey and supplemented by other available data, such as cost reports or published wage data.

Figure 1 presents the results of this analysis, reporting the total estimated increase to providers' costs for each scheduled minimum wage increase.

Figure 1: Projected Cost of Full Implementation of $15 Minimum Wage by Provider Type ($ in millions)

Provider Type	Total Est. Inc. to Costs	Step 1 ($7.25-$9.50)	Step 2 ($9.50-$11.00)	Step 3 ($11.00-$12.00)	Step 4 ($12.00-$13.50)	Step 5 ($13.50-$15.00)	Total
Home Health-Aides	44.25%	$0.20	$0.14	$0.09	$0.16	$0.17	$0.8
Personal Care/ Respite	44.00%	$106.97	$74.45	$48.74	$91.72	$100.25	$422.1
DD Waiver-Direct Supp.	19.50%	$12.49	$13.54	$11.12	$39.48	$80.49	$157.1
Adult Day Health	19.50%	$0.02	$0.36	$0.30	$0.93	$1.16	$2.8
Non-Emer. Transportation	18.50%	$1.33	$0.94	$0.64	$1.61	$3.17	$7.7
Intermed. Care Facilities	13.25%	$0.77	$1.26	$1.15	$6.72	$14.31	$24.2
Nursing Facilities	8.50%	$5.03	$5.71	$4.62	$15.30	$27.13	$57.8
Psychiatric Residential	6.75%	$0.15	$0.39	$0.37	$1.68	$4.28	$6.9
Home Health-Other	5.25%	$0.77	$0.58	$0.39	$0.99	$2.05	$4.8
DD Waiver-Other	4.50%	$0.06	$0.07	$0.06	$0.28	$0.93	$1.4
Hospitals	2.75%	$2.29	$3.05	$2.67	$12.38	$32.01	$52.4
PACE	2.75%	$0.03	$0.07	$0.05	$0.31	$1.36	$1.8
Clinic/ Medical Facilities	2.75%	$0.03	$0.04	$0.04	$0.18	$0.53	$0.8
Hospice	2.75%	$0.01	$0.03	$0.02	$0.12	$0.54	$0.7
Physicians/ Practitioners	1.00%	$0.09	$0.11	$0.11	$0.51	$1.39	$2.2
		$130.23	**$100.72**	**$70.37**	**$172.38**	**$269.77**	**$743.5**

The table demonstrates the large variation in projected impacts based on provider type, ranging from less than five percent for physician practices, hospitals, and several other provider types to more than 40 percent for personal care and home health aide services. Based on current spending levels, Medicaid providers' costs are projected to increase by more than $740 million annually once the minimum wage reaches $15 per hour. In addition to differences in the size of the estimated cost increase, provider groups vary in several other ways that should be considered when determining whether and how to adjust provider rates, including a provider group's reliance on Medicaid funding (i.e., do providers have access to other revenues) and current policies related to payments (i.e., are rates tied to other benchmarks and/or do providers receive supplemental payments).

Introduction

Pursuant to 2021 Appropriation Act Item 317.CC, the Department of Medical Assistance Services (DMAS) studied the impact of Virginia's rising minimum wage on Medicaid provider expenses and overall system costs. DMAS contracted with the Burns & Associates division of Health Management Associates (HMA-Burns) to lead this study.

The study was designed to account for the diversity of Virginia's Medicaid providers. Virginia's Medicaid program covers more than 1.2 million residents with a total budget approaching $12 billion. Services are delivered through thousands of contracted providers. They range in size from large hospital systems to independent practitioners. Some serve individuals with Medicaid almost exclusively; others serve very few individuals with Medicaid. Staff range from doctors, nurses, therapists, and other clinicians to relatively lower-wage staff who provide personal care assistance and perform administrative tasks. Figure 2 reports calendar year 2019 spending figures for major groups of providers included in this study.

Figure 2: Calendar Year 2019 Virginia Medicaid Spending Totals for Select Provider Groups ($ in millions)

Provider Type	FY2019 Payments	Provider Type	FY2019 Payments
Hospitals	$1,905.2	ICF – IID and MH	$182.7
HCBS Waiver Providers	$1,810.3	Clinic/ Medical Facilities	$122.1
Residential Facilities	$781.6	Home Health Providers	$92.9
Physicians/ Practitioners	$220.2	Non-Emer. Transportation	$41.6

For any provider employing lower-wage workers, a rising minimum wage will increase their costs. DMAS and HMA-Burns therefore designed the study to include the large majority of Medicaid provider types. However, the magnitude of the impact will vary greatly by provider type, based on the extent to which they rely on lower-wage staff. A provider delivering personal care services will likely experience a substantial impact because their direct care staff likely earn lower wages compared to the effect on a physician's office that will likely be minimal because they have few low-wage staff.

The Commonwealth's decisions about whether to adjust Medicaid payment rates will also have differing impacts across provider types based on their reliance on Medicaid funding. Some providers, such as many hospitals, have other payers including Medicare and commercial insurers, whereas Medicaid funding represents the large majority of funding for other providers, such as those delivering home and community-based services.

Medicaid providers facing substantial cost increases will need to take action to absorb this added expense. For example, Medicaid providers may reduce expenses elsewhere, such as reducing staff benefits; shift costs to other payers, such as commercial health insurance (although this not an option for all providers); or limit the provision of more costly services, such as eliminating services in rural areas; or leave the Medicaid program entirely.

Recognizing the potential impacts on Medicaid providers, their staff, and the individuals they serve, the 2021 Appropriation Act Item 317.CC for fiscal years 2021 and 2022 directed DMAS to:

> … contract with a consultant with expertise in health care rate setting to thoroughly analyze current Medicaid rates for services likely impacted by an increase in the state minimum wage. The consultant shall take into account the timeline of future minimum wage rate increases consistent with state law and analyze such impact on various Medicaid providers and their ability to serve Medicaid enrollees. The consultant shall develop recommendations that may include benchmark rates or rate ranges that will better inform the General Assembly on potential rate changes in the future.[1]

This study has been conducted to comply with this requirement and to inform the Commonwealth's decisions regarding potential changes to provider payment rates. This report is divided into two parts.

Part I: Background provides a brief overview of the history of federal and state minimum wage changes, summarizes the research on the effects of a rising minimum wage with particular emphases on workers and public health, and describes the formula HMA-Burns has developed to estimate the impact of a rising minimum wage at different current wage levels.

Part II: Methodology and Results details the various analyses that HMA-Burns performed to estimate the impact of Virginia's increasing minimum wage on Medicaid providers' costs. A key element of this analysis is a provider survey that was developed to collect data about the wages currently paid to direct care staff as well as support and administrative staff. HMA-Burns performed additional analyses to supplement the provider survey. Findings from the provider survey and supplementary analyses were used to project the impact of the rising minimum wage on providers' costs based on provider type as well as the total cost to the Medicaid system. This section includes key considerations for policymakers deciding whether and how to adjust payment rates.

[1] State of Virginia General Assembly. 2020 Session. Budget Bill – HB30 (Chapter 1289), Item 317, paragraph CC. Retrieved February 2021 from https://budget.lis.virginia.gov/item/2020/1/HB30/Chapter/1/317/.

Part I: Background

The federal minimum wage has remained unchanged for more than a decade. As a result, a growing number of states – including Virginia – have adopted their own, higher minimum wages. A substantial amount of research has been conducted to understand the effects of minimum wage increases. However, this research has quantified the specific impacts that a higher minimum wage will have on current wages. To support its work setting Medicaid provider payment rates across the country including in states that have adopted their own minimum wages, HMA-Burns has established a methodology to model the impact of a rising minimum wage on current statewide wages.

Virginia's Minimum Wage

The federal minimum wage was last adjusted in July 2009, when it was increased to $7.25 per hour. Nearing 12 years, this is the longest period without an increase in the history of the federal minimum wage. During this period, consumer prices have increased nearly 22 percent,[2] reducing the buying power of workers earning the minimum wage. For example, a full-time worker earning the federal minimum wage and supporting a two-person household lived above the federal poverty line in 2009, but that same family they would be living about 15 percent below the poverty line today.

Virginia has historically deferred to the federal minimum wage. During the 2020 legislative session, however, the General Assembly enacted, and the Governor approved, SB 7 to increase the Commonwealth's minimum wage as illustrated in Figure 3.

Figure 3: Virginia's Minimum Wage Schedule

Date	Minimum Wage
May 1, 2021	$9.50
January 1, 2022	$11.00
January 1, 2023	$12.00
January 1, 2025*	$13.50
January 1, 2026**	$15.00

* The 2025 and 2026 increases are not effective unless reenacted by the Assembly

** Beginning in 2027, the minimum wage would be adjusted based on the Consumer Price Index

A higher minimum wage will increase costs for employers with low-wage employees. These impacts and the actions taken in response will vary by organization and industry. In a recent report, the Congressional Budget Office (CBO) summarized its review of literature, finding that impacts will be greater for industries where sales are more sensitive to price increases.[3] For organizations contracting with the government, the actions that they will need to take will be driven, in part, by the extent to which their contract rates are adjusted to account for increased wages among their lower-wage workers.

[2] U.S. Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCSL], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/CPIAUCSL, as of February 16, 2021.

[3] Congress of the United States, Congressional Budget Office. (July 8, 2019). The Effects on Employment and Family Income of Increasing the Federal Minimum Wage. Retrieved February 2021 from https://www.cbo.gov/publication/55410.

Overview of Research on Impacts of Minimum Wage Increases

Given the debate regarding a fair and appropriate minimum wage at both the state and federal levels, there has been a significant amount of research into the effects of increasing the minimum wage. This report is primarily interested in considering the impacts on employee compensation, but also briefly notes impacts on employment levels and other societal effects.

Impacts on Wages

Analyses of the effects of a rising minimum wage have found two distinct impacts on the wages of lower-wage workers:

- A 'spillover' (or 'ripple') effect, meaning that some individuals who already earn above the minimum wage will receive a pay raise when the minimum wage increases.[4]
- 'Wage compression', meaning that there will be some narrowing of the difference in pay between lower wage employees as the minimum wage rises.[5]

In combination, these effects suggest that there will be a positive impact on the wages of lower-wage staff earning more than the new minimum wage, but these benefits will diminish as the current wage increases.

A few examples illustrate the spillover effect, based on a hypothetical state wherein the minimum wage is increasing from $12.00 per hour to $15.00:

- A supervisor earns $15.25 per hour to supervise staff earning $12.00. The subordinate staff must receive a $3.00 pay raise in order to comply with the new minimum wage. There is no legal requirement for the supervisor to receive a pay raise as their current wage already exceeds the new minimum wage. However, if the supervisor does not receive a pay increase while their subordinates receive a substantial raise, there would be nearly no financial benefit associated with the additional responsibility of supervision.
- Two direct care workers work for the same company. One has been employed for three years and is earning $14.50 per hour, while the other is new to the job and is earning $12.00. To comply with the higher minimum wage, the employer only needs to increase both workers' hourly wages to $15.00. This would result in both employees receiving a raise, but the tenured

[4] See, for example:

Phelan, Brian J. (December 19, 2013). Labor Supply Substitution and the Ripple Effect of Minimum Wages. Retrieved February 2021 from https://www.aeaweb.org/conference/2014/retrieve.php?pdfid=306.

Rinz, K., and Voorheis, J. (March 2018). The Distributional Effects of Minimum Wages: Evidence from Linked Survey and Administrative Data. Published by the U.S. Census Bureau Center for Administrative Records Research and Applications. Retrieved February 2021 from https://www.census.gov/content/dam/Census/library/working-papers/2018/adrm/carra-wp-2018-02.pdf.

[5] See, for example:

Phelan, Brian J. (December 19, 2013). Labor Supply Substitution and the Ripple Effect of Minimum Wages. Retrieved February 2021 from https://www.aeaweb.org/conference/2014/retrieve.php?pdfid=306.

Miller, Stephen. (June 1, 2018). Address Pay Compression or Risk Employee Flight. Published by the Society for Human Resource Management. Retrieved February 2021 from https://www.shrm.org/resourcesandtools/hr-topics/compensation/pages/address-pay-compression-or-risk-employee-flight.aspx.

employee would receive a much smaller raise and would no longer be receiving any wage differential for their experience.

In these examples, the only legal requirement is to pay all employees at least the new minimum wage. However, the lack of a meaningful wage premium for the supervisor and experienced worker in these scenarios will act as a demotivator for these employees. This could result in increased turnover, decreased productivity, job dissatisfaction and disengagement, and potential discrimination and pay equity claims.[6]

Consequently, there is a practical need for employers to address the wages of staff who earn more than the new minimum wage in addition to those earning below the new minimum wage. In fact, a significant portion of the workforce that benefits from a minimum wage increase is comprised of workers who already earn more than the new minimum. In its 2019 analysis of the effects of a rising minimum wage, the CBO estimated that increasing the federal minimum wage to $15.00 per hour would increase the wages of 17 million workers earning less than the new minimum wage and 10 million workers earning more. At a federal minimum wage of $12.00 per hour, there would be more workers already earning more than $12 who would experience a pay raise than workers earning less the new minimum (6 million and 5 million, respectively).[7]

The two examples above also illustrate the wage compression effect:

- The supervisor currently earning $15.25 per hour is expected to receive a pay raise even though they already earn more than the new minimum wage, but they are not expected to receive an increase equivalent to the change in the minimum wage (that is, their pay raise will be less than the $3.00 per hour increase in the hypothetical minimum wage as it rises from $12.00 to $15.00).
- Similarly, the experienced worker is expected to receive a pay raise so that they continue to earn more than a new employee. However, their raise is not expected to be as high as the $3.00 raise granted to the newly-hired employee. While the experienced worker will still earn more than their less-tenured coworker, the difference in pay will be less than the existing $2.50 gap.

Thus, while lower-wage workers earning more than the new minimum wage will receive pay raises, these raises will be smaller than those received by minimum-wage workers, resulting in wages that are more compressed near the new minimum wage. To assume otherwise would require that every worker would receive a dollar-for-dollar pay raise every time the minimum wage increases, regardless of how much they currently earn.

[6] See, for example

Kochanski, J. Stiles, Y. (July 19, 2013). Put a Lid on Salary Compression Before It Boils Over. Published by the Society for Human Resource Management. Retrieved February 2021 from https://www.shrm.org/ResourcesAndTools/hr-topics/compensation/Pages/address-pay-compression-or-risk-employee-flight.aspx.

Economic Research Institute. (November 2017). How to Manage Salary Compression Issues. Retrieved February 2021 from https://downloads.erieri.com/pdf/How_to_Manage_Salary_Compression.pdf.

[7] Congress of the United States, Congressional Budget Office. (July 8, 2019). The Effects on Employment and Family Income of Increasing the Federal Minimum Wage. Retrieved February 2021 from https://www.cbo.gov/publication/55410.

While the existence of the spillover and compression effects of an increased minimum wage have been widely documented, there has been much less analysis to quantify the combined impacts of these effects. That is, while the research is largely conclusive that the supervisor and the experienced worker discussed in the preceding examples will receive a pay raise, the research does not specify what those pay raises will be. HMA-Burns therefore developed and tested its own formula to estimate the specific impact of a rising minimum wage on existing wages. This formula is detailed later in this section.

Other Impacts on Workers

In addition to the impacts of a rising minimum wage on the pay of lower-wage workers, researchers have identified a variety of other effects on these workers. These impacts include overall employment levels, fringe benefits provided to workers, and actions employers may take to offset higher wage costs.

The CBO's report reviewed and summarized much of this research.[8] The report noted that the evidence for these impacts is mixed, varying by organization, industry, and locality. For Virginia Medicaid providers, the cost and the resultant responses will likely be driven by the extent to which an organization depends on lower-wage employees, an organization's dependence on Medicaid payments, and whether payment rates from Medicaid and other payers are increased to account for higher wage expenses.

The CBO estimates that increasing the minimum wage will have a negative impact on overall employment. If the federal minimum wage were increased to $15 per hour, for example, the CBO estimated that as many as 3.7 million jobs would be lost. The report predicted that employment would fall more in industries where sales are more sensitive to price increases.

In Medicaid, many providers have limited ability to increase their payment rates (their 'prices'). Providers who contract with DMAS under its fee-for-service delivery system must accept the published rate set by DMAS for the service. Providers delivering services through the managed care delivery system by agreeing to contract with one or more managed care organizations (MCO) may be able to negotiate payment rates with the MCO(s) with which they contract, but their negotiating power will likely be a function of their size and importance to the MCO's provider network. Even if a provider contracted with an MCO has negotiating power, the MCOs themselves are constrained by the fixed per member per month payments (referred to as 'capitation payments') they receive from Virginia Medicaid to deliver services to their enrolled members. Thus, in the unlikely scenario where the capitation payments to MCOs are not adjusted, the MCOs may have limited ability to increase the rates they pay their contracted providers.

This demonstrates that Medicaid providers are generally "sensitive to price increases", meaning that, across the Medicaid system, employment could decline if rates are not adjusted. This would be particularly true for providers who rely on lower-wage care providers (such as personal care assistants or home health aides) and that derive a significant share of their business from Medicaid.

The CBO report noted other strategies that employers may use to offset higher wage expenses. For example, employers may reduce fringe benefits such as health insurance or retirement plans. As part of its analysis, the CBO cited a 2018 report that studied the relationship between minimum wage and

[8] Ibid.

employer-sponsored health insurance.[9] That study found that increases in state level minimum wages are associated with decreases in the prevalence of employer-sponsored health insurance coverage. The impacts were most pronounced for staff with the lowest wages (that is, those who would receive the largest pay raise due a minimum wage increase), with a $1 minimum wage increase resulting in a two-to-four percent reduction in the probability of coverage. Smaller reductions in coverage were observed for workers earning somewhat more (that is, the 'spillover' group discussed previously). The CBO report also suggested that employers may respond to a rising minimum wage by reducing training or by replacing workers with technology.

These strategies will not necessarily be viable for Medicaid providers, however. For example, providers may be constrained by the fact that lower-wage workers often have few benefits that could be reduced and by legal requirements (for example, to offer affordable health insurance to full-time employees or to meet minimum training requirements). Additionally, the work performed by direct care workers generally cannot be replaced by technology.

Impacts on Public Health

An increasing minimum wage and Medicaid programs' response to these increases have the potential to impact both lower-wage workers' access to care and health outcomes.

Medicaid providers that are substantially dependent on both lower-wage staff and Medicaid funding may have relatively few options to offset higher wage expenses. Thus, if payment rates are not adjusted, these providers will need to determine whether providing services to the Medicaid population is financially viable by evaluating their service offerings and potentially eliminating less-profitable service lines and/or service areas.

The Centers for Medicare and Medicaid Services (CMS) oversees each state's Medicaid program to ensure the adequacy of the provider network to meet the needs of the Medicaid beneficiaries. If Medicaid enrollees are unable to access services as providers limit their offerings in the absence of rate adjustments to account for increased wage expenses, a state may be at risk of federal sanctions.

Since Medicaid is an income-tested program, an increased minimum wage can impact an individual's eligibility for the program. The Urban Institute conducted a study on the implications of New Jersey raising its minimum wage from $8.85 per hour to $15.00 by 2024 on Medicaid eligibility and enrollment.[10] The researchers found that changes in minimum wage would increase earnings for 810,000 nondisabled workers, with 250,000 estimated to be currently eligible for Medicaid. The majority of those eligible were either not enrolled or would not lose eligibility based on the increase in the minimum wage. The study estimated only 24,000 nondisabled, nonelderly adult Medicaid enrollees would lose eligibility due to the increase in their income, but the authors noted they would qualify for subsidized coverage in the Affordable Care Act Marketplace.

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[9] Clemens, J., Kahn, L., and Meer, J. (May 2018). The Minimum Wage, Fringe Benefits, and Worker Welfare. Published by the National Bureau of Economic Research. Retrieved February 2021 from https://www.nber.org/papers/w24635.

[10] Gangopadhyaya, A., Haley, J.M., Blavin, F. and Kenney, G.M. (September 2019). Raising the Minimum Wage in New Jersey: Implications for Earnings and Medicaid Eligibility and Enrollment. Published by the Urban Institute. Retrieved February 2021 from https://www.urban.org/sites/default/files/publication/100993/nj_minimum_wage_and_medicaid_0.pdf.

Although not directly related to the minimum wage, a recent report from the United States Department of Health and Human Services' (DHHS) Office of the Inspector General (OIG) observed significant vulnerabilities in CMS' hospital wage indexes and the negative impact of the rural floor.[11] This has contributed to the challenges that rural and low-wage hospitals have in attracting and maintaining a skilled workforce, an issue that could be exacerbated if the minimum wage increases. The OIG recommended that CMS take a more targeted approach in calculating hospital wages for rural providers and hospitals operating at low or negative margins. In response, CMS increased the Medicare Hospital Wage Index for hospitals below the 25th percentile wage index beginning in federal fiscal year 2020 for at least the next four years.[12]

Since a significant share of the nursing home workforce is comprised of lower-wage nursing assistants, DHHS' Assistant Secretary for Planning and Evaluation (ASPE) and Office of Disability, Aging and Long-Term Care Policy commissioned a study to understand the potential impacts of the proposed federal minimum wage increases on nursing homes.[13] The study specifically considered the potential impact that federal minimum wage increases could have on staffing patterns and direct labor costs. The study found that a federal minimum wage of $15 would increase labor costs across the nursing home industry by $2.5 billion, a cost that would have to be addressed to avoid impacts to care. In the absence of additional funding, the study noted that nursing homes could reduce staffing, subject to any mandated staffing levels.

Finally, recent research regarding an increased minimum wage has considered impacts on population health.[14] While multiple outcomes have been studied, the most conclusive findings among individuals with a high school education or less (that is, those most likely to be in lower-wage positions) include:

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[11] United States Department of Health and Human Services, Office of the Inspector General. (November 2018). Significant Vulnerabilities Exist in the Hospital Wage Index System for Medicare Payments (A-01-17-00500). Retrieved February 2021 from https://oig.hhs.gov/oas/reports/region1/11700500.pdf.

[12] United States Department of Health and Human Services, Centers for Medicare & Medicaid Services. (August 2, 2019). Fiscal Year (FY) 2020 Medicare Inpatient Prospective Payment (IPPS) and Long Term Acute Care Hospital (LTACH) Prospective Payment System (CMS-1716-F). Retrieved February 2021 from https://www.cms.gov/newsroom/fact-sheets/fiscal-year-fy-2020-medicare-hospital-inpatient-prospective-payment-system-ipps-and-long-term-acute-0.

[13] United States Department of Health and Human Services, Office of Assistant Secretary for Planning and Evaluation. (June 30, 2020). Impacts of Minimum Wage Increases on Nursing Homes: Final Report. Retrieved February 2021 from https://aspe.hhs.gov/pdf-report/impacts-minimum-wage-increases-nursing-homes-final-report.

[14] See for example:

Leigh, J.P. and Du, J. (October 4, 2018).Effects Of Minimum Wages On Population Health. Published by Health Affairs, Health Policy Brief.. Retrieved February 2021 from https://www.healthaffairs.org/do/10.1377/hpb20180622.107025/full/.

Congress of the United States, Congressional Budget Office. (July 8, 2019). The Effects on Employment and Family Income of Increasing the Federal Minimum Wage. Retrieved February 2021 from https://www.cbo.gov/publication/55410. Horn, B.P., Maclean, J.C. and Strain, M.R. (August 2016). Do Minimum Wage Increases Influence Worker Health? Published by the National Bureau of Economic Research. Retrieved February 2021 from https://www.nber.org/papers/w22578.

Komro, K.A., Livingston, M.D., Markowitz, S., and Wagenaar, A.C. (August 2016), The Effect of an Increased Minimum Wage on Infant Mortality and Birth Weight. Published by the American Journal of Public Health (Vol.

- *Reductions in smoking*. Among adult women, a 10 percent increase in the minimum wage led to a decrease of 1.6 percent in self-reported smoking prevalence.
- *Improved birthweight.* Among pregnant women, a $1 increase in the minimum wage led to a 1.1 percent decrease in prevalence of low birth weight.
- *Reduced illness-related work absences.* Among employed adults, a $1 increase in the minimum wage led to a 16.1 percent reduction in absences due to illness.

The impacts that an increased minimum wage has on Medicaid providers, healthcare workers, and society as a whole warrants careful consideration of the additional expenses that providers will face and the potential cost across Virginia's Medicaid system.

Quantifying the Impact of a New Minimum Wage on Existing Wages

As discussed earlier, research on the effects of an increasing minimum wage has found that there will be both spillover and wage compression effects. However, this research generally does not quantify these effects. That is, HMA-Burns' literature review did not identify a formula to calculate the specific change to a specific current wage based on a specific increase in the minimum wage. As part of Medicaid rate-setting work that has been performed across the country, HMA-Burns created its own formula based on analysis of the effects on the wages of lower-wage occupations in states that have increased their minimum wage. Figure 4 summarizes the formula.

Figure 4: Illustration of Formula for Estimating Impact of New Minimum Wage on Existing Wage

Dollar Increment in Excess of Current Minimum Wage	Cumulative Funding Above Current Minimum Wage	Percent of Wages Retained in Relation to New Minimum Wage	Amount Retained in Relation to New Minimum Wage	Cumulative Increase Above New Minimum Wage
First $1.00	$1.00	90%	$0.90	$0.90
Second $1.00	$2.00	80%	$0.80	$1.70
Third $1.00	$3.00	70%	$0.70	$2.40
Fourth $1.00	$4.00	60%	$0.60	$3.00
Fifth $1.00	$5.00	50%	$0.50	$3.50
Sixth $1.00	$6.00	40%	$0.40	$3.90
Seventh $1.00	$7.00	30%	$0.30	$4.20
Eighth $1.00	$8.00	20%	$0.20	$4.40
Each Add'l. $1.00	$9.00	10%	$0.10	$4.50

106, No. 8. 2016, pages 1516 – 1516). Retrieved February 2021 from https://doi.org/10.2105/AJPH.2016.303268.

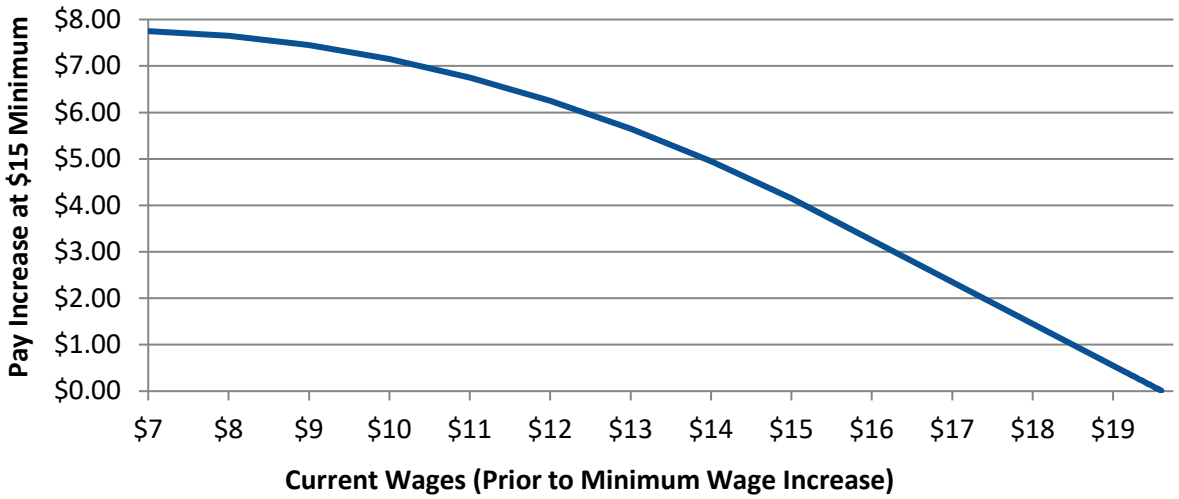
Wehby, G., Dave, D., Kaestner, R. (June 2016, revised March 2018). Effects of Minimum Wage on Infant Health. Published by the National Bureau of Economic Research. Retrieved February 2021 from https://www.nber.org/papers/w22373.

Du, J. and Leigh, J.P. (November 13, 2017). Effects of Minimum Wages on Absence from Work Due to Illness. Retrieved February 2021 from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3071132.

The formula is designed to measure the proportion of the premium that a worker earns above the current minimum wage that will be retained by wage employees in relation to the new minimum wage. That is, the formula assumes there will be spillover impacts on lower-wage workers already earning above the new minimum wage. As the table demonstrates, the percentage of the premium that is retained declines for each additional marginal dollar; that is, wages will become more compressed.

To illustrate the application of this formula during the first step of Virginia's minimum wage increase, from $7.25 to $9.50, the formula estimates that a current wage of $10.50 ($3.25 above the current minimum wage) will increase to $13.05 ($2.55 above the new minimum wage). Specifically, the formula assumes retention of 90 percent of the first 'premium' dollar ($0.90), 80 percent of the second dollar ($0.80), 70 percent of the third dollar ($0.70), and 60 percent of the remaining $0.25 ($0.15). Figure 5 applies this formula to the increase in Virginia's minimum wage from $7.25 per hour to $15.00.

Fig. 5: Estimated Impact of Virginia's Minimum Wage Increase on Existing Wages



The chart demonstrates that individuals who currently earn the $7.25 minimum hourly wage will receive the largest pay increase, $7.75 to bring their wage up to the new $15 minimum. Workers earning more than the current minimum wage but less than the new minimum wage will receive a pay raise that ensures they continue to earn more than the minimum wage. For example, for someone currently earning $11.00 per hour, the formula assumes they will receive a $6.85 pay raise, bringing their wage to $17.85 once the minimum wage reaches $15.00. Many individuals currently earning above the new minimum wage will also receive a pay raise. For example, for someone currently earning $17.00 per hour, the formula assumes they will receive a $2.58 pay raise, bringing their wage to $19.58. The formula assumes there will be no impact on staff currently earning more than $19.85 per hour.

In order to evaluate the extent to which HMA-Burns' formula accurately predicts the impact that a rising minimum wage will have on existing wages, HMA-Burns applied the formula to published wage data in states that met the following criteria:

- Minimum wage increases were phased-in over at least two years between 2014 and 2019. The multiple year criterion was established to ensure that there was sufficient time for the wage data to reflect the changes.

- The minimum wage must have increased by at least $0.75 in each year during the two-or-more year period being reviewed. This criterion helps ensure that observed changes in wages are due to the rising minimum wage rather than general wage inflation or other economic conditions.
- There cannot be a local jurisdiction with a higher minimum wage within the state since this prevents comparison of statewide wage data to a single minimum wage.

As reported in Figure 6, five states and the District of Columbia met these criteria.

Figure 6: Jurisdictions Included in Testing of Minimum Wage Formula

Jurisdiction	Details
Alaska	Changes from $7.75 (2014) to $8.75 (2015) to $9.75 (2016)
Hawaii	Changes from $7.25 (2015) to $8.50 (2016) to $9.25 (2017) to $10.10 (2018)
Massachusetts	Changes from $8.00 (2014) to $9.00 (2015) to $10.00 (2016) to $11.00 (2017)
Maine	Changes from $7.50 (2016) to $9.00 (2017) to $10.00 (2018) to $11.00 (2019)
Nebraska	Changes from $7.25 (2014) to $8.00 (2015) to $9.00 (2016)
District of Columbia	Changes from $9.50 (2014) to $10.50 (2015) to $11.50 (2016) to $12.50 (2017) to $13.25 (2018) to $14.00 (2019)

Detailed wage data from the United States Department of Labor's Bureau of Labor Statistics (BLS) was extracted for these six jurisdictions. Traditionally lower-wage occupations with a substantial employment base were then identified as shown in Figure 7.

Figure 7: Bureau of Labor Statistics Occupations Included in Testing of Minimum Wage Formula (*Healthcare Occupations Emphasized*)

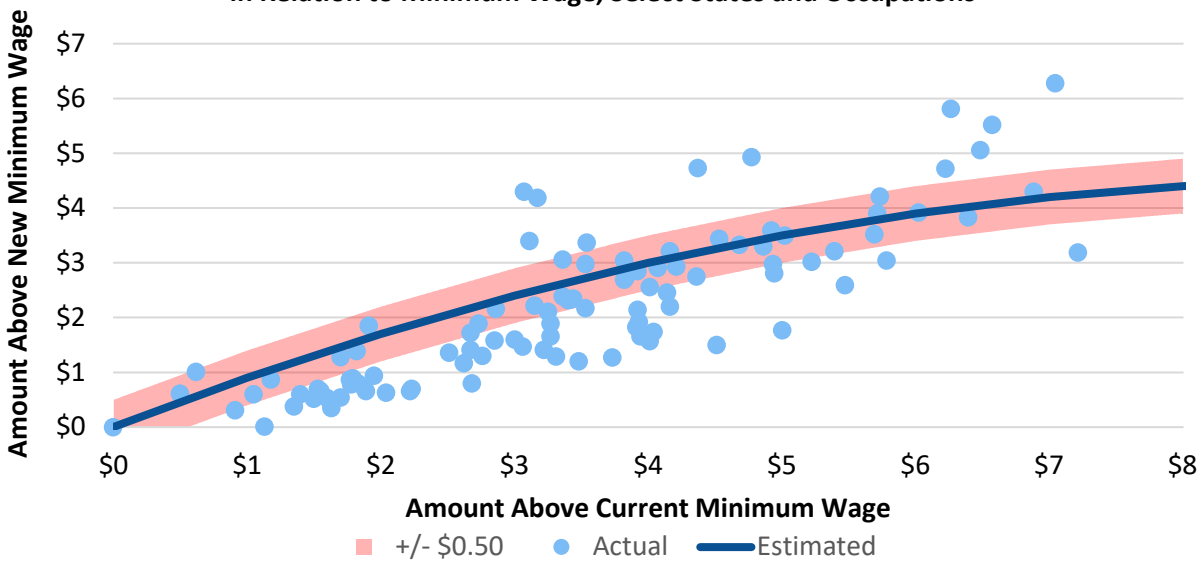
Personal care aides (39-9021 / 31-1120)	Cooks, fast food (35-2011)
Home health aides (31-1011 / 31-1120)	Cooks, institution and cafeteria (35-2012)
Nursing assistants (31-1131 / 31-1014)	Cooks, restaurant (35-2014)
Orderlies (31-1132 / 31-1015)	Cooks, short order (35-2015)
Psychiatric aides (31-1133 / 31-1013)	Food preparation workers (35-2021)
Medical assistants (31-9092)	Fast food and counter workers (35-3023)
Pharmacy aides (31-9095)	Dishwashers (35-9021)
Preschool teachers, except special ed. (25-2011)	Hosts and hostesses (35-9031)
Childcare workers (39-9011)	Hotel, motel, and resort desk clerks (43-4081)
Recreation workers (39-9032)	Cashiers (41-2011)
Janitors and cleaners (37-2011)	Counter and rental clerks (41-2021)
Maids and housekeeping cleaners (37-2012)	Retail salespersons (41-2031)

For each of the jurisdictions reviewed, HMA-Burns applied its formula to the median wage reported for each of these occupations in the year prior to the first minimum wage increase and compared the resulting estimate to the reported median for the last year of the analysis period. For example, Figure 6 shows that the analysis considered the increase in the minimum wage in Massachusetts from $8.00 in 2014 to $11.00 in 2017. In 2014, the BLS reported a median hourly wage of $12.36 for a personal care aide in Massachusetts. Based on this wage and the increase in the statewide minimum wage, the HMA-Burns formula estimated that the new wage for a personal care aide would be $14.18 once the minimum wage reached $11.00. The actual median wage reported by the BLS in 2017 was $13.75, about 3.1 percent less than predicted.

This process was repeated for each of the occupations listed in Figure 6. HMA-Burns then calculated the average difference, weighted by employee count, between the wage estimated by the formula and the actual wage reported by the BLS. For five of the six jurisdictions, the weighted average estimate was within five percent of actual wages; for Maine, the variance was slightly less than seven percent. The overall average variance was less than four percent. In five of the jurisdictions, the formula produced aggregate estimates greater than actual results. In the remaining jurisdiction, the formula produced aggregate estimates about one percent less than actual results. For healthcare occupations in particular, the HMA-Burns formula produced even more accurate results, within an overall average variance of less than three percent.

Figure 8 compares the estimated wage for each occupation included in the analysis in each of the six jurisdictions (in relation to the applicable minimum wage for each state) to actual wages.

Figure 8: Comparison of HMA-Burns Estimated & Actual Wages in Relation to Minimum Wage, Select States and Occupations



The chart[15] shows that actual wages were clustered around the estimates produced by the HMA-Burns formula with approximately 40 percent of the actuals falling within $0.50 of the formula estimate and

[15] Figure 8 chart equation located within footnote on subsequent page.

almost three-quarters falling within $1.00. At the lower end of the wage scale, the formula is more likely to somewhat overestimate the wage adjustment whereas the formula somewhat underestimates the wage adjustment at the higher end of the wage scale.

Year-to-year changes in average wages are influenced by a variety of factors in addition to any changes in a state's minimum wage, such as the general health of the economy, industry-specific conditions, and the available labor pool. Acknowledging that the HMA-Burns formula for estimating the effect of a rising minimum wage does not consider these external factors, testing the formula against actual changes in wages in states that have increased their minimum wage shows that the formula produces reasonably reliable results. HMA-Burns has therefore made no changes to this formula and has used it to estimate the impact of Virginia's increasing minimum wage on the wages paid to employees of the Commonwealth's Medicaid providers as discussed in the next part of this report.

$$P = \begin{cases} (CW - CMW) \times 0.9, & if\ 0 < CW - CMW \leq 1 \\ \$0.90 + ((CW - CMW - 1) \times 0.8), & if\ 1 < CW - CMW \leq 2 \\ \$1.70 + ((CW - CMW - 2) \times 0.7), & if\ 2 < CW - CMW \leq 3 \\ \$2.40 + ((CW - CMW - 3) \times 0.6), & if\ 3 < CW - CMW \leq 4 \\ \$3.00 + ((CW - CMW - 4) \times 0.5), & if\ 4 < CW - CMW \leq 5 \\ \$3.50 + ((CW - CMW - 5) \times 0.4), & if\ 5 < CW - CMW \leq 6 \\ \$3.90 + ((CW - CMW - 6) \times 0.3), & if\ 6 < CW - CMW \leq 7 \\ \$4.20 + ((CW - CMW - 7) \times 0.2), & if\ 7 < CW - CMW \leq 8 \\ \$4.40 + ((CW - CMW - 8) \times 0.1), & if\ 8 < CW - CMW \leq 9 \\ \$4.50 + ((CW - CMW - 9) \times 0.1), & if\ 9 < CW - CMW \leq 10 \\ \$4.60 + ((CW - CMW - 10) \times 0.1), & if\ 10 < CW - CMW \leq 11 \\ \$4.70 + ((CW - CMW - 11) \times 0.1), & if\ 11 < CW - CMW \leq 12 \\ \ldots \end{cases}$$

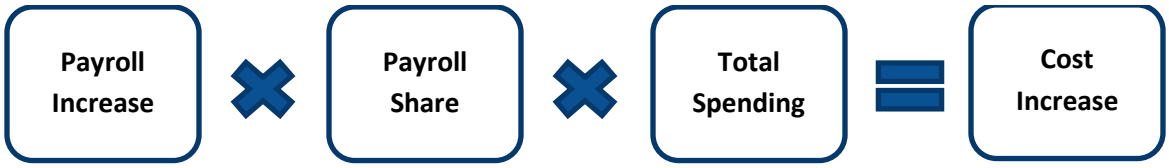
$$FW = FMW + P, \quad if\ CW < FW$$

CW = Current Wage
CMW = Current Minimum Wage
P = Premium
FMW = Future Minimum Wage
FW = Future Wage (after adjusting for minimum wage impact)

Part II: Methodology and Results

Figure 9 illustrates the calculation for estimating the impact of Virginia's increasing minimum wage on providers' expenses and overall system costs.

Figure 9: Formula for Estimating Total Cost of a Minimum Wage Increase



As the figure demonstrates, the formula includes three components:

1. *Payroll Increase*. This is the estimated incremental cost of higher payroll expenses resulting from the increased minimum wage, considering both spillover and compression effects, expressed as a percentage of the current expense. For example, if a current expense of $16 per hour is projected to increase to $20 per hour, the payroll increase is 25 percent.
2. *Payroll Share*. This is the estimated percentage of total expenses that payroll comprises. For example, if payroll expenses are $400,000 and total expenses are $800,000, the payroll share is 50 percent.
3. *Total Spending*. This is the estimated current spending.

The product of the payroll increase and the payroll share represents the projected increase in a provider's costs. In the examples above (a payroll increase of 25 percent and a payroll share of 50 percent), the projected increase in costs would be 12.5 percent.

These impacts will vary across the diverse array of Medicaid providers. For example, a significant portion of a personal care agency's payroll will be affected by a rising minimum wage because direct care staff earn low wages while the impact to a physician group will likely be limited to administrative staff. Recognizing these substantial differences, the analysis was organized around approximately 100 different Medicaid provider types defined by DMAS. Several provider types were excluded from the analysis because no impact is anticipated. These primarily related to provider types associated with devices/ equipment and prescriptions, such as hearing aids (provider type 038), pharmacy (060), durable medical equipment and supplies (062), and prosthetic services (064).

Within each provider type analyzed, payroll increase and payroll share were separately evaluated for direct care staff and all other staff (that is, support and administrative staff). For many provider types, it is unlikely that there will be any impacts associated with direct care staff. For example, the wages of therapists employed by a therapy provider will almost certainly be unaffected by a change in the minimum wage. For other providers, such as personal care providers, all or nearly all direct care staff will be impacted. However, all provider types could potentially employ administrative and support staff that will be affected by an increasing minimum wage. For example, a therapy provider may employ lower-wage staff that perform administrative tasks.

The calculated impacts on direct care staff and other staff were added to determine the overall impact on providers' costs within each provider type. This total increase in providers' costs was then applied to the total spending projections for each provider type to determine the overall estimated cost increase.

This analysis does not purport to assess the adequacy of current payment rates. It is only intended to estimate the incremental cost of the rising minimum wage.

Analyses to Estimate Payroll Increases and Payroll Shares

The primary strategy to estimate payroll-related data was the administration of a provider survey. The results of the survey were supplemented by several other analyses.

Provider Survey

HMA-Burns developed a provider survey to collect the following information:

- Calendar year 2019 revenues, which were used as a proxy for costs since it is generally easier to report revenues than costs at the program-level (2019 data was requested to avoid the impacts that COVID-19 had on provider revenues and expenses)
- The proportion of revenue derived from Medicaid
- Total wage expenses
- For administrative and support staff (that is, staff who do not primarily provide direct care), the distribution of paid wages by wage band (that is, the percentage of payroll paid to staff earning less than $9 per hour, between $9 and $10, between $10 and $11, etc.)
- For direct care staff, the distribution of paid wages by wage band

Administration of the survey was divided into two phases. The first phase covered provider types that were most likely to rely on significant numbers of lower-wage direct care staff (DMAS provider type identifiers are included in parentheses):

- Home health agencies (058, 059)
- Intellectual and developmental disabilities (DD) waiver services providers (056)
- Adult day health providers (048)
- Personal care and respite providers (055, 047)
- Non-emergency medical transportation (080, 081)
- Nursing facilities (010)
- Intermediate care facilities for individuals with intellectual disabilities (ICF/IID, 018)
- Hospices (046)
- Psychiatric residential inpatient facilities (077)
- Programs of All-Inclusive Care for the Elderly (PACE, 104)

For home health agencies and DD waiver service providers, the survey further differentiated between services or service groups because of the expected differences in wages paid to the direct care staff. For home health providers, for example, the survey separately collected information for home health aides and for nurses and therapists since only the former is likely to include direct care staff who would be impacted.

The second phase of the survey covered the remaining provider types included in the analysis, grouped by hospitals, clinics, other facility-based providers, and physicians/ practitioners.

Distribution of the phase 1 survey occurred in March 2021 while the phase 2 survey was administered in May. The original due date was originally March 21, 2021, but all surveys submitted after that date were accepted. Provider email addresses on file with DMAS were used to contact providers. Additionally, DMAS asked provider associations to assist in distributing the survey and encouraging their members to participate. HMA-Burns provided technical assistance throughout the survey period. A total of 350 providers submitted a survey that included at least some usable data. Phase 1 participation rates substantially exceeded phase 2 participation, which was anticipated because phase 1 providers will experience larger effects from an increased minimum wage, increasing their interest in this study. Figure 10 reports the participation rate by provider type.

Figure 10: Survey Participation by Provider Type

Provider Type	Total Providers	Responding Providers	Response Rate by Provider Count	FY 2019 Spending ($ in millions)	Spending of Responding Providers	Response Rate by Spending
Hospitals	864	16	1.9%	$1,905.2	$470.2	24.7%
DD Waiver Providers	858	92	10.7%	$836.8	$442.2	52.8%
Personal Care/ Respite	523	41	7.8%	$959.4	$5.5	0.6%
Adult Day Health	33	4	12.1%	$14.2	$0.08	0.6%
Nursing Facilities	256	107	41.8%	$679.9	$350.1	51.5%
Psychiatric Residential	63	11	17.5%	$101.7	$56.9	55.9%
Physicians/ Practitioners	3,045	23	0.8%	$220.2	$45.1	20.5%
Intermed. Care Facilities	23	12	52.2%	$182.7	$82.0	44.9%
Clinic/ Medical Facilities	327	4	1.2%	$29.7	$4.3	14.5%
Hospice	74	3	4.1%	$26.3	$1.1	4.2%
PACE	21	0	0.0%	$66.1	$0.0	0.0%
Home Health Agencies	191	33	17.3%	$92.9	$2.4	2.6%
Non-Emer. Transportation	127	16	12.6%	$41.5	$0.9	2.2%

Figure 10 demonstrates that participation varied widely across provider types. For DD waiver, nursing facility, intermediate care facility, and psychiatric residential inpatient facility providers, participating providers accounted for at least 40 percent of the services delivered. Participation rates were lower for the remaining provider types.

There were instances when providers reported data that was obviously erroneous so certain exclusions were made to avoid skewing results. Most notably, a number of providers reported incomplete revenue figures such as $1.00 or $0.01. Additionally, any provider with wage costs that were less than 35 percent

or more than 80 percent of reported revenues were excluded from the payroll share analysis. However, their wage figures were still included in the payroll increase calculations.

HMA-Burns applied several strategies to address the somewhat limited participation amongst some provider types. First, when feasible, similar provider types were grouped for the purposes of developing provider impact assumptions. Second, analyses of other data sources were performed to validate the survey findings when feasible. These other analyses are described later in this report.

Although not directly associated with impacts on provider costs, the survey asked providers about the extent to which their revenues are derived from Medicaid. Those most reliant on Medicaid will be most affected by decisions about whether and by how much to adjust Medicaid payment rates. The results are shown in Figure 11.

Figure 11: Reported Percent of Revenues Derived from Medicaid by Provider Type

Provider Type	% of Revenue from Medicaid	Provider Type	% of Revenue from Medicaid
Intermed. Care Facilities	97.0%	Clinic/ Medical Facilities	36.8%
DD Waiver Providers	79.6%	Physicians/Practitioners	29.1%
Personal Care/ Respite	77.5%	Hospitals	12.7%
Non-Emer. Transportation	66.1%	Hospice	3.2%
Psychiatric Residential	63.4%	Adult Day Health	0.4%
Home Health Agencies	50.6%	PACE	-
Nursing Facilities	49.1%		

As the table demonstrates, several provider types are substantially reliant on Medicaid. More than 95 percent of intermediate care facility provider revenues come from Medicaid as do about three-quarters of DD waiver and personal care/respite provider revenues. Conversely, hospice and adult day health providers reported that less than 10 percent of their revenue came from Medicaid although it is unclear if these results are representative since few surveys were received from these provider types.

Figure 12 provides the distribution of wages reported by providers for direct care staff.

Figure 12: Reported Distribution of Direct Care Staff Wages by Wage Band and Provider Type

Provider Type	Under $9	$9-$9.99	$10-$10.99	$11-$11.99	$12-$12.99	$13-$13.99	$14-$14.99	$15-$15.99	$16-$16.99	$17-$17.99	$18-$18.99	$19-$19.99	$20 or more
Adult Day Health	0%	0%	0%	0%	4%	83%	7%	3%	1%	0%	0%	0%	2%
Clinic/ Medical Facilities	0%	0%	1%	1%	4%	3%	4%	3%	3%	3%	3%	3%	72%
DD Waiver – Direct Supp.	0%	1%	6%	12%	13%	11%	10%	8%	7%	7%	3%	3%	18%
DD Waiver– Other	1%	0%	1%	0%	1%	2%	2%	3%	3%	3%	1%	3%	79%
Home Health – Aides	69%	11%	5%	5%	8%	1%	1%	0%	0%	0%	0%	0%	0%
Home Health – Other	0%	1%	2%	1%	0%	0%	0%	0%	1%	0%	0%	0%	94%
Hospice	0%	0%	0%	0%	1%	2%	1%	2%	2%	4%	2%	2%	85%
Hospitals	0%	0%	1%	1%	4%	2%	1%	2%	2%	2%	1%	1%	83%
Intermed. Care Facilities	0%	0%	1%	2%	13%	11%	9%	22%	9%	6%	3%	4%	20%
Non-Emer. Transportation	13%	2%	3%	9%	5%	13%	9%	4%	7%	6%	5%	4%	20%
Nursing Facilities	0%	1%	2%	3%	9%	8%	7%	4%	3%	2%	2%	2%	58%
PACE	-	-	-	-	-	-	-	-	-	-	-	-	-
Personal Care/ Respite	15%	39%	23%	13%	6%	2%	0%	0%	0%	0%	0%	0%	0%
Physicians/ Practitioners	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	95%
Psychiatric Residential	0%	0%	0%	1%	5%	12%	6%	7%	5%	5%	5%	4%	50%

The results are largely consistent with what was expected. For home health services provided by home health aides as well as personal care and respite services, more than 50 percent of the wages paid to direct care staff are associated with staff earning less than $10 per hour. Other services tend to rely on a broader mix of service providers so wages are more distributed across a number of wage bands. For DD waiver services delivered by direct support professionals, adult day health services, nursing facilities, intermediate care facilities, psychiatric residential inpatient facilities, and non-emergency medical transportation providers, between about one-quarter and one-half of the direct care wage expenses are paid to staff earning less than $15 per hour. Providers of the remaining services generally reported comparatively higher wages for direct care staff.

Figure 13 provides the distribution of wages reported by providers for administrative and support staff.

Figure 13: Reported Distribution of Administrative and Support Staff Wages by Wage Band by Provider Type

Provider Type	Under $9	$9-$9.99	$10-$10.99	$11-$11.99	$12-$12.99	$13-$13.99	$14-$14.99	$15-$15.99	$16-$16.99	$17-$17.99	$18-$18.99	$19-$19.99	$20 or more
Adult Day Health	0%	0%	0%	0%	1%	0%	1%	10%	4%	2%	4%	3%	75%

Figure 13: Reported Distribution of Administrative and Support Staff Wages by Wage Band by Provider Type

Provider Type	Under $9	$9-$9.99	$10-$10.99	$11-$11.99	$12-$12.99	$13-$13.99	$14-$14.99	$15-$15.99	$16-$16.99	$17-$17.99	$18-$18.99	$19-$19.99	$20 or more
Clinic/ Medical Facilities	0%	0%	0%	2%	6%	7%	7%	6%	6%	7%	5%	4%	52%
DD Waiver – Direct Supp.	0%	0%	1%	1%	6%	2%	7%	6%	3%	12%	3%	3%	56%
DD Waiver– Other	0%	1%	3%	1%	4%	3%	3%	4%	3%	4%	4%	4%	65%
Home Health – Aides	6%	2%	3%	3%	5%	4%	3%	4%	3%	4%	5%	3%	54%
Home Health – Other	8%	2%	4%	2%	2%	1%	1%	2%	2%	3%	2%	3%	69%
Hospice	0%	0%	0%	1%	1%	1%	1%	2%	1%	2%	2%	1%	89%
Hospitals	0%	0%	0%	1%	3%	3%	3%	5%	4%	4%	3%	3%	71%
Intermed. Care Facilities	0%	0%	0%	1%	1%	1%	2%	2%	3%	3%	5%	3%	80%
Non-Emer. Transportation	3%	0%	1%	1%	2%	3%	5%	4%	4%	5%	3%	5%	66%
Nursing Facilities	2%	4%	4%	4%	13%	7%	4%	4%	2%	2%	2%	3%	49%
PACE	-	-	-	-	-	-	-	-	-	-	-	-	-
Personal Care/ Respite	12%	3%	3%	4%	3%	3%	5%	8%	3%	5%	3%	2%	46%
Physicians/ Practitioners	0%	0%	0%	1%	4%	5%	4%	4%	4%	4%	3%	3%	67%
Psychiatric Residential	0%	0%	1%	1%	1%	2%	2%	2%	2%	5%	2%	2%	80%

Compared to the wages for direct support staff, there are greater similarities across provider types in terms of the wages paid to administrative and support positions. At least half of the wage expense for these positions is associated with staff earning at least $20 per hour for nearly all provider types.

The HMA-Burns formula for estimating the impact of an increasing minimum wage was applied to the midpoint value of each wage band, and then weighted based on the distribution of wages. The results are shown in Figure 14.

Figure 14: Estimated Wage Increase at Full Implementation of $15 Per Hour Minimum Wage Based on Provider Survey by Provider Type

Provider Type	Est. Wage Increase		Provider Type	Est. Wage Increase	
	Direct Care	Admin./ Supp.		Direct Care	Admin./ Supp.
Home Health – Aides	81.0%	18.5%	Clinic/ Medical Facilities	7.4%	1.8%
Personal Care/ Respite	71.4%	20.7%	Hospitals	5.9%	7.3%
Adult Day Health	39.0%	4.8%	DD Waiver – Other	5.5%	10.1%
Non-Emer. Transportation	34.8%	9.6%	Hospice	3.2%	2.3%
DD Waiver – Direct Supp.	31.0%	7.3%	Home Health – Other	3.1%	15.1%
Intermed. Care Facilities	23.6%	3.7%	Physicians/Practitioners	0.8%	6.3%
Nursing Facilities	15.5%	21.9%	PACE	-	-
Psychiatric Residential	14.0%	5.0%			

As the figure demonstrates, the impact of the increasing minimum wage on direct care wages will vary significantly across provider types. The impacts are greatest for provider types with a single lower-wage occupation such as personal care assistants and home health aides. Provider types that include a mix of direct care staff will experience smaller impacts. For example, facility-based programs such as nursing facilities and intermediate care facilities employ both personal care-type staff whose wages will need to be adjusted in response to the increasing minimum wage and clinicians whose wages will be unaffected by the minimum wage. There is less, but still notable, variation in the projected impacts associated with administrative and support staff.

As shown in the formula outlined in Figure 9, the other element of the calculation needed to determine the impact to providers' costs is the "payroll share", that is, the percentage of total costs comprised of wages. Figure 15 reports the results from the provider survey for direct care as well as administrative and support staff. Since the survey only requested information regarding wages, the figures reported in this table include an additional 10.65 percent for payroll taxes that are directly correlated with wages (7.65 percent for the employer share of Social Security and Medicare payroll taxes and an estimated 3.00 percent for workers' compensation expenses).

Figure 15: Direct Care and Administrative and Support Staff Wages as a Percentage of Revenues Based on Provider Survey by Provider Type

Provider Type	Wages as % of Revenue		Provider Type	Wages as % of Revenue	
	Direct Care	Admin./ Supp.		Direct Care	Admin./ Supp.
Hospitals	25.6%	15.0%	Intermed. Care Facilities	48.9%	14.7%
DD Waiver – Direct Supp.	51.0%	16.3%	Clinic/ Medical Facilities	36.1%	6.2%
DD Waiver– Other	23.2%	14.2%	Hospice	38.2%	12.6%
Personal Care/ Respite	62.1%	9.7%	PACE	-	-
Adult Day Health	67.1%	9.5%	Home Health – Aides	62.5%	19.6%
Nursing Facilities	31.4%	20.4%	Home Health – Other	58.3%	15.5%
Psychiatric Residential	40.9%	18.1%	Non-Emer. Transportation	48.4%	8.4%
Physicians/ Practitioners	49.3%	22.6%			

Across all provider types, the wages paid to administrative and support staff were equal to about 10 to 20 percent of their reported revenue. The proportions represented by wages paid to direct care staff were more variable, ranging from about 20 percent to 70 percent of reported revenues. In general, higher direct care shares were reported for home and community-based services compared to facility-based services, which was expected because of the facility-related operating costs that are not part of non-facility services.

Figure 16 combines the findings from the previous tables – the payroll increase reported in Figure 14 and the payroll share reported in Figure 15 – to report the estimated impact on providers' total costs once the minimum wage reaches $15 per hour based on the results of the provider survey. The table suggests that increased wages for lower-wage administrative and support staff will have a modest impact on total costs, ranging from less than one percent to less than five percent. The impact on direct care wages is more significant because these staff have generally lower wages and represent a larger share of total costs. The impact is greater for home and community-based services than for facility-based services, primarily because wages are generally lower and comprise a smaller proportion of total costs.

Figure 16: Estimated Cost Increase at Full Implementation of $15 Per Hour Minimum Wage Based on Provider Survey by Provider Type

Provider Type	Direct Care Related Cost Increase	Admin. and Support Related Cost Increase	Total Increase
Hospitals	1.5%	1.1%	2.6%
DD Waiver – Direct Supp.	15.8%	1.8%	17.6%
DD Waiver– Other	1.3%	1.4%	2.7%
Personal Care/ Respite	44.4%	2.0%	46.4%
Adult Day Health	26.2%	0.5%	26.7%
Nursing Facilities	4.9%	4.5%	9.4%
Psychiatric Residential	5.7%	0.9%	6.6%
Physicians/ Practitioners	1.4%	0.4%	1.8%
Intermed. Care Facilities	11.5%	0.5%	12.0%
Clinic/ Medical Facilities	0.1%	2.7%	2.8%
Hospice	1.2%	0.3%	1.5%
PACE	-	-	-
Home Health – Aides	50.6%	3.6%	54.2%
Home Health – Other	1.8%	2.3%	4.1%
Non-Emer. Transportation	16.8%	0.8%	17.6%

To supplement the findings from the provider survey, HMA-Burns identified other data that could be used to validate the results for one or more elements of the calculation for one or more provider types.

Nursing Facility Cost Reports

Nursing facilities are required to annually submit cost reports to DMAS using a prescribed format. The cost reports require that providers report average wages for major direct care job classifications (for example, certified nursing assistants, licensed practical nurses, registered nurses, etc.), but does not capture detailed information about the distribution of wages across wage bands as in the provider survey. HMA-Burns applied its minimum wage impact formula to the average wages reported for direct care staff in the 2019 cost reports. After adding payroll taxes, the calculated increase for direct care staff was equal to 2.9 percent of providers' overall costs, which is reasonably close to the 4.8 percent estimate based on provider survey.

Adult Day Health Wage Survey

DMAS surveyed adult day health providers about the average wages paid to various defined job classifications. The survey did not request a distribution of wages by wage band so HMA-Burns applied its minimum wage impact formula to the average reported wages for direct care staff. The analysis of the 2016 wage survey produced an estimated wage increase of 33 percent, which is somewhat less than the 39 percent estimated based on the results of the provider survey. This was unexpected as it implies that wages have declined since 2016, but the result may be due to the fairly limited participation of Adult Day Health providers in the provider survey as only four agencies submitted surveys. In contrast, there were 33 respondents in the 2016 wage survey included in the analysis.

DD Waiver Rate Models

DD waiver payment rates are based on rate models that HMA-Burns developed in 2016. These rate models include the specific assumed wage for the direct support worker delivering each service. The wage assumptions were adjusted based on the HMA-Burns minimum wage impact formula. The rate models for services provided by direct support professionals were recalculated with these new wage assumptions and the impacts were weighted against all services based on fiscal year 2019 claims data. This analysis suggested that higher direct care staff wages would increase DD waiver providers' costs by 24 percent, which is notably higher than the 16 percent estimate derived from the provider survey. This could be because providers have increased wages since the rate models were implemented.

Bureau of Labor Statistics Industry Data

The United States Department of Labor's Bureau of Labor Statistics annually publishes wage data at the 10th, 25th, 50th, 75th, and 90th percentiles for more than 800 occupations. Further, the BLS publishes industry-level data that allows for comparison of wages paid to staff in the same occupations but in different settings. For example, the industry-level data allows for comparison of wages paid to registered nurses in hospitals compared to public schools compared to nursing homes, etc. The BLS also publishes state-specific wage data, but the industry-level data is only available at the national level.

In order to develop industry-level estimates within Virginia, the ratio between the all-industry national wage estimates and the industry-specific estimates were calculated for each occupation and applied to the Virginia data. For example, the national median wage for a licensed practical nurse (LPN) across all industries is $23.47 while the national median wage for an LPN in a nursing facility is $24.11, which is 2.7 percent greater. The analysis therefore assumed that the median wage for LPNs in nursing facilities in Virginia is 2.7 percent greater than the statewide median wage. This process was repeated for each reported wage percentile for each relevant job classification within an industry.

The HMA-Burns formula assumes the impact of a minimum wage increase on a worker's wage varies based on their current wage so the analysis considered the range of current wages in increments of five percent of the workforce. Since the BLS data only includes wage estimate at the 10th, 25th, 50th, 75th, and 90th percentiles, linear interpolation was used to estimate the wage value at the remainder of the percentiles. For example, if the 10th percentile and 25th percentile hourly wages for a job classification were $12.40 and $13.45, respectively, the estimated value of each percentile point would be $0.07, which is the $1.05 difference spread across 15 percentile points. Thus, the assumed 15th percentile wage would be $12.75 and the assumed 20th percentile wage would be $13.10. The midpoint wage for each

percentile bracket (i.e. 20th and 25th percentiles) was then calculated. For example, if the wage at the 20th percentile was $13.10 and the wage at the 25th percentile was $13.45, the midpoint of $13.275 would represent all wages within the bracket. HMA-Burns applied its minimum wage impact formula to each midpoint wage and compared the average of all 20 wage estimates with and without the minimum wage impact to determine the overall change.

Figure 17 presents the results of the BLS-based analysis compared to the estimates developed using provider survey data.

Figure 17: Comparison of Estimated Impacts of Full Implementation of $15 Minimum Wage on Direct Support, Administration, and Support Staff Wages, Provider Survey and BLS-Based Analysis

Provider Type	Provider Survey Est.	North American Industry Classification System	BLS-Based Estimate
Nursing Facilities	18%	Nursing Care Facilities (623100)	18%
DD Waiver – Direct Supp.	24%	Residential I/DD Facilities (623210)	32%
Pers. Care/ Respite; Adult Day Health; DD Waiver-Direct Supp.	35%	Services for Elderly/ Disabled (624120)	36%
Home Health	13%	Home Health Care (621600)	20%
Hospitals	6.4%	Hospitals (622000)	4.7%

As the table shows, this analysis produced very similar results to the estimates based on the provider survey. Three of the five categories were within two percentage points. There was a seven percentage point difference between the classification for home health care and the provider survey results and an eight percentage point difference between the industry classification for residential services for people with intellectual and developmental disabilities and the broader DD waiver direct support grouping from the provider survey.

Projected Impacts on Providers' Costs and Total Medicaid Spending

Based on the analyses described above and current trends in Medicaid service usage, HMA-Burns has developed projected estimates of the impacts of the increasing minimum wage on providers' costs and total Medicaid spending.

Projected Impacts on Providers' Costs

As illustrated earlier in Figure 9, the impact of the increasing minimum wage on providers' costs is a function of two factors: the payroll increase and the payroll share. Figures 18 and 19 use provider survey data to compare provider types based on these factors for direct care staff and administrative and program support staff, respectively.

These figures visualize the data previously reported in Figures 14 and 15, illustrating clusters of provider types. The provider survey offers the most current and detailed information regarding the distribution of paid wages and total revenues, but relatively few responses were received from several provider types.

There were also large differences in reported data within some provider types, so it is not always clear whether the reported data is representative of all providers within a given type. Thus, when developing projected estimates of the impact of a rising minimum wage on provider costs, HMA-Burns considered commonalities across provider types based on survey results. For example, Figure 18 shows similar calculated payroll increases for administrative and support staff for intermediate care facilities, hospice, and psychiatric residential inpatient facility providers. The calculated payroll increases for administrative and support staff for these provider types ranged from 2.3 percent to 5.0 percent so HMA-Burns' projection for all three provider types was 5.0 percent. The calculated administrative and support staff payroll increase for adult day health was only 4.8 percent, but this provider types is similar to DD waiver providers so the projection for these providers assumes the same 10 percent payroll increase as assumed for DD waiver providers. In addition to the provider survey, HMA-Burns also considered the results of the supplementary analyses described above. Figure 18 presents HMA-Burns' projections of the full impact of a $15 minimum wage on each provider type.

Figure 18: Projected Impact of Full Implementation of $15 Minimum Wage on Providers' Costs by Provider Type

Provider Type	Admin. and Support Staff			Direct Care Staff			Total Est. Inc. to Costs
	Payroll Inc.	Payroll Share	Inc. to Costs	Payroll Inc.	Payroll Share	Inc. to Costs	
Home Health-Aides	15.00%	15.00%	2.25%	70.00%	60.00%	42.00%	44.25%
Personal Care/ Respite	20.00%	10.00%	2.00%	70.00%	60.00%	42.00%	44.00%
Adult Day Health	10.00%	15.00%	1.50%	30.00%	60.00%	18.00%	19.50%
DD Waiver-Direct Supp.	10.00%	15.00%	1.50%	30.00%	60.00%	18.00%	19.50%
Non-Emer. Transportation	10.00%	10.00%	1.00%	35.00%	50.00%	17.50%	18.50%
Intermed. Care Facilities	5.00%	15.00%	0.75%	25.00%	50.00%	12.50%	13.25%
Nursing Facilities	20.00%	20.00%	4.00%	15.00%	30.00%	4.50%	8.50%
Psychiatric Residential	5.00%	15.00%	0.75%	15.00%	40.00%	6.00%	6.75%
Home Health-Other	15.00%	15.00%	2.25%	5.00%	60.00%	3.00%	5.25%
DD Waiver-Other	10.00%	15.00%	1.50%	5.00%	60.00%	3.00%	4.50%
Clinic/ Medical Facilities	5.00%	15.00%	0.75%	5.00%	40.00%	2.00%	2.75%
Hospice	5.00%	15.00%	0.75%	5.00%	40.00%	2.00%	2.75%
Hospitals	10.00%	15.00%	1.50%	5.00%	25.00%	1.25%	2.75%
PACE	5.00%	15.00%	0.75%	5.00%	40.00%	2.00%	2.75%
Physicians/ Practitioners	5.00%	20.00%	1.00%	-	-	-	1.00%

In general, these projections are within a few percentage points of the increases calculated based solely on provider survey results, which were previously summarized in Figure 16.

As indicated, the projections reported in Figure 18 reflect the impact once the minimum wage reaches $15 per hour on January 1, 2026. Figure 19 reports the projected impact on providers' costs for each of the scheduled increases in the minimum wage, beginning with first increase from $7.25 per hour to $9.50 on May 1, 2021.

Figure 19: Projected Step-by-Step Impact of Increasing Minimum Wage on Providers' Costs by Provider Type

Provider Type	Step 1 ($7.25-$9.50)	Step 2 ($9.50-$11.00)	Step 3 ($11.00-$12.00)	Step 4 ($12.00-$13.50)	Step 5 ($13.50-$15.00)	Total Est. Inc. to Costs
Home Health – Aides	11.56%	7.95%	5.27%	9.24%	10.23%	44.25%
Personal Care/ Respite	11.15%	7.76%	5.08%	9.56%	10.45%	44.00%
DD Waiver – Direct Supp.	1.55%	1.68%	1.38%	4.90%	9.99%	19.50%
Adult Day Health	0.12%	2.53%	2.12%	6.54%	8.19%	19.50%
Non-Emer. Transportation	3.20%	2.26%	1.54%	3.88%	7.62%	18.50%
Intermed. Care Facilities	0.42%	0.69%	0.63%	3.68%	7.83%	13.25%
Nursing Facilities	0.74%	0.84%	0.68%	2.25%	3.99%	8.50%
Psychiatric Residential	0.15%	0.38%	0.36%	1.65%	4.21%	6.75%
Home Health – Other	0.84%	0.64%	0.43%	1.09%	2.25%	5.25%
DD Waiver– Other	0.19%	0.21%	0.19%	0.91%	3.00%	4.50%
Hospitals	0.12%	0.16%	0.14%	0.65%	1.68%	2.75%
Clinic/ Medical Facilities	0.09%	0.14%	0.13%	0.61%	1.78%	2.75%
Hospice	0.05%	0.10%	0.08%	0.47%	2.05%	2.75%
PACE	0.05%	0.10%	0.08%	0.47%	2.05%	2.75%
Physicians/ Practitioners	0.04%	0.05%	0.05%	0.23%	0.63%	1.00%

Potential Impacts on Total Medicaid Spending

After estimating the projected impact of the increasing minimum wage on providers' costs, HMA-Burns estimated the overall cost to Virginia's Medicaid program to implement these changes by applying the estimated percentage increase in costs for each provider type to the total spending for that provider type.

HMA-Burns relied on two sources of data to determine current spending levels by provider type: paid claims and encounters data provided by DMAS, and estimated per-member per-month costs in the capitation rates developed by DMAS' contracted actuaries for managed care organizations.

DMAS provided paid claims and encounters between January 2018 and December 2020. HMA-Burns analyzed the data for all three years to assess trends in utilization and spending by provider type. In consultation with DMAS, it was decided that calendar year 2019 data would be used to establish baseline spending levels for two reasons. First, providers are still able to submit claims and encounters for services provided in 2020 so spending for this year may be slightly understated. Second, and more importantly, the COVID-19 pandemic significantly affected service utilization in 2020 and it is not expected that these impacts will persist for the next five years.

Virginia Medicaid identifies 98 provider types. Of these, 76 were included in the analysis of potential costs. The provider types that were excluded were:

- Those that do not include substantial labor costs such as devices/ equipment, laboratory testing, and prescriptions)

- Those with an unknown provider type, which represent eight percent of calendar year 2019 spending

For the 76 provider types included in the analysis, some spending was excluded:

- Claims and encounters for which Medicare pays the larger share of the cost
- Claims and encounters paid to out-of-state providers not subject to Virginia's minimum wage

A total of $5.8 billion in non-pharmacy Medicaid expenditures was identified in calendar year 2019. After applying the exclusions discussed above, the spending base was reduced to $4.9 billion.

In some instances, it was determined that the claims and encounters data did not provide complete information for certain services. In these instances, the analysis instead relied on spending estimates included in the published capitation rates for the contracted managed care organizations.

The following methodologies were employed for each provider type:

- *Hospitals.* All claims and encounters for provider types 001, 002, 003, 004, 007, 008, 012, and 014.
- *DD waiver providers.* Spending totals reflect all claims for provider type 056 delivered to individuals enrolled in one of the DD waivers. The distribution between services provided by direct support workers, personal assistance and respite services, and all other services was determined based on procedure code.
- *Personal care and respite providers.* Per-member per-month estimates from the calendar year 2019 capitation rate reports for the CCC Plus and CCC Plus Medicaid Expansion populations were totaled. The total also includes paid fee-for-service claims for provider types 047 and 055.
- *Adult day health providers.* Per-member per-month estimates from the calendar year 2019 capitation rate reports for the CCC Plus and CCC Plus Medicaid Expansion populations were totaled.
- *Nursing facilities.* All claims and encounters for provider type 010.
- *Psychiatric residential treatment facilities.* All claims and encounters for provider type 077 without a procedure code and for procedure code H2020.
- *Intermediate Care Facilities.* All claims and encounters for provider types 015, 016, 017, 018, and 029.
- *Physicians/ Practitioners.* All claims and encounters for provider types 020, 021, 022, 023, 024, 025, 026, 030, 031, 032, 033, 034, 035, 040, 043, 044, 045, 054, 076, 102, 103, 105, and 108.
- *Clinic/ Medical Facilities.* All claims and encounters for provider types 041, 051, 052, 053, 071, 019, 049, 050, and 057.
- *Hospice.* All claims and encounters for provider type 046.
- *PACE.* All claims and encounters for provider type 104.
- *Home health agencies.* Detailed payment information was not included in the claims and encounters data so billed charges were used to approximate payments. To determine the

distribution between home health aides and all other practitioners, the share of charges for revenue codes 0571 and 0572 compared to all revenue codes excluding the all-inclusive 0001 code was applied to total charges for provider types 058 and 059.

- *Non-emergency transportation.* Per-member per-month estimates from the calendar year 2019 capitation rate reports for the Medallion 4.0, CCC Plus, and CCC Plus Medicaid Expansion populations were totaled and then reduced by 20 percent to account for the estimated overhead expenses of the transportation brokers that coordinated services.

Figure 20 shows the baseline costs and estimated cost increase to accommodate a $15 minimum wage.

Figure 20: Projected Total Cost of Full Implementation of $15 Minimum Wage by Provider Type ($ in millions)

Provider Type	Annual Costs	Total Est. Inc. to Costs	
Home Health – Aides	$1.7	44.25%	$0.80
Personal Care/ Respite	$959.4	44.00%	$422.10
DD Waiver – Direct Supp.	$805.7	19.50%	$157.10
Adult Day Health	$14.2	19.50%	$2.80
Non-Emer. Transportation	$41.6	18.50%	$7.70
Intermed. Care Facilities	$182.7	13.25%	$24.20
Nursing Facilities	$679.9	8.50%	$57.80
Psychiatric Residential	$101.7	6.75%	$6.90
Home Health – Other	$91.2	5.25%	$4.80
DD Waiver– Other	$31.0	4.50%	$1.40
Hospitals	$1,905.2	2.75%	$52.4
PACE	$66.1	2.75%	$1.80
Clinic/ Medical Facilities	$29.7	2.75%	$0.80
Hospice	$26.3	2.75%	$0.70
Physicians/ Practitioners	$220.2	1.00%	$2.20
Total	**$5,156.6**		**$743.5**

Based on the projected cost increases and 2019 spending levels, the increase to a $15 per hour minimum wage will eventually increase providers' Medicaid-related expenses by $744 million annually. More than half of this expense is associated with personal care and respite services due both to the large amount of current spending on these services and the substantial impact that a higher minimum wage will have on these providers.

Given that the minimum wage will not reach $15 until 2026, Figure 21 reports the annualized cost increase for each incremental increase in the minimum wage.

Figure 21: Projected Annualized Step-by-Step Cost of Implementation of Increasing Minimum Wage by Provider Type ($ in millions)

Provider Type	Step 1 ($7.25-$9.50)	Step 2 ($9.50-$11.00)	Step 3 ($11.00-$12.00)	Step 4 ($12.00-$13.50)	Step 5 ($13.50-$15.00)	Total
Home Health – Aides	$0.20	$0.14	$0.09	$0.16	$0.17	$0.80
Personal Care/ Respite	$106.97	$74.45	$48.74	$91.72	$100.25	$422.10
DD Waiver – Direct Supp.	$12.49	$13.54	$11.12	$39.48	$80.49	$157.10
Adult Day Health	$0.02	$0.36	$0.30	$0.93	$1.16	$2.80
Non-Emer. Transportation	$1.33	$0.94	$0.64	$1.61	$3.17	$7.70
Intermed. Care Facilities	$0.77	$1.26	$1.15	$6.72	$14.31	$24.20
Nursing Facilities	$5.03	$5.71	$4.62	$15.30	$27.13	$57.80
Psychiatric Residential	$0.15	$0.39	$0.37	$1.68	$4.28	$6.90
Home Health – Other	$0.77	$0.58	$0.39	$0.99	$2.05	$4.80
DD Waiver– Other	$0.06	$0.07	$0.06	$0.28	$0.93	$1.40
Hospitals	$2.29	$3.05	$2.67	$12.38	$32.01	$52.4
PACE	$0.03	$0.07	$0.05	$0.31	$1.36	$1.80
Clinic/ Medical Facilities	$0.03	$0.04	$0.04	$0.18	$0.53	$0.80
Hospice	$0.01	$0.03	$0.02	$0.12	$0.54	$0.70
Physicians/ Practitioners	$0.09	$0.11	$0.11	$0.51	$1.39	$2.20
Total	**$130.23**	**$100.72**	**$70.37**	**$172.38**	**$269.77**	**$743.5**

As the table demonstrates, there are substantial costs associated with each scheduled increase in the minimum wage. The largest increases are associated with the first step, which includes the single largest increase in the minimum wage, a $2.25 per hour increase from $7.25 to $9.50, and the last step when the minimum wage reaches $15 and impacts the largest number of staff.

These costs are based on 2019 spending levels. If payment rates are adjusted, the baseline spending amounts will need to be adjusted to account for changes to caseload and utilization. These estimates do not account for any other increasing costs faced by providers, such as expenses to respond to the COVID-19 pandemic; increasing rent, utility, and health insurance costs; or new mandates, such as the provision of sick leave to personal care attendants.

Several factors should be considered by policymakers deciding whether to adjust Medicaid payment rates, including:

- *Current policies related to rate adjustments.* Some provider groups already receive annual rate adjustments, a portion of which likely supports increasing wage expenses, or have rates tied to other benchmarks. Any minimum wage related adjustments to payment rates for these provider groups should be considered in concert with other scheduled adjustments.
- *The magnitude of the impact to a given provider type.* Though many provider types will be impacted, the size of these impacts varies considerably. For some provider types, the impact is

projected to total a few percentage points while other provider types are anticipated to see their costs increase by more than 40 percent. Provider groups experiencing large cost increases should be prioritized since they will have limited ability to absorb these costs.

- *A provider group's reliance on Medicaid.* Some provider groups generate most or all of their revenue from Medicaid, while Medicaid represents less than half of the revenue for other provider groups. Those groups with the greatest reliance on Medicaid should be prioritized to ensure their viability.
- *The availability of other Medicaid payments.* This analysis only considers payments for services, but some provider groups, such as hospitals, receive supplemental payments from Medicaid that should be evaluated when considering whether to adjust payment rates.
- *Local wages.* Current wages vary substantially across Virginia. In particular, wages in Northern Virginia are much higher than those elsewhere in the Commonwealth. The impact of a higher minimum wage will therefore be lessened in Northern Virginia. Adjustments to payment rates should account for these existing differences.

Conclusion

Virginia's increasing minimum wage will greatly improve the financial circumstances of lower-wage workers across the Commonwealth and provide larger societal benefits in terms of public health and reduced reliance on public programs.

Tens of thousands of lower-wage direct care and support staff providing critical healthcare services to Medicaid enrollees will be among the beneficiaries of wage increases. For many of these essential workers, however, these benefits will not be fully realized unless Medicaid payment rates are adjusted to accommodate employers' increased costs. At current spending levels, more than $740 million, half of which would be paid for by federal funds, would be needed annually to fully offset providers' increased wage expenses by the time the minimum wage reaches $15 per hour.

The impact of the higher minimum wage varies substantially across provider types. Due to their reliance on generally lower-wage direct care staff, personal care and respite providers' expenses are projected to increase by 44 percent. This provider type coupled with DD waiver providers accounts for three-quarters of the estimated increase in Medicaid providers' costs. For provider types that primarily employ higher-wage staff, the impacts are much more modest, totaling less than five percent over the next five years. For provider types facing large cost increases and with a heavy reliance on Medicaid, the continued viability of their businesses will largely depend on increased Medicaid payment rates. If providers are unable to maintain operations, Medicaid enrollees' access to care and the quality of that care could be sharply reduced.

When contemplating potential adjustments to payment rates to address the increased costs resulting from the rising minimum wage, policymakers must consider differences across provider types in terms of the magnitude of the impact, reliance on Medicaid funding, and current policies related to rate adjustments.