
HMA

HEALTH MANAGEMENT ASSOCIATES

*Estimating the Impact of an Increased Federal
Minimum Wage on Direct Support Professionals'
Wages and I/DD Service Providers' Costs*

PREPARED FOR

AMERICAN NETWORK OF COMMUNITY OPTIONS AND RESOURCES

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*Research and Consulting in the Fields of Health and Human Services Policy, Health Economics
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Table of Contents

Executive Summary.....	1
Purpose and Summary of Findings	2
Section I: Background	4
Direct Support Professional Workforce	4
Overview of Federal and State Minimum Wages	6
Overview of Research on Impacts of Minimum Wage Increases	8
Section II: Methodology.....	10
Estimating the Payroll Increase.....	10
Estimating the Payroll Share	17
Estimating Total Spending	18
Section III: Results, Limitations, and Conclusions	20
Estimates.....	20
Limitations	21
Conclusion.....	22
End Notes.....	23

Appendix A: Estimated Increase in Providers’ DSP and Supervisor Expenses at Various Minimum Wage Levels and Cost (in millions) to Fully Implement, by State

Appendix B: Estimated Increase in Providers’ DSP and Supervisor Expenses with a \$22.50 Wage Floor and Cost (in millions) to Fully Implement, by State

Executive Summary

Medicaid is the primary source of funding for long-term services and supports for individuals with intellectual and developmental disabilities (I/DD) such as Down syndrome, cerebral palsy, and autism. In 2017, more than 800,000 individuals with I/DD received Medicaid-funded supports such as in-home services, residential care, center- and community-based training programs, supported employment, and caregiver respite.

Private for-profit and nonprofit agencies deliver the large majority of these services. The front-line staff who provide services are broadly known as direct support professionals (DSPs). DSPs provide assistance with activities of daily living such as eating, bathing, and toileting; training to maximize individuals' independence; and management of medical and behavioral conditions. DSPs often work independently and must comply with ever-increasing administrative responsibilities. Despite the important and challenging work they do, DSPs earn low wages. Nationally, the average DSP earns less than \$14.00 per hour. Consequently, many providers struggle with recruiting and retaining DSPs.

DSPs therefore stand to benefit from an increase in the federal minimum wage. However, these benefits will not be realized unless the payment rates established by state Medicaid programs are increased in concert with any change to the minimum wage.

To provide policymakers with information about the costs providers will incur if the federal minimum wage increases, the American Network of Community Options and Resources (ANCOR), which represents more than 1,600 organizations employing more than a half-million DSPs, contracted with the Burns & Associates division of Health Management Associates (HMA-Burns) to develop state-by-state estimates.

HMA-Burns conducted a literature review of the economic effects of an increased minimum wage. Building on this research, HMA-Burns developed a formula to quantify the impact of a higher minimum wage on current wages, accounting for spillover and compression effects, and tested this formula with actual data from states that have implemented their own higher minimum wages.

This analysis concludes that a \$15 federal minimum wage would increase services providers' costs by nearly \$10 billion. Based on current laws regarding states' financial responsibilities for Medicaid costs, the states' share of this expense would be \$3.9 billion. There is substantial variability in the state-by-state impact based primarily on each state's current minimum wage.

These estimates account only for the additional costs that providers will incur to keep pace with an increased minimum wage. The analysis did not seek to address the greater investment that would be necessary to address the existing challenges confronting the DSP workforce.

Few providers have the ability to raise prices and almost all providers lack access to other funding sources because there is little-to-no private pay, commercial insurance, or Medicare coverage for long-term services and supports for individuals with I/DD. Without an increase in Medicaid payment rates, providers will be unable to ensure DSPs receive the benefits of an increased minimum wage. In fact, given their reliance on Medicaid payments, providers' ability to continue to deliver critical supports will be threatened if the minimum wage increases without a commensurate increase in Medicaid payment rates.

Purpose and Summary of Findings

More than 840,000 individuals with intellectual and developmental disabilities (I/DD) such as Down syndrome, cerebral palsy, and autism across the United States received Medicaid-funded services in fiscal year 2017.¹ Supports include residential services delivered in group homes, host homes, family homes, and independent living arrangements; center- and community-based training services; employment supports; and respite for family caregivers.

Services are delivered through a variety of nonprofit and for-profit agencies as well as through arrangements in which the service recipient or their guardian serves as the employer of the staff providing care. Staff providing services have a number of job titles, but are most commonly referred to as direct support professionals (DSPs). DSPs may assist service recipients with personal care activities such as eating, dressing, bathing, and toileting, and work with individuals on daily living skills designed to maximize their independence.

Despite the important and challenging work performed by DSPs, this workforce is characterized by low wages and minimal benefits. National data from the United States Department of Labor's Bureau of Labor Statistics (BLS) shows that DSPs providing residential care earn an average of \$13.38 per hour while those in other settings earn an average of \$13.69.² An increase in the federal minimum wage has the potential to significantly benefit DSPs, particularly in states that have not adopted their own higher minimum wages. However, agencies serving individuals with I/DD rely almost entirely on payments from state governments as there is little-to-no private pay, commercial insurance, or Medicare coverage for these supports. As a result, providers would be unable to ensure that DSPs receive the full benefit of a higher minimum wage without increases to their payment rates.

To inform the minimum wage debate, the American Network of Community Options and Resources (ANCOR, at ancor.org) contracted with the Burns & Associates division of Health Management Associates (HMA-Burns) to estimate the additional costs that providers would incur to increase DSP wages in response to a higher federal minimum wage.

For 50 years, ANCOR has been a leading advocate for the critical role service providers play in enriching the lives of people with I/DD. As a national nonprofit trade association, ANCOR represents more than 1,600 organizations employing more than a half-million DSPs. ANCOR's mission is to advance the ability of its members to support people with I/DD to fully participate in their communities.

Established in 1985, HMA is a leading independent, national research and consulting firm providing technical and analytical services with 22 office locations in 16 states and Washington, DC. Since its inception, HMA's has focused on providing meaningful help grounded in real-world experience to policymakers, providers, health plans, foundations, community-based organizations, and communities that serve populations that depend on publicly funded services.

HMA acquired Burns & Associates, Inc., a data analytics and health policy consulting firm in September 2020. HMA-Burns' practice includes a particular emphasis on supporting state I/DD authorities and, over the past decade, HMA-Burns has completed more than a dozen studies of state payment rates for services delivered to individuals with I/DD. Several of these rate studies included specific analyses of the impact of an increasing state minimum wage on DSP wages and provider payment rates.

An \$11 federal minimum wage would increase service providers' payroll costs by \$2.6 billion while a \$15 minimum wage would increase costs by \$9.9 billion

Utilizing methodologies it has developed and tested as part of these previous projects, HMA-Burns developed state-by-state estimates of the cost increases providers would experience if the federal minimum wage increases. Figure 1 presents a summary of these results. As the table demonstrates, a federal minimum wage of \$11 per hour would increase providers' payroll costs for DSPs and first-line supervisors by \$2.6 billion nationwide. As the minimum wage increases, more staff are impacted

and larger pay raises are required. A \$15 minimum wage would increase providers' costs by \$9.9 billion. These estimates represent only the cost of keeping pace with rising wages if the federal minimum wage increases; they do not account for broader investments in DSP compensation that would be required to address existing challenges such as high vacancy and turnover rates.

Figure 1: Estimate of Increased I/DD Service Provider Costs at Different Federal Minimum Wages

Potential federal minimum wage	Cost to increase provider rates (\$ in billions)
\$11.00	\$2.6
\$12.00	\$3.9
\$13.00	\$5.7
\$14.00	\$7.7
\$15.00	\$9.9

The remainder of this report details the research and analysis used to develop these estimates:

- Section I provides background information about the DSP workforce, the history of minimum wage changes, and research on the effects of a rising minimum wage on existing wages.
- Section II describes the data sources and methodologies employed to develop the estimates.
- Section III reports the state-by-state results of the analysis and summarizes limitations in the use of these results.

Section I: Background

There have been dramatic shifts over the past 40 years in the community's expectations and the public sector's philosophy about supporting individuals with I/DD. In 1977, 84 percent of individuals receiving residential services from state I/DD authorities were supported in facilities that had at least 16 residents. Most of these facilities were state-operated. As individuals demanded greater integration into their communities, many of these large facilities were closed. By 2017, only seven percent of those receiving residential services were in large facilities. The number of individuals served in their family home has increased dramatically during this period. In 2017, 60 percent of individuals receiving Medicaid-funded home and community-based services were living with a family member.³

The shift to more integrated services is reliant on the front-line direct support professionals responsible for assisting individuals with their personal care needs and supporting individuals to achieve their greatest independence. The DSP workforce has historically been characterized by low wages and high turnover. Given these low wages, increasing the federal minimum wage to \$15 per hour has the potential to increase the earnings of a substantial portion of this workforce.

However, since Medicaid pays for the large majority of home and community-based services for individuals with I/DD, the promise of increased wages will not be realized without higher Medicaid payment rates.

Direct Support Professional Workforce

The estimated 1.4 million DSPs across the country are the linchpin of the system of supports for individuals with I/DD. Befitting the population they serve, the workforce is diverse. According to the Public Homecare Institute, the median age of the workforce (including those serving non-I/DD populations, such as the elderly) is 47 years, 87 percent are women, 60 percent are people of color, and 29 percent are immigrants.⁴

The role of DSPs has become more challenging in recent years

There have always been significant demands placed on DSPs, but the work has become even more challenging in recent years. As noted above, today most individuals live in small community settings. While the shift away from larger settings has produced many benefits, it has resulted in many DSPs working with only intermittent face-to-face interaction with supervisors, requiring the ability to work with significant autonomy. This shift has additionally resulted in more individuals with complex needs receiving services in the community. Between 2012-13 and 2018-19, data from the National Core Indicators (NCI) In Person Survey shows the number of individuals with behavior challenges living in the community more than doubled from 15 percent to 31 percent, people with anxiety disorders grew from 14 percent to 29 percent, and those with mood disorders increased from 23 percent to 31 percent. DSPs must also manage more challenging medical conditions as individuals with I/DD live longer. By 2030, an estimated 1.2 million individuals with I/DD will be 60 years of age or older, nearly double the number of older adults with I/DD in 2000.⁵ In addition to their caregiving and training responsibilities, DSPs must possess the administrative and communication skills necessary to complete documentation, coordination, and reporting tasks that have become more complicated in recent years.

The President’s Committee on People with Intellectual Disabilities’ 2017 report focused on the workforce challenges in the I/DD field. In addition to low compensation and minimal benefits, the Committee highlighted high rates of injury due to the physical demands of the work, high accountability and consequences for actions, isolation from other workers and supervisors given the decentralized nature of the system, the lack of a career ladder, and insufficient training and professional development.⁶

Though they are essential to the well-being of individuals with I/DD, most DSPs earn wages equivalent to entry-level retail, food service, and hospitality jobs. Figure 2 compares the median DSP wage (using the BLS occupational classification for home health and personal care aides) in each state to that state’s minimum wage.

Figure 2: Median DSP Compared to Minimum Wage, by State

State	2020 Min. Wage	Median DSP Wage	% of Min.	State	2020 Min. Wage	Median DSP Wage	% of Min.
Alabama	\$7.25	\$9.58	132%	Montana	\$8.65	\$12.82	148%
Alaska	\$10.19	\$16.66	163%	Nebraska	\$9.00	\$12.70	141%
Arizona	\$12.00	\$12.70	106%	Nevada	\$9.00	\$11.69	130%
Arkansas	\$10.00	\$10.97	110%	New Hampshire	\$7.25	\$13.54	187%
California	\$13.00	\$14.05	108%	New Jersey	\$11.00	\$12.76	116%
Colorado	\$12.00	\$13.83	115%	New Mexico	\$9.00	\$10.52	117%
Connecticut	\$12.00	\$13.62	114%	New York	\$11.80	\$14.86	126%
Delaware	\$9.25	\$11.65	126%	North Carolina	\$7.25	\$10.74	148%
DC	\$15.00	\$15.04	100%	North Dakota	\$7.25	\$16.22	224%
Florida	\$8.56	\$11.61	136%	Ohio	\$8.70	\$11.41	131%
Georgia	\$7.25	\$11.17	154%	Oklahoma	\$7.25	\$9.80	135%
Hawaii	\$10.10	\$13.35	132%	Oregon	\$12.00	\$14.33	119%
Idaho	\$7.25	\$11.65	161%	Pennsylvania	\$7.25	\$12.40	171%
Illinois	\$10.00	\$13.46	135%	Rhode Island	\$10.50	\$14.39	137%
Indiana	\$7.25	\$11.63	160%	South Carolina	\$7.25	\$11.00	152%
Iowa	\$7.25	\$13.23	182%	South Dakota	\$9.30	\$13.08	141%
Kansas	\$7.25	\$10.97	151%	Tennessee	\$7.25	\$10.88	150%
Kentucky	\$7.25	\$11.89	164%	Texas	\$7.25	\$10.11	139%
Louisiana	\$7.25	\$9.04	125%	Utah	\$7.25	\$13.14	181%
Maine	\$12.00	\$13.80	115%	Vermont	\$10.96	\$14.87	136%
Maryland	\$11.00	\$13.51	123%	Virginia	\$7.25	\$10.69	147%
Massachusetts	\$12.75	\$16.38	128%	Washington	\$13.50	\$15.14	112%
Michigan	\$9.65	\$11.85	123%	West Virginia	\$8.75	\$9.97	114%
Minnesota	\$10.00	\$14.00	140%	Wisconsin	\$7.25	\$12.32	170%
Mississippi	\$7.25	\$10.25	141%	Wyoming	\$7.25	\$13.35	184%
Missouri	\$9.45	\$11.44	121%				

The table demonstrates that the average DSP earns a wage that offers a modest premium – generally 30 to 40 percent – above the minimum wage. The premium is greatest in states with the lowest minimum wages. As the minimum wage increases, wages tend to become more compressed and the DSP wage premium is reduced.

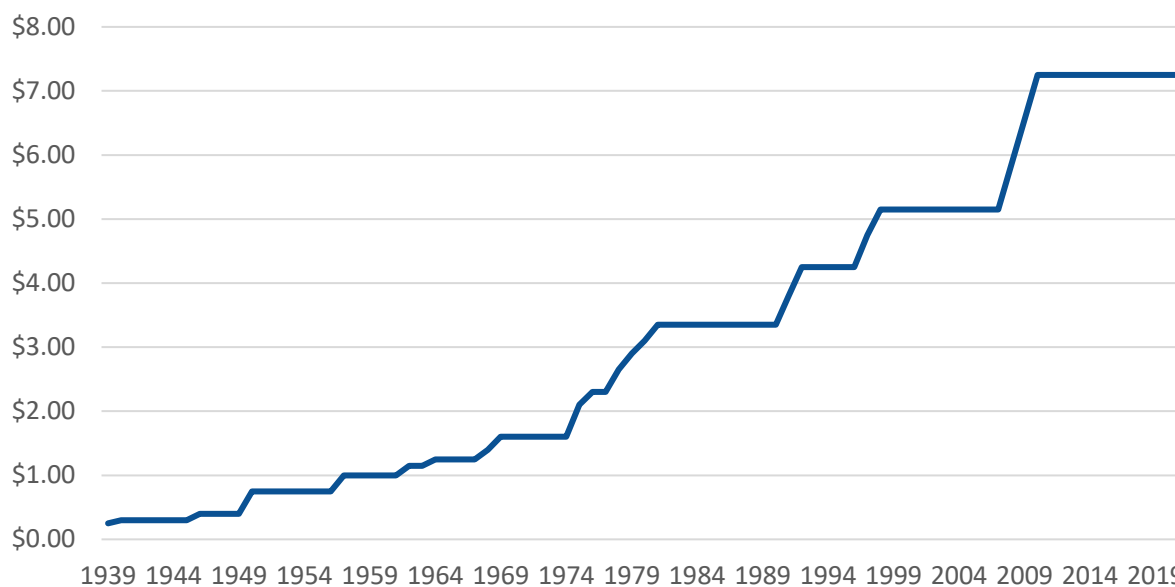
Given the disconnect between ever-increasing job expectations and low wages, attracting and retaining DSPs poses an ongoing challenge to service providers across the country. Data from the 2019 NCI Staff Stability Survey – conducted prior to the Covid-19 pandemic – demonstrated an average turnover rate of 43 percent and vacancy rates of 8.5 percent for full time DSPs and 11.2 percent for part time DSPs.⁷

Although most DSPs earn more than the minimum wage, their relatively low wages mean they are impacted by increases to the minimum wage because employers will need to continue to pay at least somewhat above the minimum to avoid exacerbating existing challenges related to recruitment and retention.

Overview of Federal and State Minimum Wages

The federal Fair Labor Standards Act (FLSA) of 1938 created the first national minimum wage of \$0.25 per hour.⁸ The federal minimum wage is not indexed for inflation so any increase requires congressional action. As shown in Figure 3, the federal minimum wage has been increased numerous times since it was originally established.

Figure 3: Federal Minimum Wage by Year (as of Jan. 1; not inflation-adjusted)



As the chart shows, the minimum wage was last increased in July 2009. Exceeding 12 years, this is the longest period without an increase in the history of the federal minimum wage. Inflation, as measured by the consumer price index, has totaled nearly 22 percent during this period,⁹ reducing the buying power of workers earning the minimum wage. While a full-time worker supporting a two-person household earning the minimum wage lived above the federal poverty line in 2009, they would be living about 15 percent below the poverty line today.

In the absence of federal increases, many states have taken action on their own. Figure 4 includes information related to state minimum wages in relation to the federal minimum wage.

Figure 4: Comparison of State Minimum Wages to Federal Minimum Wage Since 1997¹⁰

Year	Federal Minimum Wage (Jan. 1)	States w/ Higher Minimum Wage Than Federal	States w/ Minimum Wage at Least \$1 More Than Federal	States w/ Minimum Wage at Least \$4 More Than Federal	Average Amount Over the Federal Minimum
1997	\$4.75	11	1	0	\$0.42
1998	\$5.15	7	1	0	\$0.38
2000	\$5.15	11	4	0	\$0.76
2001	\$5.15	11	9	0	\$1.05
2002	\$5.15	12	9	0	\$1.14
2003	\$5.15	12	12	0	\$1.41
2004	\$5.15	13	12	0	\$1.45
2005	\$5.15	14	13	0	\$1.56
2006	\$5.15	18	17	0	\$1.59
2007	\$5.15	30	29	0	\$1.72
2008	\$5.85	33	21	0	\$1.17
2009	\$6.55	28	8	0	\$0.90
2010	\$7.25	15	5	0	\$0.63
2011	\$7.25	18	6	0	\$0.60
2012	\$7.25	19	7	0	\$0.71
2013	\$7.25	20	7	0	\$0.75
2014	\$7.25	24	9	0	\$0.96
2015	\$7.25	30	17	0	\$1.20
2016	\$7.25	30	22	1	\$1.56
2017	\$7.25	30	25	1	\$1.91
2018	\$7.25	30	28	2	\$2.32
2019	\$7.25	30	30	9	\$3.19
2020	\$7.25	30	30	11	\$3.39

The table shows that states have been most active in establishing their own minimum wages during periods when the federal minimum is stagnant. Between 1998 and 2007 when the federal minimum wage remained \$5.15 per hour, the number of states with a minimum wage greater than the federal minimum increased from 7 to 30. Similarly, 15 states had a higher minimum wage in 2010 when the federal minimum was \$7.25. By 2020, that number had doubled to 30.

Additionally, the amount by which state minimum wages exceed the federal minimum has continued to increase over the past decade. In 2010, there were no states with a minimum wage that was at least \$4

per hour greater than the federal minimum (that is, \$11.25) and the average amount above the federal minimum was only \$0.63. In 2020, the average state minimum wage among states with a higher minimum was \$3.39 above the federal minimum and 11 states had a minimum wage greater than \$11.25.

Overview of Research on Impacts of Minimum Wage Increases

Given the debates 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 research has 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.¹¹
- ‘Wage compression’, meaning that there will be some narrowing of the difference in pay between lower-wage employees as the minimum wage rises.¹²

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 a worker’s current wage increases. A few examples illustrate the practical necessity of these effects.

To illustrate the importance of the spillover effect, consider the following two examples 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 is already above 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 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 supervisors and experienced staff in these scenarios would 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.¹³

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 are workers who already earn more than the new minimum. In its 2019 analysis of the effects of a rising minimum wage, the Congressional Budget Office (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, more workers already earning in excess of the new minimum wage would experience a pay raise than workers earning less the new minimum (6 million and 5 million, respectively).¹⁴

To illustrate the wage compression effect, consider the same two examples from above:

- 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. Thus, 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.

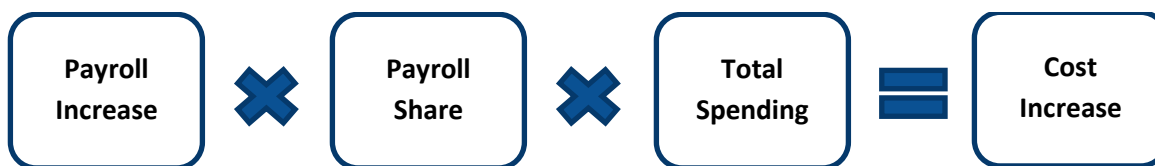
Thus, while lower-wage workers earning more than the new minimum wage will receive pay raises, these raises will be smaller than those received by minimum-wage workers, resulting in wages that are more compressed near the new minimum wage. To assume otherwise would require that everyone would receive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

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 likely receive a pay raise in response to an increasing minimum wage, 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.

Section II: Methodology

Figure 5 illustrates the calculation for estimating the cost of an increased federal minimum wage to I/DD system costs across the country:

Figure 5: 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 an increased minimum wage, considering both spillover and compression effects, expressed as a percentage of the current expense. For example, if a current payroll expense of \$16 per hour is projected to rise to \$20 per hour due to a higher minimum wage, 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 on I/DD services.

The product of the payroll increase and the payroll share represents the projected increase in providers' 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. This percentage increase is applied to the total spending figure to produce the estimated cost increase.

Since this analysis considers both DSP and supervisor wages, this formula is applied to both groups of workers and the sum of the two results represents the overall estimated cost increase.

Estimating the Payroll Increase

As discussed in Section I, 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. In the absence of such a documented methodology, HMA-Burns has created its own formula. HMA-Burns has successfully employed this formula in a number of rate-setting engagements for I/DD services in states that have scheduled minimum wage increases. Figure 6 outlines this formula.

Figure 6: 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 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

The formula is designed to measure the portion of the premium that a worker earns above the current minimum wage that will be retained in relation to the new minimum wage. That is, the formula assumes that lower-wage workers who earn more than the current minimum wage will receive pay raises to ensure that they continue to earn more than the new minimum wage and that these pay raises will apply to many workers who already earn more than the new minimum wage (the spillover effect). However, the percentage of the premium that is retained declines for each additional marginal dollar. In short, the pay adjustment decreases as the current wage increases (the compression effect).

Figure 7 includes several examples to demonstrate the results of this formula based on a state with a minimum wage increasing from \$12 to \$15 per hour.

Figure 7: Examples of Results of Formula for Estimating Impact of New Minimum Wage on Existing Wage, for a Minimum Wage Increasing from \$12 per Hour to \$15

	% Retained in Relation to New Minimum Wage	Example 1	Example 2	Example 3
Current Wage		\$13.50	\$15.40	\$17.60
\$12.00	100%			
\$12.01 - \$13.00	90%	\$0.90	\$0.90	\$0.90
\$13.01 - \$14.00	80%	\$0.40	\$0.80	\$0.80
\$14.01 - \$15.00	70%		\$0.70	\$0.70
\$15.01 - \$16.00	60%		\$0.24	\$0.60
\$16.01 - \$17.00	50%			\$0.50
\$17.01 - \$18.00	40%			\$0.24
\$18.01 - \$19.00	30%			
\$19.01 - \$19.24	20%			
Current Premium (Comp. to \$12.00)		\$1.50	\$3.40	\$5.60
New Premium (Comp. to \$15.00)		\$1.30	\$2.64	\$3.74
Adjusted Wage		\$16.30	\$17.64	\$18.74

The worker in each example currently earns more than the \$12 minimum wage so the formula assumes they will continue to earn more than the minimum wage as it increases. The worker currently earning \$13.50 per hour (\$1.50 more than the \$12 minimum) is assumed to earn \$16.30 once the minimum wage reaches \$15, a premium of \$1.30. In this example, the worker retains 87 percent of their wage premium in relation to the minimum wage. The retained premium declines as the beginning wage increases. For the worker currently earning \$17.60 per hour, the retained premium is 67 percent.

Figure 6 also demonstrates the importance of the current minimum wage in the formula. The worker earning \$13.50 in a state with a \$12 minimum wage is only receiving a modest premium and the formula assumes that they will continue to earn a modest (and slightly lower) premium. However, if that worker is employed in a state with a \$10 minimum wage, their current premium is considerably larger and the formula will produce an hourly wage of \$17.70 when the minimum wage reaches \$15. The two workers are earning the same current wage and both will be affected as the minimum wage increases to \$15, but the worker in the state with the lower current minimum wage is assumed to receive a larger pay increase because they are currently earning a larger premium. These results illustrate the individual nature of the workforce and I/DD system in each state, which are influenced by differences in economic conditions, labor force composition, competing industries, DSP requirements, payment rates, and other factors.

To test the accuracy of its formula to predict the impact 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 reviewed. This criterion increases the likelihood that changes in wages are a result of 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 8, five states and the District of Columbia meet these criteria.

Figure 8: 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 BLS was extracted for these six jurisdictions. Traditionally lower-wage occupations with a substantial employment base were then identified as shown in Figure 9.

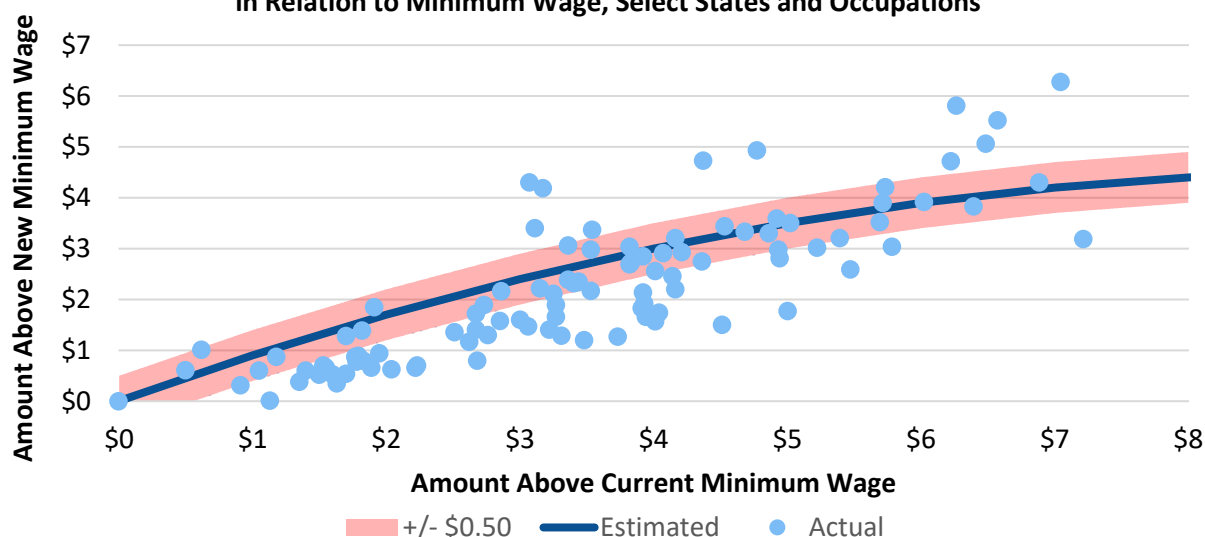
Figure 9: Bureau of Labor Statistics Occupations Included in Testing of Minimum Wage Formula (Healthcare Occupations Emphasized)

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 jurisdiction 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, 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 the state. Based on this wage and the increase in the state’s minimum wage, the HMA-Burns formula estimated 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.

Figure 10 compares the predicted wage to the actual wage (in relation to the applicable minimum wage for each state) for each occupation in each of the six jurisdictions listed in Figure 8.

Figure 10: Comparison of HMA-Burns Estimated & Actual Wages in Relation to Minimum Wage, Select States and Occupations



The chart shows that actual wages were clustered around the estimates produced by the HMA-Burns formula with nearly 40 percent of the actuals falling within \$0.50 of the formula estimate and almost three-quarters falling within \$1.00. At the lower end of the wage scale, the formula is more likely to modestly overestimate the wage adjustment whereas the formula somewhat underestimates the wage adjustment at the higher end of the wage scale.

HMA-Burns 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; there was a seven percent variance in the remaining state. The overall average variance was 3.8 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-half-of-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 2.7 percent.

Having confirmed the general predictiveness of the formula, HMA-Burns used it to model the state-by-state impact of an increased minimum wage on DSP and supervisor wages.

A number of reports and datasets provide estimates of DSP wages. This analysis uses the BLS' Occupational Employment and Wage Statistics dataset for several reasons. The data is reasonably current, reflecting wage levels as of May 2020; available for all 50 states and the District of Columbia; and detailed beyond a simple, single average wage. There is not a dedicated BLS occupation for DSPs; rather, the BLS assigns them to the home health and personal care aide classification (standard occupational classification 31-1120). Although this classification also includes workers who often perform work that is less complex than the responsibilities of DSPs, the BLS' national industry-level data (industry-level data is not published by state) demonstrates that the wage value for the broad occupation is within one or two percent of the wage value for DSPs. The average national hourly wage for home health and personal care aides across all industries is \$13.49. The average wage for this classification in residential intellectual and developmental facilities (industry 62-3210 in the North American Industry Classification System, NAICS) is \$13.38 and the average wage in non-residential environments (NAICS industry 62-4120, services for the elderly and persons with disabilities) is \$13.69.

To further validate the BLS data, HMA-Burns compared it to estimates reported through the National Core Indicators' Staff Stability Survey, which collects data – including wage data – regarding DSPs supporting adults with I/DD from service providers.¹⁵ HMA-Burns compared the median wage for the BLS' home health and personal care aide classification to the median DSP wage reported in the 2019 Staff Stability Survey in the 26 states that participated in the survey. Compared to the BLS data, the Staff Stability Survey reported a lower median wage in 15 states, a higher wage in 10 states, and an equal wage in one state. In 15 of 26 states (57 percent), the BLS and Staff Stability Survey estimates were within five percent; in 20 of 26 states (77 percent), the estimates were within ten percent. Given that most estimates were reasonably close across datasets and that variances were bidirectional (that is, the BLS estimate was higher in some instances and lower in others), the BLS figures were deemed to provide reliable estimates of DSP wages.

As with DSPs, the BLS dataset incorporates DSP supervisors in a larger classification: first line supervisors of personal service and entertainment and recreation workers except gambling services (standard

occupational classification 39-1098). For this occupation, the cross-industry average hourly wage of \$22.03 is very close to the \$21.70 average for non-residential settings but notably higher than the \$19.39 average for residential I/DD programs. Given the comparatively small effect that supervisor wages have on the overall cost of accommodating a higher minimum wage, this classification was determined to be reasonable for modeling the impacts on supervisor wages.

The BLS publishes the distribution of wages within an occupation using five markers: the wage at the 10th percentile, the 25th percentile, the 50th percentile (that is, the median), the 75th percentile, and the 90th percentile. To reflect the full range of DSP and supervisor wages, and to establish wage estimates covering equal numbers of employees, the analysis interpolated wages for every fifth percentile assuming a linear distribution between published estimates. For example, if the 10th percentile and 25th percentile hourly wages for home health and personal care aides in a given state 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. To calculate the wage estimates between the 1st and 10th percentiles, the analysis used the same cost-per-percentile-point assumed for wages between the 10th and 25th percentiles, with a floor that prevented a resulting wage from being less than the minimum wage within that state. Similarly, the calculation of wage estimates between the 90th and 99th percentiles relied on the cost-per-percentile-point assumed for wages between the 75th and 90th percentiles. Ultimately, 20 wage estimates were produced for each occupation in each state: the 5th percentile, the 10th percentile, etc.

The analysis then applies HMA-Burns’ formula for estimating the impact of an increased minimum wage to the midpoint of the five percentile point estimates. Since the analysis relies on BLS data from 2020, the model used the minimum wage in effect in 2020 in each state. The average of the 20 current wage estimates is compared to the average of the 20 wage estimates adjusted for a higher minimum wage. Figure 11 demonstrates the results of these calculations for Wyoming where the current minimum wage is \$7.25 per hour.

Figure 11: Estimates of Current Wages and Wages with a \$15 Minimum Wage for DSPs in Wyoming

Percentile Bracket	Current Midpoint Wage Estimate	Estimated Wage with \$15 Min.	Percentile Bracket	Current Midpoint Wage Estimate	Estimated Wage with \$15 Min.
1-5	\$9.55	\$16.91	50-55	\$13.55	\$18.99
5-10	\$9.94	\$17.18	55-60	\$13.96	\$19.11
10-15	\$10.34	\$17.45	60-65	\$14.36	\$19.22
15-20	\$10.74	\$17.69	65-70	\$14.77	\$19.30
20-25	\$11.13	\$17.93	70-75	\$15.17	\$19.38
25-30	\$11.53	\$18.14	75-80	\$15.89	\$19.46
30-35	\$11.94	\$18.35	80-85	\$16.93	\$19.57
35-40	\$12.34	\$18.54	85-90	\$17.97	\$19.67
40-45	\$12.75	\$18.70	90-95	\$19.01	\$19.78
45-50	\$13.15	\$18.86	95-99	\$20.05	\$20.05

The average of the current wage estimates for the 20 percentile brackets is \$13.75 and the average of the wages adjusted for a \$15 minimum wage based on the HMA-Burns formula is \$18.71. The difference between the two figures is 36.1 percent, which is the estimated increase in wages for DSPs in Wyoming if the federal minimum wage increases to \$15 per hour.

Figure 12 presents the average estimated impact of a \$15 federal minimum wage on DSP wages in each of the 50 states and the District of Columbia.

Figure 12: Estimated Impact of \$15 Federal Minimum Wage on DSP and Supervisor Wages, by State

State	Increase to DSP Wages	State	Increase to DSP Wages	State	Increase to DSP Wages
Alabama	70.7%	Kentucky	39.8%	North Dakota	18.7%
Alaska	13.6%	Louisiana	76.1%	Ohio	47.0%
Arizona	20.8%	Maine	17.1%	Oklahoma	62.1%
Arkansas	42.7%	Maryland	23.9%	Oregon	15.2%
California	10.6%	Massachusetts	7.5%	Pennsylvania	46.1%
Colorado	15.8%	Michigan	37.1%	Rhode Island	20.7%
Connecticut	16.9%	Minnesota	25.7%	South Carolina	57.6%
Delaware	42.0%	Mississippi	68.7%	South Dakota	32.7%
DC	0.0%	Missouri	41.3%	Tennessee	60.2%
Florida	45.1%	Montana	39.2%	Texas	68.4%
Georgia	56.4%	Nebraska	36.7%	Utah	37.1%
Hawaii	25.7%	Nevada	43.3%	Vermont	15.5%
Idaho	43.4%	New Hampshire	35.7%	Virginia	57.8%
Illinois	30.4%	New Jersey	22.1%	Washington	6.4%
Indiana	51.6%	New Mexico	48.0%	West Virginia	57.8%
Iowa	36.5%	New York	13.7%	Wisconsin	46.9%
Kansas	58.8%	North Carolina	60.2%	Wyoming	36.1%

As would be expected, the greatest costs will be experienced by providers in states with the lowest minimum wages and the lowest current DSP wages. The three states with the greatest estimated impacts – Louisiana, Alabama, and Mississippi – all have minimum wages of \$7.25 per hour and have the three lowest average wages for the home health and personal care aide classification (\$9.52, \$10.08, and \$10.35, respectively). The three jurisdictions with the smallest estimated impacts – the District of Columbia, Washington and Massachusetts – have minimum wages of at least \$12.75 and have some of the highest current wages. Since the District of Columbia already had a \$15 minimum wage, the model does not produce any estimated increase.

Figure 13 lists the average estimated impact of a \$15 federal minimum wage on first-line supervisor wages.

Figure 13: Estimated Impact of \$15 Federal Minimum Wage on First-Line Supervisor Wages, by State

State	Increase to DSP Wages	State	Increase to DSP Wages	State	Increase to DSP Wages
Alabama	17.0%	Kentucky	15.9%	North Dakota	15.9%
Alaska	3.2%	Louisiana	13.1%	Ohio	13.1%
Arizona	4.9%	Maine	2.8%	Oklahoma	2.8%
Arkansas	13.4%	Maryland	5.0%	Oregon	5.0%
California	1.7%	Massachusetts	1.4%	Pennsylvania	1.4%
Colorado	3.7%	Michigan	7.4%	Rhode Island	7.4%
Connecticut	2.1%	Minnesota	4.3%	South Carolina	4.3%
Delaware	3.6%	Mississippi	23.2%	South Dakota	23.2%
DC	0.0%	Missouri	8.6%	Tennessee	8.6%
Florida	7.3%	Montana	11.4%	Texas	11.4%
Georgia	8.6%	Nebraska	12.2%	Utah	12.2%
Hawaii	5.4%	Nevada	8.5%	Vermont	8.5%
Idaho	12.8%	New Hampshire	6.1%	Virginia	6.1%
Illinois	9.5%	New Jersey	3.1%	Washington	3.1%
Indiana	12.4%	New Mexico	12.6%	West Virginia	12.6%
Iowa	15.3%	New York	2.0%	Wisconsin	2.0%
Kansas	11.3%	North Carolina	9.8%	Wyoming	9.8%

Given the higher current wages paid to supervisors, the estimated increases are much lower than the impacts on DSP wages.

Estimating the Payroll Share

After estimating the increased payroll-related expense, this figure must be put into the context of providers’ overall expenses. There is not a standardized national cost report for I/DD service providers as there is for some other provider types, such as Medicare-certified home health agencies. Lacking state-specific data regarding the payroll share, HMA-Burns devised a common set of assumptions to apply across all states.

To estimate the payroll share, HMA-Burns considered rate models developed as part of rate studies for I/DD services in several states. Rate models were used if the specific DSP wage assumption cost could be identified. This included time that DSPs spend on non-billable activities (often referred to as productivity adjustments) since this is part of the DSP wage expense. If a rate model combined this factor with other expenses (as part of a ‘program support’ factor, for example), it could not be included in the analysis.

HMA-Burns identified rate studies in 11 states – Arizona, California, Georgia, Hawaii, Maine, Minnesota, Mississippi, Nebraska, New Mexico, Oregon, and Virginia – that were completed by four different consulting firms. Within each rate study, the rate models were identified for the three DSP-provided services that typically comprise the largest spending amounts: group home, in-home, and day program. For each identified rate model, the DSP wage assumption (inclusive of productivity adjustments) plus Social Security and Medicare payroll taxes (7.65 percent of wages) and unemployment insurance and workers’ compensation (assumed to total 3.00 percent) were compared to the total rate. When there were multiple rate models for the same service (for group home services, for example, there could be different models based on home size and participant acuity), HMA-Burns calculated a weighted average if utilization detail was available; otherwise, an unweighted average was calculated. The same analysis was performed for supervisor wages although this only applied to the handful of states where supervisor costs were specifically identified within the rate model. Figure 14 presents the unweighted average of DSP and supervisor payroll expenses as a percentage of total costs from these rate models. Since the payroll share varies somewhat from service to service, HMA-Burns established a weighted average that assumes group home services account for 60 percent of spending amongst these three services and that both in-home and day program services account for 20 percent. This results in an estimated payroll share of 60 percent for DSPs and 10 percent for supervisors.

Figure 14: Estimated DSP and Supervisor Payroll Costs as a Percent of Total Costs, by Service

Service	DSPs	Supervisors
Group Home	63%	11%
In-Home	60%	10%
Day Program	53%	7%

Estimating Total Spending

Medicaid-funded HCBS for individuals with I/DD may be authorized under a number of different authorities, including Sections 1915(c) and 1115 waivers and Sections 1915(i) and 1915(k) state plan options. These programs may be limited to individuals with I/DD or may cover multiple populations. As a result, there is not a single, reliable source of data regarding HCBS spending on services for individuals with I/DD. To establish state-by-state spending baselines, HMA-Burns relied on two primary data sources:

- The Centers for Medicare and Medicaid Services’ Long Term Services and Supports Annual Expenditures report.¹⁶ The data reflects spending through 1915(c) and 1915(i) authorities as reported through CMS-64 forms that states use to report actual Medicaid spending. The most recent publication reflects fiscal year 2018.
- The University of Minnesota’s Residential Information Systems Project (RISP).¹⁷ This report includes a variety of information regarding long-term services and supports for individuals with I/DD, including spending data, based on an annual survey of states. The most recent report reflects fiscal year 2017.

This analysis relies primarily on fiscal year 2018 data from the CMS report. There are a number of states for which the CMS report could not be used, however. For example, the report does not include spending for states that deliver services through an 1115 waiver authority, such as Arizona, Rhode Island, and Vermont, or through a managed care arrangement, such as Kansas and North Carolina. In these

circumstances, this analysis generally uses RISP’s fiscal year 2017 data. For a few states, neither of these sources produced reasonable estimates and an alternative source was used. Figure 15 reports the spending baseline figures used for each state.

Figure 15: Baseline Spending Data on I/DD Services, by State
 (in Millions, from CMS’ Fiscal Year 2018 Spending Report Unless Otherwise Noted)

State	Increase to DSP Wages	State	Increase to DSP Wages	State	Increase to DSP Wages
Alabama	\$353.5	Kentucky	\$666.3	North Dakota	\$197.5
Alaska	\$189.4	Louisiana	\$469.3	Ohio	\$1,803.4
Arizona ^a	\$982.5	Maine	\$395.4	Oklahoma	\$302.9
Arkansas	\$235.5	Maryland	\$956.6	Oregon ^d	\$518.0
California	\$4,044.9	Massachusetts	\$1,472.2	Pennsylvania	\$3,064.3
Colorado	\$522.4	Michigan ^b	\$1,437.6	Rhode Island ^a	\$209.2
Connecticut	\$1,018.7	Minnesota	\$1,374.5	South Carolina	\$375.2
Delaware	\$139.6	Mississippi	\$117.8	South Dakota	\$126.8
DC	\$241.9	Missouri	\$925.2	Tennessee	\$683.7
Florida	\$1,084.5	Montana	\$113.3	Texas	\$1,532.4
Georgia	\$647.3	Nebraska	\$316.1	Utah	\$268.2
Hawaii	\$129.9	Nevada	\$98.2	Vermont ^a	\$198.0
Idaho	\$247.8	New Hampshire ^c	\$228.7	Virginia	\$911.7
Illinois	\$890.5	New Jersey ^a	\$1,047.9	Washington	\$655.3
Indiana	\$832.5	New Mexico	\$380.9	West Virginia	\$304.2
Iowa ^a	\$565.2	New York	\$5,938.2	Wisconsin	\$789.3
Kansas ^a	\$489.9	North Carolina	\$1,063.8	Wyoming	\$105.5
^a Estimate from fiscal year 2017 RISP data.			^c Estimate from fiscal year 2016 CMS data.		
^b Estimate from fiscal year 2016 RISP data.			^d Estimate from HMA-Burns analysis of 2018 spending data.		

Across the country, state and federal Medicaid spending on services for individuals with I/DD nationwide totaled nearly \$42 billion. To account for spending growth since this period, HMA-Burns reviewed CMS’ Long Term Services and Supports Annual Expenditures reports between 2013 and 2018. Given issues with some state-level figures such as those discussed above, HMA-Burns considered aggregated figures, finding that national spending during this period grew by about 4.1 percent annually. HMA-Burns therefore assumed this growth rate for four years, adding a total of 17.44 percent. Since there is wide variability in spending trends across the states, this growth factor was only applied to total estimates. That is, the state-level figures reflect the spending baselines reported in Figure 15, but the national total has been inflated to account for estimated spending growth since 2018.

Section III: Results, Limitations, and Conclusions

Building on the data sources and methodologies described in the previous section, HMA-Burns developed state-by-state estimates of the additional costs that providers would incur to accommodate a federal minimum wage of \$15 per hour. These estimates should be viewed as presenting the magnitude of these costs increases, but actual costs will vary based on state-specific factors.

Estimates

Based on the payroll increase, payroll share, and baseline spending figures detailed in the previous section, Figure 16 presents the total estimated increase in provider costs due to higher DSP and supervisor costs.

Figure 16: Estimated Increase in Providers' DSP and Supervisor Expenses at \$15 Minimum Wage and Cost (in millions) to Fully Implemented, by State

State	% Cost Inc.	\$ Cost Inc.	FMAP	State Share	State	% Cost Inc.	\$ Cost Inc.	FMAP	State Share
Alabama	44.1%	\$155.9	72.37%	\$43.1	Montana	24.6%	\$27.9	64.90%	\$9.8
Alaska	8.5%	\$16.0	50.00%	\$8.0	Nebraska	23.2%	\$73.4	57.80%	\$31.0
Arizona	13.0%	\$127.4	70.01%	\$38.2	Nevada	26.8%	\$26.3	62.59%	\$9.8
Arkansas	27.0%	\$63.5	71.62%	\$18.0	New Hampshire	22.0%	\$50.4	50.00%	\$25.2
California	6.5%	\$263.5	50.00%	\$131.7	New Jersey	13.6%	\$142.3	50.00%	\$71.1
Colorado	9.9%	\$51.5	50.00%	\$25.8	New Mexico	30.1%	\$114.6	73.71%	\$30.1
Connecticut	10.3%	\$105.3	50.00%	\$52.7	New York	8.4%	\$501.2	50.00%	\$250.6
Delaware	25.5%	\$35.6	57.72%	\$15.1	North Carolina	37.1%	\$394.5	67.65%	\$127.6
DC	0.0%	\$0.0	70.00%	\$0.0	North Dakota	12.0%	\$23.7	53.59%	\$11.0
Florida	27.8%	\$301.6	61.03%	\$117.5	Ohio	29.4%	\$530.3	64.10%	\$190.4
Georgia	34.7%	\$224.6	66.85%	\$74.4	Oklahoma	39.0%	\$118.2	68.31%	\$37.4
Hawaii	16.0%	\$20.8	53.64%	\$9.6	Oregon	9.5%	\$49.0	60.22%	\$19.5
Idaho	27.3%	\$67.7	70.21%	\$20.2	Pennsylvania	28.5%	\$872.2	52.68%	\$412.7
Illinois	19.2%	\$170.8	51.09%	\$83.5	Rhode Island	12.7%	\$26.6	54.88%	\$12.0
Indiana	32.2%	\$268.1	66.30%	\$90.4	South Carolina	35.7%	\$134.0	70.75%	\$39.2
Iowa	23.4%	\$132.5	62.14%	\$50.1	South Dakota	20.6%	\$26.1	58.69%	\$10.8
Kansas	36.4%	\$178.5	60.16%	\$71.1	Tennessee	37.5%	\$256.7	66.36%	\$86.3
Kentucky	25.4%	\$169.5	72.75%	\$46.2	Texas	42.1%	\$645.2	60.80%	\$252.9
Louisiana	47.0%	\$220.4	68.02%	\$70.5	Utah	23.9%	\$64.0	66.83%	\$21.2
Maine	10.6%	\$41.7	64.00%	\$15.0	Vermont	9.6%	\$18.9	56.47%	\$8.2
Maryland	14.9%	\$142.2	50.00%	\$71.1	Virginia	35.4%	\$322.4	50.00%	\$161.2
Massachusetts	4.6%	\$68.3	50.00%	\$34.2	Washington	3.9%	\$25.6	50.00%	\$12.8
Michigan	23.0%	\$330.5	65.48%	\$114.1	West Virginia	36.4%	\$110.7	74.68%	\$28.0
Minnesota	15.8%	\$217.6	50.51%	\$107.7	Wisconsin	29.1%	\$229.6	59.88%	\$92.1
Mississippi	43.5%	\$51.3	78.31%	\$11.1	Wyoming	22.7%	\$23.9	50.00%	\$12.0
Missouri	25.6%	\$237.0	66.36%	\$79.7	Total		\$8,469.5		\$3,362.3

A \$15 minimum wage is projected to increase I/DD service providers' costs by more than 40 percent in Louisiana, Alabama, Mississippi, and Texas, all states with a \$7.25 minimum wage. At the other end of the range, providers' costs are estimated to increase by less than 5 percent in Washington DC, Washington, and Massachusetts, states with minimum wages of at least \$12.75. The nationwide increase exceeds 20 percent.

At 2018 spending levels, the cost to Medicaid to cover providers' increased costs is \$8.5 billion. Based on fiscal year 2022 federal medical assistance percentages (FMAPs) – excluding the temporary 6.2 percent increase in the FMAP enacted during the Covid-19 pandemic and any other enhanced FMAPs that states may be receiving for some portion of this spending (for example, the additional six percent for services delivered through a Section 1915(k) state plan option) – the states' share of this cost would be \$3.4 billion. At 2022 spending levels, the estimated cost totals \$9.9 billion with a state share of \$3.9 billion.

Appendix A includes the results of this analysis at lower potential federal minimum wages (for example, the impacts if the federal minimum wage was increased to \$11 per hour).

Limitations

This analysis quantifies the magnitude of the impact that a \$15 minimum wage would have on I/DD providers' costs. The analysis is, however, subject to several limitations.

The analysis does not address the adequacy of current DSP wages. The analysis does not purport to suggest the 'right' wage for DSPs and supervisors. Rather, it only seeks to estimate the impact of adjusting wages in response to any changes to the minimum wage. Many providers and I/DD system stakeholders would argue, however, that current DSP wages are too low and should be increased irrespective of changes to the federal minimum wage. Some stakeholders have suggested that an appropriate DSP wage benchmark is 150 percent of the minimum wage suggesting that, if the minimum wage is \$15 per hour, the appropriate DSP wage would be \$22.50. Establishing a DSP wage floor of \$22.50 would increase Medicaid costs by nearly \$22 billion.

The analysis does not address the adequacy of current provider payment rates. As observed earlier, the analysis is very sensitive to a state's current minimum wage since the payroll increase formula measures current wages against the applicable minimum wage to estimate a new wage at a new minimum. HMA-Burns recognizes there are a number of states in which the minimum wage has increased, but providers' rates have not been increased commensurately. This analysis does not account for these circumstances or any similar existing deficiencies in payment rates. Rather, it seeks to estimate new costs that providers would incur if the federal minimum wage increase without consideration of whether existing costs are adequately covered.

Baseline spending amounts are dated and do not differentiate between services. The analysis relies on expenditures from 2018 to establish baseline spending levels. Since that time, spending on services for individuals with I/DD has increased in a number of states. As discussed above, the analysis applies estimated spending growth at the national level but does not adjust state-level figures, so these estimates are generally understated. The baseline spending figures do not affect the estimated increases in provider costs (that is, the payroll increase and payroll share figures), however, so these figures suggest the magnitude of the cost increase that a given state would experience. Additionally, spending totals do not

differentiate between services that are likely to experience varying cost increases. For example, DSPs who provide employment supports typically earn more than DSPs providing residential or day habilitation services. As a result, cost increases may be overstated for some services (such as employment supports) but understated for other services.

In short, this analysis provides a comprehensive evaluation of the total costs that providers of services for individuals with I/DD will incur if the federal minimum wage increases. As demonstrated in this report, the magnitude of these impacts will vary by state based on each state's current minimum wage and DSP wage levels. However, the state-by-state estimates do not represent recommendations for changes to the rates for specific services. Rather, any changes to provider payment rates should be based on a service-by-service analysis of current and future payroll expenses conducted in concert with service providers.

Conclusion

ANCOR's 2017 report on the DSP workforce found a system in crisis, noting low wages and scant benefits, the lack of a career ladder, a dearth of useful data, and a lack of public awareness.¹⁸ These challenges have only been exacerbated by the Covid-19 pandemic. For example, as part of a survey conducted in April and May 2020, 42 percent of 9,000 responding DSPs reported they know a DSP who had left their job due to the pandemic.¹⁹

Although not a panacea for all of the industry's challenges, a \$15 federal minimum wage has the potential to increase the earnings of hundreds of thousands of DSPs. However, DSPs will not experience the full effects of increased wages unless provider payment rates are increased. Federal and state investment in payment rates is therefore critical in ensuring that DSPs receive the benefits of an increased minimum wage.

Meeting the present and future needs of individuals with I/DD with a range of functional abilities, including those who experience complex physical or behavioral health needs, requires a stable, supported, and sustainable workforce. The integrity of the long-term services and supports system, and the ability to achieve positive outcomes for participants, depends on it.

End Notes

- ¹ Larson, S.A., Eschenbacher, H.J., Taylor, B., Pettingell, S., Sowers, M., & Bourne, M.L. (2020). *In-home and residential long-term supports and services for persons with intellectual or developmental disabilities: Status and trends through 2017*. Minneapolis: University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration.
- ² <https://www.bls.gov/oes/>. As discussed in Section II, the BLS does not have a standard occupational classification for DSPs, but groups them into the home health and personal care aides classification.
- ³ Larson, S.A., Eschenbacher, H.J., Taylor, B., Pettingell, S., Sowers, M., & Bourne, M.L. (2020). *In-home and residential long-term supports and services for persons with intellectual or developmental disabilities: Status and trends through 2017*. Minneapolis: University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration.
- ⁴ Public Homecare Institute (2018). *The Direct Care Workforce: Year in Review*.
<file:///C:/Users/vbradley/Downloads/Direct-Care-Workforce-Year-in-Review-2018-PHI.pdf>.
- ⁵ Heller T. People with intellectual and developmental disabilities growing old: an overview. *Impact*. 2010;23(1).
- ⁶ President's Committee on People with Intellectual Disabilities. (2017). *Report to the President 2017. America's Direct Support Workforce Crisis: Effects on People with Intellectual Disabilities, Families, communities and the US Economy*: https://acl.gov/sites/default/files/programs/2018-02/2017%20PCPID%20Full%20Report_0.PDF.
- ⁷ National Core Indicators. (2018). *National Core Indicators 2019 Staff Stability Survey Report*:
https://www.nationalcoreindicators.org/upload/core-indicators/2019StaffStabilitySurveyReport_FINAL_1_6_21.pdf.
- ⁸ Minimum wage provisions of the FLSA are currently codified at 29 U.S.C. § 206.
- ⁹ 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.
- ¹⁰ United States Department of Labor. N.d. *Changes in Basic Minimum Wages in Non-Farm Employment Under State Law: Selected Years 1968 to 2020*. Retrieved February 2021 from
<https://www.dol.gov/agencies/whd/state/minimum-wage/history>.
- ¹¹ 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>.

¹² 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>.

¹³ 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.eri.com/pdf/How_to_Manage_Salary_Compression.pdf.

¹⁴ 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>.

¹⁵ National Core Indicators. (2018). National Core Indicators 2019 Staff Stability Survey Report: https://www.nationalcoreindicators.org/upload/core-indicators/2019StaffStabilitySurveyReport_FINAL_1_6_21.pdf.

¹⁶ <https://www.medicaid.gov/medicaid/long-term-services-supports/reports-evaluations/index.html>

¹⁷ Larson, S.A., Eschenbacher, H.J., Taylor, B., Pettingell, S., Sowers, M., & Bourne, M.L. (2020). *In-home and residential long-term supports and services for persons with intellectual or developmental disabilities: Status and trends through 2017*. Minneapolis: University of Minnesota, Research and Training Center on Community Living, Institute on Community Integration.

¹⁸ American Network of Community Options and Resources. (2017). *Addressing the Disability Services Workforce Crisis of the 21st Century*. Retrieved June 2021 from <https://cqrcengage.com/ancor/file/ZuL1zlyZ3mE/Workforce%20White%20Paper%20-%20Final%20-%20hyperlinked%20version.pdf>.

¹⁹ Hewitt, A., Pettingell, S., Kramme, J., Smith, J., Dean, K., & Kleist, B. (2020). The Direct Support Workforce and COVID-19: National Survey Report 2020. Minneapolis: Institute on Community Integration, University of Minnesota.

Appendix A-1: Estimated Increase in Providers' DSP and Supervisor Expenses at \$15 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	70.7%	60%	\$149,932,446	17.0%	10%	\$6,016,528	\$155,948,975	44.1%	72.37%	\$43,088,702
Alaska	\$189,373,941	13.6%	60%	\$15,441,551	3.2%	10%	\$605,997	\$16,047,548	8.5%	50.00%	\$8,023,774
Arizona	\$982,472,685	20.8%	60%	\$122,553,643	4.9%	10%	\$4,833,766	\$127,387,408	13.0%	70.01%	\$38,203,484
Arkansas	\$235,543,311	42.7%	60%	\$60,402,727	13.4%	10%	\$3,144,503	\$63,547,230	27.0%	71.62%	\$18,034,704
California	\$4,044,908,007	10.6%	60%	\$256,528,066	1.7%	10%	\$6,957,242	\$263,485,308	6.5%	50.00%	\$131,742,654
Colorado	\$522,447,318	15.8%	60%	\$49,559,353	3.7%	10%	\$1,943,504	\$51,502,857	9.9%	50.00%	\$25,751,428
Connecticut	\$1,018,691,105	16.9%	60%	\$103,234,157	2.1%	10%	\$2,088,317	\$105,322,473	10.3%	50.00%	\$52,661,237
Delaware	\$139,590,524	42.0%	60%	\$35,134,935	3.6%	10%	\$505,318	\$35,640,253	25.5%	57.72%	\$15,068,699
DC	\$241,892,500	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.00%	\$0
Florida	\$1,084,548,133	45.1%	60%	\$293,673,943	7.3%	10%	\$7,938,892	\$301,612,836	27.8%	61.03%	\$117,538,522
Georgia	\$647,324,952	56.4%	60%	\$218,977,085	8.6%	10%	\$5,586,414	\$224,563,499	34.7%	66.85%	\$74,442,800
Hawaii	\$129,861,581	25.7%	60%	\$20,048,031	5.4%	10%	\$705,148	\$20,753,179	16.0%	53.64%	\$9,621,174
Idaho	\$247,845,104	43.4%	60%	\$64,494,253	12.8%	10%	\$3,182,331	\$67,676,584	27.3%	70.21%	\$20,160,854
Illinois	\$890,537,231	30.4%	60%	\$162,327,126	9.5%	10%	\$8,486,820	\$170,813,946	19.2%	51.09%	\$83,545,101
Indiana	\$832,484,133	51.6%	60%	\$257,787,037	12.4%	10%	\$10,322,803	\$268,109,840	32.2%	66.30%	\$90,353,016
Iowa	\$565,173,523	36.5%	60%	\$123,806,912	15.3%	10%	\$8,652,807	\$132,459,719	23.4%	62.14%	\$50,149,250
Kansas	\$489,936,267	58.8%	60%	\$172,967,100	11.3%	10%	\$5,541,179	\$178,508,279	36.4%	60.16%	\$71,117,698
Kentucky	\$666,344,454	39.8%	60%	\$158,963,133	15.9%	10%	\$10,581,550	\$169,544,683	25.4%	72.75%	\$46,200,926
Louisiana	\$469,259,617	76.1%	60%	\$214,292,097	13.1%	10%	\$6,133,223	\$220,425,320	47.0%	68.02%	\$70,492,017
Maine	\$395,422,094	17.1%	60%	\$40,641,483	2.8%	10%	\$1,103,228	\$41,744,711	10.6%	64.00%	\$15,028,096
Maryland	\$956,598,246	23.9%	60%	\$137,405,772	5.0%	10%	\$4,792,557	\$142,198,329	14.9%	50.00%	\$71,099,165
Massachusetts	\$1,472,158,456	7.5%	60%	\$66,335,460	1.4%	10%	\$2,002,136	\$68,337,596	4.6%	50.00%	\$34,168,798
Michigan	\$1,437,648,930	37.1%	60%	\$319,848,134	7.4%	10%	\$10,667,355	\$330,515,489	23.0%	65.48%	\$114,093,947
Minnesota	\$1,374,482,111	25.7%	60%	\$211,697,735	4.3%	10%	\$5,869,039	\$217,566,773	15.8%	50.51%	\$107,673,796
Mississippi	\$117,788,679	68.7%	60%	\$48,531,292	23.2%	10%	\$2,737,409	\$51,268,701	43.5%	78.31%	\$11,120,181
Missouri	\$925,177,878	41.3%	60%	\$229,037,035	8.6%	10%	\$7,984,285	\$237,021,321	25.6%	66.36%	\$79,733,972
Montana	\$113,338,718	39.2%	60%	\$26,623,265	11.4%	10%	\$1,286,394	\$27,909,660	24.6%	64.90%	\$9,796,290

Appendix A-1: Estimated Increase in Providers' DSP and Supervisor Expenses at \$15 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	36.7%	60%	\$69,520,583	12.2%	10%	\$3,847,501	\$73,368,084	23.2%	57.80%	\$30,961,332
Nevada	\$98,164,421	43.3%	60%	\$25,473,667	8.5%	10%	\$831,453	\$26,305,120	26.8%	62.59%	\$9,840,745
New Hampshire	\$228,721,706	35.7%	60%	\$48,992,189	6.1%	10%	\$1,395,202	\$50,387,392	22.0%	50.00%	\$25,193,696
New Jersey	\$1,047,872,743	22.1%	60%	\$139,073,670	3.1%	10%	\$3,206,491	\$142,280,161	13.6%	50.00%	\$71,140,081
New Mexico	\$380,908,202	48.0%	60%	\$109,792,980	12.6%	10%	\$4,803,252	\$114,596,233	30.1%	73.71%	\$30,127,350
New York	\$5,938,241,849	13.7%	60%	\$489,192,364	2.0%	10%	\$11,995,249	\$501,187,612	8.4%	50.00%	\$250,593,806
North Carolina	\$1,063,757,581	60.2%	60%	\$384,101,587	9.8%	10%	\$10,403,549	\$394,505,137	37.1%	67.65%	\$127,622,412
North Dakota	\$197,506,131	18.7%	60%	\$22,124,637	7.9%	10%	\$1,566,224	\$23,690,861	12.0%	53.59%	\$10,994,928
Ohio	\$1,803,372,051	47.0%	60%	\$508,009,907	12.4%	10%	\$22,325,746	\$530,335,653	29.4%	64.10%	\$190,390,499
Oklahoma	\$302,863,927	62.1%	60%	\$112,919,787	17.3%	10%	\$5,242,575	\$118,162,361	39.0%	68.31%	\$37,445,652
Oregon	\$518,000,000	15.2%	60%	\$47,117,280	3.7%	10%	\$1,895,880	\$49,013,160	9.5%	60.22%	\$19,497,435
Pennsylvania	\$3,064,331,516	46.1%	60%	\$847,042,518	8.2%	10%	\$25,188,805	\$872,231,323	28.5%	52.68%	\$412,739,862
Rhode Island	\$209,184,132	20.7%	60%	\$25,930,465	3.2%	10%	\$677,757	\$26,608,222	12.7%	54.88%	\$12,005,630
South Carolina	\$375,220,336	57.6%	60%	\$129,766,201	11.2%	10%	\$4,202,468	\$133,968,669	35.7%	70.75%	\$39,185,836
South Dakota	\$126,846,643	32.7%	60%	\$24,910,144	9.7%	10%	\$1,234,218	\$26,144,362	20.6%	58.69%	\$10,800,236
Tennessee	\$683,684,442	60.2%	60%	\$246,741,715	14.5%	10%	\$9,920,261	\$256,661,977	37.5%	66.36%	\$86,341,089
Texas	\$1,532,375,972	68.4%	60%	\$628,519,329	10.9%	10%	\$16,672,251	\$645,191,579	42.1%	60.80%	\$252,915,099
Utah	\$268,191,765	37.1%	60%	\$59,635,121	16.2%	10%	\$4,331,297	\$63,966,418	23.9%	66.83%	\$21,217,661
Vermont	\$198,041,518	15.5%	60%	\$18,394,096	2.6%	10%	\$520,849	\$18,914,946	9.6%	56.47%	\$8,233,676
Virginia	\$911,721,026	57.8%	60%	\$316,239,555	6.7%	10%	\$6,135,883	\$322,375,438	35.4%	50.00%	\$161,187,719
Washington	\$655,310,615	6.4%	60%	\$25,085,290	0.9%	10%	\$563,567	\$25,648,858	3.9%	50.00%	\$12,824,429
West Virginia	\$304,222,399	57.8%	60%	\$105,431,315	17.3%	10%	\$5,250,879	\$110,682,193	36.4%	74.68%	\$28,024,731
Wisconsin	\$789,266,753	46.9%	60%	\$222,147,020	9.4%	10%	\$7,411,215	\$229,558,235	29.1%	59.88%	\$92,098,764
Wyoming	\$105,538,808	36.1%	60%	\$22,840,709	10.4%	10%	\$1,101,825	\$23,942,534	22.7%	50.00%	\$11,971,267
Total	\$41,663,837,925							\$8,469,639,045	20.3%		\$3,362,264,220
Est. FY22 Total (w/ 17.44% Growth)								\$9,946,443,505			\$3,948,523,773

Appendix A-2: Estimated Increase in Providers' DSP and Supervisor Expenses at \$14 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	60.7%	60%	\$128,765,014	13.6%	10%	\$4,804,032	\$133,569,045	37.8%	72.37%	\$36,905,127
Alaska	\$189,373,941	9.0%	60%	\$10,226,193	2.1%	10%	\$401,473	\$10,627,666	5.6%	50.00%	\$5,313,833
Arizona	\$982,472,685	13.3%	60%	\$78,224,475	2.7%	10%	\$2,652,676	\$80,877,152	8.2%	70.01%	\$24,255,058
Arkansas	\$235,543,311	33.8%	60%	\$47,810,581	9.8%	10%	\$2,308,324	\$50,118,906	21.3%	71.62%	\$14,223,745
California	\$4,044,908,007	4.7%	60%	\$114,794,489	0.6%	10%	\$2,346,047	\$117,140,536	2.9%	50.00%	\$58,570,268
Colorado	\$522,447,318	9.7%	60%	\$30,312,393	2.0%	10%	\$1,055,344	\$31,367,737	6.0%	50.00%	\$15,683,869
Connecticut	\$1,018,691,105	10.3%	60%	\$63,016,232	1.0%	10%	\$1,018,691	\$64,034,923	6.3%	50.00%	\$32,017,461
Delaware	\$139,590,524	33.7%	60%	\$28,191,702	2.4%	10%	\$336,413	\$28,528,116	20.4%	57.72%	\$12,061,687
DC	\$241,892,500	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.00%	\$0
Florida	\$1,084,548,133	36.8%	60%	\$239,598,374	5.3%	10%	\$5,693,878	\$245,292,251	22.6%	61.03%	\$95,590,390
Georgia	\$647,324,952	47.6%	60%	\$184,953,685	6.8%	10%	\$4,408,283	\$189,361,968	29.3%	66.85%	\$62,773,493
Hawaii	\$129,861,581	19.1%	60%	\$14,882,137	3.8%	10%	\$493,474	\$15,375,611	11.8%	53.64%	\$7,128,133
Idaho	\$247,845,104	36.0%	60%	\$53,504,801	10.0%	10%	\$2,488,365	\$55,993,166	22.6%	70.21%	\$16,680,364
Illinois	\$890,537,231	22.9%	60%	\$122,413,248	6.9%	10%	\$6,162,518	\$128,575,766	14.4%	51.09%	\$62,886,407
Indiana	\$832,484,133	43.3%	60%	\$216,179,480	9.6%	10%	\$7,991,848	\$224,171,328	26.9%	66.30%	\$75,545,737
Iowa	\$565,173,523	29.5%	60%	\$100,069,624	12.0%	10%	\$6,787,734	\$106,857,358	18.9%	62.14%	\$40,456,196
Kansas	\$489,936,267	49.9%	60%	\$146,716,315	8.8%	10%	\$4,326,137	\$151,042,452	30.8%	60.16%	\$60,175,313
Kentucky	\$666,344,454	32.9%	60%	\$131,616,357	12.5%	10%	\$8,355,959	\$139,972,316	21.0%	72.75%	\$38,142,456
Louisiana	\$469,259,617	65.6%	60%	\$184,700,585	10.1%	10%	\$4,744,215	\$189,444,800	40.4%	68.02%	\$60,584,447
Maine	\$395,422,094	10.3%	60%	\$24,413,360	1.1%	10%	\$415,193	\$24,828,553	6.3%	64.00%	\$8,938,279
Maryland	\$956,598,246	16.7%	60%	\$95,621,561	3.2%	10%	\$3,061,114	\$98,682,675	10.3%	50.00%	\$49,341,338
Massachusetts	\$1,472,158,456	2.9%	60%	\$25,968,875	0.4%	10%	\$588,863	\$26,557,739	1.8%	50.00%	\$13,278,869
Michigan	\$1,437,648,930	29.1%	60%	\$250,582,208	5.2%	10%	\$7,403,892	\$257,986,101	17.9%	65.48%	\$89,056,802
Minnesota	\$1,374,482,111	18.8%	60%	\$154,876,644	2.7%	10%	\$3,752,336	\$158,628,981	11.5%	50.51%	\$78,505,482
Mississippi	\$117,788,679	58.9%	60%	\$41,633,586	18.9%	10%	\$2,221,494	\$43,855,081	37.2%	78.31%	\$9,512,167
Missouri	\$925,177,878	32.9%	60%	\$182,463,581	6.3%	10%	\$5,837,872	\$188,301,454	20.4%	66.36%	\$63,344,609
Montana	\$113,338,718	31.4%	60%	\$21,346,214	8.5%	10%	\$965,646	\$22,311,860	19.7%	64.90%	\$7,831,463

Appendix A-2: Estimated Increase in Providers' DSP and Supervisor Expenses at \$14 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	28.9%	60%	\$54,762,871	9.2%	10%	\$2,892,739	\$57,655,610	18.2%	57.80%	\$24,330,668
Nevada	\$98,164,421	35.0%	60%	\$20,585,079	6.3%	10%	\$614,509	\$21,199,589	21.6%	62.59%	\$7,930,766
New Hampshire	\$228,721,706	28.7%	60%	\$39,427,048	4.4%	10%	\$1,001,801	\$40,428,849	17.7%	50.00%	\$20,214,424
New Jersey	\$1,047,872,743	15.5%	60%	\$97,452,165	1.9%	10%	\$1,970,001	\$99,422,166	9.5%	50.00%	\$49,711,083
New Mexico	\$380,908,202	39.2%	60%	\$89,498,191	9.6%	10%	\$3,649,101	\$93,147,292	24.5%	73.71%	\$24,488,423
New York	\$5,938,241,849	8.2%	60%	\$292,517,793	1.1%	10%	\$6,235,154	\$298,752,948	5.0%	50.00%	\$149,376,474
North Carolina	\$1,063,757,581	51.1%	60%	\$326,148,074	7.4%	10%	\$7,903,719	\$334,051,793	31.4%	67.65%	\$108,065,755
North Dakota	\$197,506,131	13.9%	60%	\$16,460,161	5.7%	10%	\$1,133,685	\$17,593,846	8.9%	53.59%	\$8,165,304
Ohio	\$1,803,372,051	38.4%	60%	\$415,929,730	9.5%	10%	\$17,114,001	\$433,043,731	24.0%	64.10%	\$155,462,699
Oklahoma	\$302,863,927	52.8%	60%	\$95,929,120	14.1%	10%	\$4,273,410	\$100,202,530	33.1%	68.31%	\$31,754,182
Oregon	\$518,000,000	9.1%	60%	\$28,220,640	1.8%	10%	\$937,580	\$29,158,220	5.6%	60.22%	\$11,599,140
Pennsylvania	\$3,064,331,516	38.2%	60%	\$701,425,484	5.9%	10%	\$18,140,843	\$719,566,327	23.5%	52.68%	\$340,498,786
Rhode Island	\$209,184,132	14.6%	60%	\$18,274,326	2.0%	10%	\$422,552	\$18,696,878	8.9%	54.88%	\$8,436,031
South Carolina	\$375,220,336	48.8%	60%	\$109,751,948	8.7%	10%	\$3,275,674	\$113,027,622	30.1%	70.75%	\$33,060,579
South Dakota	\$126,846,643	25.3%	60%	\$19,217,266	6.5%	10%	\$820,698	\$20,037,964	15.8%	58.69%	\$8,277,683
Tennessee	\$683,684,442	51.1%	60%	\$209,617,650	11.5%	10%	\$7,828,187	\$217,445,837	31.8%	66.36%	\$73,148,780
Texas	\$1,532,375,972	58.6%	60%	\$538,875,334	8.6%	10%	\$13,132,462	\$552,007,797	36.0%	60.80%	\$216,387,056
Utah	\$268,191,765	30.1%	60%	\$48,387,158	12.7%	10%	\$3,411,399	\$51,798,558	19.3%	66.83%	\$17,181,582
Vermont	\$198,041,518	10.4%	60%	\$12,369,673	1.4%	10%	\$279,239	\$12,648,912	6.4%	56.47%	\$5,506,071
Virginia	\$911,721,026	48.9%	60%	\$267,444,246	5.1%	10%	\$4,649,777	\$272,094,023	29.8%	50.00%	\$136,047,012
Washington	\$655,310,615	1.5%	60%	\$5,701,202	0.1%	10%	\$85,190	\$5,786,393	0.9%	50.00%	\$2,893,196
West Virginia	\$304,222,399	48.1%	60%	\$87,798,584	13.2%	10%	\$4,006,609	\$91,805,194	30.2%	74.68%	\$23,245,075
Wisconsin	\$789,266,753	38.9%	60%	\$184,404,284	6.9%	10%	\$5,445,941	\$189,850,225	24.1%	59.88%	\$76,167,910
Wyoming	\$105,538,808	29.2%	60%	\$18,515,728	7.8%	10%	\$827,424	\$19,343,153	18.3%	50.00%	\$9,671,576
Total	\$41,663,837,925							\$6,592,268,996	15.8%		\$2,580,423,251
Est. FY22 Total (w/ 17.44% Growth)								\$7,741,726,748			\$3,030,357,487

Appendix A-3: Estimated Increase in Providers' DSP and Supervisor Expenses at \$13 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	50.7%	60%	\$107,597,581	10.5%	10%	\$3,694,049	\$111,291,630	31.5%	72.37%	\$30,749,877
Alaska	\$189,373,941	5.2%	60%	\$5,874,380	1.2%	10%	\$229,142	\$6,103,522	3.2%	50.00%	\$3,051,761
Arizona	\$982,472,685	5.8%	60%	\$33,895,308	1.0%	10%	\$952,999	\$34,848,306	3.5%	70.01%	\$10,451,007
Arkansas	\$235,543,311	24.9%	60%	\$35,218,436	6.6%	10%	\$1,547,520	\$36,765,956	15.6%	71.62%	\$10,434,178
California	\$4,044,908,007	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Colorado	\$522,447,318	4.0%	60%	\$12,570,082	0.7%	10%	\$370,938	\$12,941,020	2.5%	50.00%	\$6,470,510
Connecticut	\$1,018,691,105	4.4%	60%	\$26,587,838	0.3%	10%	\$285,234	\$26,873,071	2.6%	50.00%	\$13,436,536
Delaware	\$139,590,524	25.4%	60%	\$21,248,470	1.4%	10%	\$199,614	\$21,448,084	15.4%	57.72%	\$9,068,250
DC	\$241,892,500	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.00%	\$0
Florida	\$1,084,548,133	28.5%	60%	\$185,587,877	3.5%	10%	\$3,828,455	\$189,416,332	17.5%	61.03%	\$73,815,544
Georgia	\$647,324,952	38.9%	60%	\$150,969,125	5.2%	10%	\$3,346,670	\$154,315,795	23.8%	66.85%	\$51,155,686
Hawaii	\$129,861,581	12.9%	60%	\$10,020,120	2.3%	10%	\$302,577	\$10,322,697	7.9%	53.64%	\$4,785,602
Idaho	\$247,845,104	28.9%	60%	\$43,035,824	7.5%	10%	\$1,866,274	\$44,902,098	18.1%	70.21%	\$13,376,335
Illinois	\$890,537,231	15.4%	60%	\$82,499,369	4.6%	10%	\$4,051,944	\$86,551,314	9.7%	51.09%	\$42,332,247
Indiana	\$832,484,133	35.0%	60%	\$174,621,872	7.1%	10%	\$5,918,962	\$180,540,834	21.7%	66.30%	\$60,842,261
Iowa	\$565,173,523	23.0%	60%	\$77,824,394	9.0%	10%	\$5,069,607	\$82,894,001	14.7%	62.14%	\$31,383,669
Kansas	\$489,936,267	41.0%	60%	\$120,465,529	6.6%	10%	\$3,253,177	\$123,718,706	25.3%	60.16%	\$49,289,533
Kentucky	\$666,344,454	26.5%	60%	\$105,748,865	9.5%	10%	\$6,330,272	\$112,079,137	16.8%	72.75%	\$30,541,565
Louisiana	\$469,259,617	55.1%	60%	\$155,137,229	7.4%	10%	\$3,467,829	\$158,605,058	33.8%	68.02%	\$50,721,898
Maine	\$395,422,094	4.2%	60%	\$9,988,362	0.1%	10%	\$39,542	\$10,027,904	2.5%	64.00%	\$3,610,046
Maryland	\$956,598,246	9.7%	60%	\$55,387,038	1.7%	10%	\$1,635,783	\$57,022,822	6.0%	50.00%	\$28,511,411
Massachusetts	\$1,472,158,456	0.2%	60%	\$1,766,590	0.0%	10%	\$0	\$1,766,590	0.1%	50.00%	\$883,295
Michigan	\$1,437,648,930	21.0%	60%	\$181,230,024	3.2%	10%	\$4,571,724	\$185,801,748	12.9%	65.48%	\$64,138,763
Minnesota	\$1,374,482,111	12.4%	60%	\$102,096,531	1.5%	10%	\$2,075,468	\$104,171,999	7.6%	50.51%	\$51,554,722
Mississippi	\$117,788,679	49.2%	60%	\$34,735,881	14.8%	10%	\$1,744,450	\$36,480,332	31.0%	78.31%	\$7,912,584
Missouri	\$925,177,878	24.5%	60%	\$135,890,127	4.3%	10%	\$3,941,258	\$139,831,385	15.1%	66.36%	\$47,039,278
Montana	\$113,338,718	23.6%	60%	\$16,075,964	6.0%	10%	\$678,899	\$16,754,863	14.8%	64.90%	\$5,880,957

Appendix A-3: Estimated Increase in Providers' DSP and Supervisor Expenses at \$13 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	21.3%	60%	\$40,308,660	6.4%	10%	\$2,029,660	\$42,338,320	13.4%	57.80%	\$17,866,771
Nevada	\$98,164,421	26.7%	60%	\$15,702,381	4.3%	10%	\$424,070	\$16,126,451	16.4%	62.59%	\$6,032,905
New Hampshire	\$228,721,706	22.2%	60%	\$30,424,561	2.9%	10%	\$672,442	\$31,097,003	13.6%	50.00%	\$15,548,502
New Jersey	\$1,047,872,743	9.4%	60%	\$58,848,533	1.0%	10%	\$995,479	\$59,844,012	5.7%	50.00%	\$29,922,006
New Mexico	\$380,908,202	30.3%	60%	\$69,180,548	6.8%	10%	\$2,590,176	\$71,770,724	18.8%	73.71%	\$18,868,523
New York	\$5,938,241,849	3.4%	60%	\$122,565,312	0.3%	10%	\$2,019,002	\$124,584,314	2.1%	50.00%	\$62,292,157
North Carolina	\$1,063,757,581	42.0%	60%	\$268,130,736	5.4%	10%	\$5,691,103	\$273,821,839	25.7%	67.65%	\$88,581,365
North Dakota	\$197,506,131	9.7%	60%	\$11,447,455	3.9%	10%	\$774,224	\$12,221,680	6.2%	53.59%	\$5,672,081
Ohio	\$1,803,372,051	29.9%	60%	\$323,849,553	6.8%	10%	\$12,298,997	\$336,148,550	18.6%	64.10%	\$120,677,330
Oklahoma	\$302,863,927	43.5%	60%	\$78,956,626	11.1%	10%	\$3,367,847	\$82,324,473	27.2%	68.31%	\$26,088,625
Oregon	\$518,000,000	3.6%	60%	\$11,033,400	0.6%	10%	\$290,080	\$11,323,480	2.2%	60.22%	\$4,504,480
Pennsylvania	\$3,064,331,516	30.2%	60%	\$555,808,450	4.0%	10%	\$12,287,969	\$568,096,420	18.5%	52.68%	\$268,823,226
Rhode Island	\$209,184,132	8.9%	60%	\$11,182,984	1.1%	10%	\$219,643	\$11,402,627	5.5%	54.88%	\$5,144,865
South Carolina	\$375,220,336	39.9%	60%	\$89,737,696	6.6%	10%	\$2,468,950	\$92,206,646	24.6%	70.75%	\$26,970,444
South Dakota	\$126,846,643	18.0%	60%	\$13,668,994	3.8%	10%	\$478,212	\$14,147,206	11.2%	58.69%	\$5,844,211
Tennessee	\$683,684,442	42.1%	60%	\$172,493,585	8.7%	10%	\$5,913,870	\$178,407,455	26.1%	66.36%	\$60,016,268
Texas	\$1,532,375,972	48.9%	60%	\$449,231,340	6.5%	10%	\$9,975,768	\$459,207,108	30.0%	60.80%	\$180,009,186
Utah	\$268,191,765	23.5%	60%	\$37,782,856	9.6%	10%	\$2,566,595	\$40,349,451	15.0%	66.83%	\$13,383,913
Vermont	\$198,041,518	5.8%	60%	\$6,891,845	0.5%	10%	\$102,982	\$6,994,827	3.5%	56.47%	\$3,044,848
Virginia	\$911,721,026	40.0%	60%	\$218,648,936	3.7%	10%	\$3,373,368	\$222,022,304	24.4%	50.00%	\$111,011,152
Washington	\$655,310,615	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
West Virginia	\$304,222,399	38.4%	60%	\$70,165,854	9.5%	10%	\$2,880,986	\$73,046,840	24.0%	74.68%	\$18,495,460
Wisconsin	\$789,266,753	31.0%	60%	\$146,661,548	4.8%	10%	\$3,749,017	\$150,410,565	19.1%	59.88%	\$60,344,719
Wyoming	\$105,538,808	22.8%	60%	\$14,444,041	5.5%	10%	\$581,519	\$15,025,560	14.2%	50.00%	\$7,512,780
Total	\$41,663,837,925							\$4,838,393,062	11.6%		\$1,858,093,335
Est. FY22 Total (w/ 17.44% Growth)								\$5,682,037,096			\$2,182,078,868

Appendix A-4: Estimated Increase in Providers' DSP and Supervisor Expenses at \$12 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	40.8%	60%	\$86,430,148	7.6%	10%	\$2,683,046	\$89,113,195	25.2%	72.37%	\$24,621,976
Alaska	\$189,373,941	2.3%	60%	\$2,567,911	0.5%	10%	\$96,581	\$2,664,491	1.4%	50.00%	\$1,332,246
Arizona	\$982,472,685	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.01%	\$0
Arkansas	\$235,543,311	16.0%	60%	\$22,626,290	3.7%	10%	\$871,510	\$23,497,801	10.0%	71.62%	\$6,668,676
California	\$4,044,908,007	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Colorado	\$522,447,318	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Connecticut	\$1,018,691,105	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Delaware	\$139,590,524	17.1%	60%	\$14,305,237	0.7%	10%	\$93,526	\$14,398,763	10.3%	57.72%	\$6,087,797
DC	\$241,892,500	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.00%	\$0
Florida	\$1,084,548,133	20.2%	60%	\$131,577,379	2.1%	10%	\$2,288,397	\$133,865,776	12.3%	61.03%	\$52,167,493
Georgia	\$647,324,952	30.1%	60%	\$116,945,726	3.7%	10%	\$2,414,522	\$119,360,248	18.4%	66.85%	\$39,567,922
Hawaii	\$129,861,581	7.1%	60%	\$5,516,520	1.1%	10%	\$138,952	\$5,655,472	4.4%	53.64%	\$2,621,877
Idaho	\$247,845,104	22.3%	60%	\$33,087,321	5.3%	10%	\$1,318,536	\$34,405,857	13.9%	70.21%	\$10,249,505
Illinois	\$890,537,231	8.3%	60%	\$44,188,457	2.5%	10%	\$2,253,059	\$46,441,517	5.2%	51.09%	\$22,714,546
Indiana	\$832,484,133	26.6%	60%	\$133,064,264	4.9%	10%	\$4,112,472	\$137,176,736	16.5%	66.30%	\$46,228,560
Iowa	\$565,173,523	16.8%	60%	\$57,071,222	6.2%	10%	\$3,504,076	\$60,575,298	10.7%	62.14%	\$22,933,808
Kansas	\$489,936,267	32.0%	60%	\$94,185,348	4.7%	10%	\$2,317,399	\$96,502,747	19.7%	60.16%	\$38,446,694
Kentucky	\$666,344,454	20.3%	60%	\$81,160,754	6.8%	10%	\$4,544,469	\$85,705,224	12.9%	72.75%	\$23,354,673
Louisiana	\$469,259,617	44.6%	60%	\$125,545,718	5.0%	10%	\$2,341,605	\$127,887,324	27.3%	68.02%	\$40,898,366
Maine	\$395,422,094	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	64.00%	\$0
Maryland	\$956,598,246	3.6%	60%	\$20,719,918	0.6%	10%	\$545,261	\$21,265,179	2.2%	50.00%	\$10,632,590
Massachusetts	\$1,472,158,456	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Michigan	\$1,437,648,930	13.2%	60%	\$113,430,501	1.6%	10%	\$2,328,991	\$115,759,492	8.1%	65.48%	\$39,960,177
Minnesota	\$1,374,482,111	6.6%	60%	\$54,182,085	0.6%	10%	\$824,689	\$55,006,774	4.0%	50.51%	\$27,222,853
Mississippi	\$117,788,679	39.4%	60%	\$27,838,176	11.1%	10%	\$1,305,099	\$29,143,275	24.7%	78.31%	\$6,321,176
Missouri	\$925,177,878	16.3%	60%	\$90,204,843	2.5%	10%	\$2,349,952	\$92,554,795	10.0%	66.36%	\$31,135,433
Montana	\$113,338,718	15.9%	60%	\$10,798,913	3.8%	10%	\$431,821	\$11,230,734	9.9%	64.90%	\$3,941,988

Appendix A-4: Estimated Increase in Providers' DSP and Supervisor Expenses at \$12 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	14.2%	60%	\$26,973,607	4.0%	10%	\$1,277,231	\$28,250,838	8.9%	57.80%	\$11,921,854
Nevada	\$98,164,421	18.4%	60%	\$10,813,793	2.7%	10%	\$267,007	\$11,080,800	11.3%	62.59%	\$4,145,327
New Hampshire	\$228,721,706	16.1%	60%	\$22,080,793	1.8%	10%	\$409,412	\$22,490,205	9.8%	50.00%	\$11,245,103
New Jersey	\$1,047,872,743	3.9%	60%	\$24,268,733	0.3%	10%	\$272,447	\$24,541,180	2.3%	50.00%	\$12,270,590
New Mexico	\$380,908,202	21.4%	60%	\$48,862,904	4.3%	10%	\$1,637,905	\$50,500,810	13.3%	73.71%	\$13,276,663
New York	\$5,938,241,849	0.2%	60%	\$7,125,890	0.0%	10%	\$0	\$7,125,890	0.1%	50.00%	\$3,562,945
North Carolina	\$1,063,757,581	32.9%	60%	\$210,177,223	3.6%	10%	\$3,797,615	\$213,974,838	20.1%	67.65%	\$69,220,860
North Dakota	\$197,506,131	6.1%	60%	\$7,228,724	2.4%	10%	\$477,965	\$7,706,689	3.9%	53.59%	\$3,576,675
Ohio	\$1,803,372,051	21.4%	60%	\$231,877,578	4.4%	10%	\$7,970,904	\$239,848,483	13.3%	64.10%	\$86,105,605
Oklahoma	\$302,863,927	34.1%	60%	\$62,020,475	8.3%	10%	\$2,504,685	\$64,525,160	21.3%	68.31%	\$20,448,023
Oregon	\$518,000,000	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	60.22%	\$0
Pennsylvania	\$3,064,331,516	22.3%	60%	\$410,191,417	2.5%	10%	\$7,722,115	\$417,913,532	13.6%	52.68%	\$197,756,683
Rhode Island	\$209,184,132	3.8%	60%	\$4,706,643	0.3%	10%	\$69,031	\$4,775,674	2.3%	54.88%	\$2,154,784
South Carolina	\$375,220,336	31.0%	60%	\$69,723,443	4.7%	10%	\$1,767,288	\$71,490,731	19.1%	70.75%	\$20,911,039
South Dakota	\$126,846,643	11.4%	60%	\$8,661,089	1.8%	10%	\$228,324	\$8,889,413	7.0%	58.69%	\$3,672,216
Tennessee	\$683,684,442	33.0%	60%	\$135,410,541	6.2%	10%	\$4,211,496	\$139,622,037	20.4%	66.36%	\$46,968,853
Texas	\$1,532,375,972	39.1%	60%	\$359,587,346	4.7%	10%	\$7,202,167	\$366,789,513	23.9%	60.80%	\$143,781,489
Utah	\$268,191,765	17.3%	60%	\$27,838,305	6.7%	10%	\$1,802,249	\$29,640,554	11.1%	66.83%	\$9,831,772
Vermont	\$198,041,518	2.0%	60%	\$2,400,263	0.0%	10%	\$7,922	\$2,408,185	1.2%	56.47%	\$1,048,283
Virginia	\$911,721,026	31.1%	60%	\$169,853,627	2.5%	10%	\$2,306,654	\$172,160,281	18.9%	50.00%	\$86,080,141
Washington	\$655,310,615	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
West Virginia	\$304,222,399	28.8%	60%	\$52,533,124	6.2%	10%	\$1,892,263	\$54,425,387	17.9%	74.68%	\$13,780,508
Wisconsin	\$789,266,753	23.0%	60%	\$108,918,812	3.0%	10%	\$2,359,908	\$111,278,720	14.1%	59.88%	\$44,645,022
Wyoming	\$105,538,808	16.8%	60%	\$10,612,983	3.6%	10%	\$375,718	\$10,988,701	10.4%	50.00%	\$5,494,350
Total	\$41,663,837,925							\$3,362,638,319	8.1%		\$1,269,007,140
Est. FY22 Total (w/ 17.44% Growth)								\$3,948,963,101			\$1,490,276,948

Appendix A-5: Estimated Increase in Providers' DSP and Supervisor Expenses at \$11 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	30.8%	60%	\$65,262,716	5.1%	10%	\$1,788,698	\$67,051,413	19.0%	72.37%	\$18,526,306
Alaska	\$189,373,941	0.4%	60%	\$465,860	0.1%	10%	\$13,256	\$479,116	0.3%	50.00%	\$239,558
Arizona	\$982,472,685	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.01%	\$0
Arkansas	\$235,543,311	7.1%	60%	\$10,034,145	1.4%	10%	\$329,761	\$10,363,906	4.4%	71.62%	\$2,941,276
California	\$4,044,908,007	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Colorado	\$522,447,318	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Connecticut	\$1,018,691,105	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Delaware	\$139,590,524	9.3%	60%	\$7,805,902	0.2%	10%	\$22,334	\$7,828,237	5.6%	57.72%	\$3,309,778
DC	\$241,892,500	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	70.00%	\$0
Florida	\$1,084,548,133	12.5%	60%	\$81,276,037	1.1%	10%	\$1,149,621	\$82,425,658	7.6%	61.03%	\$32,121,279
Georgia	\$647,324,952	21.6%	60%	\$83,854,474	2.5%	10%	\$1,605,366	\$85,459,840	13.2%	66.85%	\$28,329,937
Hawaii	\$129,861,581	2.2%	60%	\$1,714,173	0.2%	10%	\$24,674	\$1,738,847	1.3%	53.64%	\$806,129
Idaho	\$247,845,104	15.9%	60%	\$23,599,811	3.4%	10%	\$847,630	\$24,447,441	9.9%	70.21%	\$7,282,893
Illinois	\$890,537,231	2.6%	60%	\$14,052,678	0.9%	10%	\$837,105	\$14,889,783	1.7%	51.09%	\$7,282,593
Indiana	\$832,484,133	18.5%	60%	\$92,505,637	3.1%	10%	\$2,589,026	\$95,094,663	11.4%	66.30%	\$32,046,901
Iowa	\$565,173,523	11.1%	60%	\$37,708,377	3.8%	10%	\$2,170,266	\$39,878,644	7.1%	62.14%	\$15,098,055
Kansas	\$489,936,267	23.1%	60%	\$67,934,563	3.1%	10%	\$1,518,802	\$69,453,365	14.2%	60.16%	\$27,670,221
Kentucky	\$666,344,454	14.5%	60%	\$57,852,025	4.5%	10%	\$2,985,223	\$60,837,249	9.1%	72.75%	\$16,578,150
Louisiana	\$469,259,617	34.1%	60%	\$95,982,362	3.0%	10%	\$1,421,857	\$97,404,219	20.8%	68.02%	\$31,149,869
Maine	\$395,422,094	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	64.00%	\$0
Maryland	\$956,598,246	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Massachusetts	\$1,472,158,456	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
Michigan	\$1,437,648,930	6.2%	60%	\$53,566,799	0.5%	10%	\$704,448	\$54,271,247	3.8%	65.48%	\$18,734,435
Minnesota	\$1,374,482,111	1.9%	60%	\$15,586,627	0.1%	10%	\$96,214	\$15,682,841	1.1%	50.51%	\$7,761,438
Mississippi	\$117,788,679	29.6%	60%	\$20,940,471	7.7%	10%	\$902,261	\$21,842,733	18.5%	78.31%	\$4,737,689
Missouri	\$925,177,878	8.7%	60%	\$48,183,264	1.2%	10%	\$1,082,458	\$49,265,722	5.3%	66.36%	\$16,572,989
Montana	\$113,338,718	8.8%	60%	\$5,977,484	2.1%	10%	\$234,611	\$6,212,095	5.5%	64.90%	\$2,180,445

Appendix A-5: Estimated Increase in Providers' DSP and Supervisor Expenses at \$11 Minimum Wage and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	7.9%	60%	\$14,985,337	2.1%	10%	\$654,423	\$15,639,760	4.9%	57.80%	\$6,599,979
Nevada	\$98,164,421	10.5%	60%	\$6,178,469	1.4%	10%	\$140,375	\$6,318,844	6.4%	62.59%	\$2,363,880
New Hampshire	\$228,721,706	10.4%	60%	\$14,299,681	0.9%	10%	\$210,424	\$14,510,105	6.3%	50.00%	\$7,255,053
New Jersey	\$1,047,872,743	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
New Mexico	\$380,908,202	13.1%	60%	\$29,825,112	2.3%	10%	\$872,280	\$30,697,392	8.1%	73.71%	\$8,070,344
New York	\$5,938,241,849	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
North Carolina	\$1,063,757,581	23.9%	60%	\$152,287,535	2.1%	10%	\$2,233,891	\$154,521,426	14.5%	67.65%	\$49,987,681
North Dakota	\$197,506,131	3.3%	60%	\$3,863,220	1.3%	10%	\$254,783	\$4,118,003	2.1%	53.59%	\$1,911,165
Ohio	\$1,803,372,051	13.1%	60%	\$142,177,853	2.5%	10%	\$4,418,262	\$146,596,114	8.1%	64.10%	\$52,628,005
Oklahoma	\$302,863,927	25.3%	60%	\$45,992,916	5.7%	10%	\$1,714,210	\$47,707,126	15.8%	68.31%	\$15,118,388
Oregon	\$518,000,000	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	60.22%	\$0
Pennsylvania	\$3,064,331,516	14.9%	60%	\$273,031,938	1.4%	10%	\$4,320,707	\$277,352,646	9.1%	52.68%	\$131,243,272
Rhode Island	\$209,184,132	0.4%	60%	\$464,389	0.0%	10%	\$0	\$464,389	0.2%	54.88%	\$209,532
South Carolina	\$375,220,336	22.2%	60%	\$50,046,888	3.2%	10%	\$1,181,944	\$51,228,833	13.7%	70.75%	\$14,984,434
South Dakota	\$126,846,643	5.6%	60%	\$4,269,658	0.6%	10%	\$71,034	\$4,340,692	3.4%	58.69%	\$1,793,140
Tennessee	\$683,684,442	24.0%	60%	\$98,286,475	4.0%	10%	\$2,741,575	\$101,028,050	14.8%	66.36%	\$33,985,836
Texas	\$1,532,375,972	29.4%	60%	\$270,035,294	3.1%	10%	\$4,781,013	\$274,816,307	17.9%	60.80%	\$107,727,992
Utah	\$268,191,765	11.5%	60%	\$18,521,323	4.3%	10%	\$1,155,907	\$19,677,230	7.3%	66.83%	\$6,526,937
Vermont	\$198,041,518	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	56.47%	\$0
Virginia	\$911,721,026	22.4%	60%	\$122,480,603	1.6%	10%	\$1,422,285	\$123,902,888	13.6%	50.00%	\$61,951,444
Washington	\$655,310,615	0.0%	60%	\$0	0.0%	10%	\$0	\$0	0.0%	50.00%	\$0
West Virginia	\$304,222,399	19.1%	60%	\$34,900,394	3.5%	10%	\$1,049,567	\$35,949,961	11.8%	74.68%	\$9,102,530
Wisconsin	\$789,266,753	15.3%	60%	\$72,502,044	1.7%	10%	\$1,310,183	\$73,812,227	9.4%	59.88%	\$29,613,465
Wyoming	\$105,538,808	11.1%	60%	\$7,028,885	2.0%	10%	\$207,911	\$7,236,796	6.9%	50.00%	\$3,618,398
Total	\$41,663,837,925							\$2,194,545,809	5.3%		\$818,061,417
Est. FY22 Total (w/ 17.44% Growth)								\$2,577,196,713			\$960,702,295

Appendix B: Estimated Increase in Providers’ DSP and Supervisor Expenses with a \$22.50 Wage Floor and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Alabama	\$353,497,539	124.6%	60%	\$264,189,921	31.5%	10%	\$11,142,242	\$275,332,163	77.9%	72.37%	\$76,074,277
Alaska	\$189,373,941	35.6%	60%	\$40,461,636	8.4%	10%	\$1,585,060	\$42,046,696	22.2%	50.00%	\$21,023,348
Arizona	\$982,472,685	69.2%	60%	\$407,627,917	18.3%	10%	\$17,998,900	\$425,626,817	43.3%	70.01%	\$127,645,482
Arkansas	\$235,543,311	100.5%	60%	\$142,032,617	32.8%	10%	\$7,723,465	\$149,756,082	63.6%	71.62%	\$42,500,776
California	\$4,044,908,007	51.5%	60%	\$1,249,148,491	10.2%	10%	\$41,338,960	\$1,290,487,451	31.9%	50.00%	\$645,243,725
Colorado	\$522,447,318	54.7%	60%	\$171,592,597	14.4%	10%	\$7,533,690	\$179,126,287	34.3%	50.00%	\$89,563,144
Connecticut	\$1,018,691,105	58.3%	60%	\$356,521,513	8.5%	10%	\$8,628,314	\$365,149,827	35.8%	50.00%	\$182,574,913
Delaware	\$139,590,524	86.6%	60%	\$72,506,110	9.1%	10%	\$1,273,066	\$73,779,176	52.9%	57.72%	\$31,193,835
DC	\$241,892,500	45.9%	60%	\$66,646,222	6.7%	10%	\$1,623,099	\$68,269,320	28.2%	70.00%	\$20,480,796
Florida	\$1,084,548,133	86.8%	60%	\$564,832,668	15.9%	10%	\$17,233,470	\$582,066,137	53.7%	61.03%	\$226,831,174
Georgia	\$647,324,952	97.0%	60%	\$376,626,604	16.3%	10%	\$10,564,343	\$387,190,947	59.8%	66.85%	\$128,353,799
Hawaii	\$129,861,581	60.5%	60%	\$47,170,921	13.4%	10%	\$1,738,847	\$48,909,767	37.7%	53.64%	\$22,674,568
Idaho	\$247,845,104	76.2%	60%	\$113,285,040	24.1%	10%	\$5,960,675	\$119,245,715	48.1%	70.21%	\$35,523,298
Illinois	\$890,537,231	68.0%	60%	\$363,392,622	23.5%	10%	\$20,954,341	\$384,346,964	43.2%	51.09%	\$187,984,100
Indiana	\$832,484,133	87.3%	60%	\$435,955,291	23.6%	10%	\$19,671,600	\$455,626,891	54.7%	66.30%	\$153,546,262
Iowa	\$565,173,523	64.0%	60%	\$216,958,812	28.2%	10%	\$15,943,545	\$232,902,357	41.2%	62.14%	\$88,176,832
Kansas	\$489,936,267	101.0%	60%	\$296,901,378	21.5%	10%	\$10,528,730	\$307,430,108	62.7%	60.16%	\$122,480,155
Kentucky	\$666,344,454	71.3%	60%	\$285,142,119	29.6%	10%	\$19,743,786	\$304,885,905	45.8%	72.75%	\$83,081,409
Louisiana	\$469,259,617	136.4%	60%	\$383,929,448	24.4%	10%	\$11,435,857	\$395,365,305	84.3%	68.02%	\$126,437,825
Maine	\$395,422,094	57.8%	60%	\$137,084,932	13.4%	10%	\$5,286,793	\$142,371,725	36.0%	64.00%	\$51,253,821
Maryland	\$956,598,246	63.8%	60%	\$366,185,809	15.0%	10%	\$14,387,238	\$380,573,046	39.8%	50.00%	\$190,286,523
Massachusetts	\$1,472,158,456	37.2%	60%	\$328,497,438	8.1%	10%	\$11,880,319	\$340,377,757	23.1%	50.00%	\$170,188,878
Michigan	\$1,437,648,930	80.8%	60%	\$696,627,166	17.7%	10%	\$25,503,892	\$722,131,058	50.2%	65.48%	\$249,279,641
Minnesota	\$1,374,482,111	58.5%	60%	\$482,443,221	11.8%	10%	\$16,163,910	\$498,607,131	36.3%	50.51%	\$246,760,669
Mississippi	\$117,788,679	119.6%	60%	\$84,525,156	41.9%	10%	\$4,937,701	\$89,462,857	76.0%	78.31%	\$19,404,494
Missouri	\$925,177,878	88.8%	60%	\$493,156,816	20.4%	10%	\$18,901,384	\$512,058,200	55.3%	66.36%	\$172,256,379
Montana	\$113,338,718	74.5%	60%	\$50,689,608	24.2%	10%	\$2,739,397	\$53,429,005	47.1%	64.90%	\$18,753,581

Appendix B: Estimated Increase in Providers’ DSP and Supervisor Expenses with a \$22.50 Wage Floor and Cost (in millions) to Fully Implement, by State

State	Spending Baseline	DSP Wage Increase	DSP Wage Share	Cost of DSP Wage Increase	Super-visor Wage Increase	Super-visor Wage Share	Cost of Supervisor Wage Increase	Total Cost of Wage Increases	Impact as Percent	FY2022 FMAP	State Share of Cost
Nebraska	\$316,146,352	75.0%	60%	\$142,171,014	26.5%	10%	\$8,374,717	\$150,545,731	47.6%	57.80%	\$63,530,299
Nevada	\$98,164,421	86.7%	60%	\$51,047,462	18.9%	10%	\$1,858,252	\$52,905,715	53.9%	62.59%	\$19,792,028
New Hampshire	\$228,721,706	62.5%	60%	\$85,743,193	12.8%	10%	\$2,929,925	\$88,673,118	38.8%	50.00%	\$44,336,559
New Jersey	\$1,047,872,743	61.6%	60%	\$387,293,766	9.7%	10%	\$10,164,366	\$397,458,131	37.9%	50.00%	\$198,729,066
New Mexico	\$380,908,202	100.0%	60%	\$228,453,503	27.5%	10%	\$10,455,930	\$238,909,433	62.7%	73.71%	\$62,809,290
New York	\$5,938,241,849	46.2%	60%	\$1,646,436,935	8.0%	10%	\$47,446,552	\$1,693,883,487	28.5%	50.00%	\$846,941,744
North Carolina	\$1,063,757,581	104.4%	60%	\$666,465,400	19.0%	10%	\$20,200,756	\$686,666,156	64.6%	67.65%	\$222,136,502
North Dakota	\$197,506,131	36.2%	60%	\$42,839,080	16.1%	10%	\$3,187,749	\$46,026,829	23.3%	53.59%	\$21,361,051
Ohio	\$1,803,372,051	91.5%	60%	\$989,510,244	25.7%	10%	\$46,346,662	\$1,035,856,906	57.4%	64.10%	\$371,872,629
Oklahoma	\$302,863,927	110.2%	60%	\$200,253,629	31.7%	10%	\$9,588,672	\$209,842,300	69.3%	68.31%	\$66,499,025
Oregon	\$518,000,000	52.0%	60%	\$161,522,760	14.6%	10%	\$7,536,900	\$169,059,660	32.6%	60.22%	\$67,251,933
Pennsylvania	\$3,064,331,516	78.2%	60%	\$1,437,232,768	16.9%	10%	\$51,756,559	\$1,488,989,327	48.6%	52.68%	\$704,589,750
Rhode Island	\$209,184,132	51.1%	60%	\$64,160,957	9.6%	10%	\$1,999,800	\$66,160,757	31.6%	54.88%	\$29,851,734
South Carolina	\$375,220,336	100.0%	60%	\$225,222,254	21.7%	10%	\$8,138,529	\$233,360,784	62.2%	70.75%	\$68,258,029
South Dakota	\$126,846,643	68.4%	60%	\$52,088,305	23.8%	10%	\$3,018,950	\$55,107,256	43.4%	58.69%	\$22,764,807
Tennessee	\$683,684,442	103.6%	60%	\$424,814,165	27.0%	10%	\$18,445,806	\$443,259,971	64.8%	66.36%	\$149,112,654
Texas	\$1,532,375,972	119.3%	60%	\$1,096,966,663	20.5%	10%	\$31,429,031	\$1,128,395,695	73.6%	60.80%	\$442,331,112
Utah	\$268,191,765	64.9%	60%	\$104,449,965	30.0%	10%	\$8,040,389	\$112,490,354	41.9%	66.83%	\$37,313,050
Vermont	\$198,041,518	42.7%	60%	\$50,750,119	9.2%	10%	\$1,818,021	\$52,568,141	26.5%	56.47%	\$22,882,912
Virginia	\$911,721,026	100.7%	60%	\$550,971,250	13.3%	10%	\$12,098,538	\$563,069,788	61.8%	50.00%	\$281,534,894
Washington	\$655,310,615	42.6%	60%	\$167,379,437	7.5%	10%	\$4,908,277	\$172,287,714	26.3%	50.00%	\$86,143,857
West Virginia	\$304,222,399	117.3%	60%	\$214,148,231	36.6%	10%	\$11,134,540	\$225,282,771	74.1%	74.68%	\$57,041,598
Wisconsin	\$789,266,753	79.3%	60%	\$375,675,189	18.5%	10%	\$14,561,972	\$390,237,161	49.4%	59.88%	\$156,563,149
Wyoming	\$105,538,808	63.6%	60%	\$40,267,277	19.9%	10%	\$2,100,222	\$42,367,499	40.1%	50.00%	\$21,183,750
Total	\$41,663,837,925							\$18,569,959,377	44.6%		\$7,594,405,125
Est. FY22 Total (w/ 17.44% Growth)								\$21,807,901,240			\$8,918,599,851