The Case for Public Investment in Higher Pay for New York State Home Care Workers:

Estimated Costs and Savings

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Executive Summary

In recent years, the aging of the population and the increasing preference for "aging in place" have combined to generate explosive growth in demand for home care workers. In New York State, the number of home health aide and personal care aide jobs is projected to rise from 440,000 in 2018 to over 700,000 by 2028, driven by employment in home care agencies, private households, and public programs like the Medicaid Consumer Directed Personal Assistance Program (CDPAP). High turnover adds to the problem: employers across the state need to recruit an average of 26,510 new aides each year simply to keep up with the growing demand for care, as well as an additional 71,680 workers each year to replace the thousands of aides who leave these occupations or exit the labor force entirely. In total, over the ten-year period 2018-2028, nearly 1,000,000 job positions must be filled to meet the demand for aides.

The demand for home care workers—aides who work in private homes—already exceeds the supply. A 2018–2019 statewide survey of home care agencies found that, on average, 17 percent of home care positions were left unfilled due to staff shortages. Because home care work is typically poorly paid, as well as physically and emotionally stressful, it is difficult to recruit new workers and retain existing ones. The COVID-19 pandemic has increased demand for home care even more, while further depressing the labor supply. In a Fall 2020 survey, 85 percent of participating New York State home care agencies reported worsening staff shortages. As a result of these staff shortages, many individuals with unmet home care needs experience hospitalizations that might otherwise be unnecessary, and many enter nursing homes, a costly alternative to in-home care that became especially dangerous during the COVID-19 pandemic.

This report explores one potential solution to the home care labor shortage: substantially raising wages for New York State's home care workers. The analysis presents detailed projections, based on the best available data, of the economic effects of such an intervention, estimating the costs and benefits that would result. **We find that public funding for wage increases and health insurance coverage for the State's home care workers would require significant resources, but those costs would be more than offset by the resulting savings, tax revenues, and economic spillover effects.**

The analysis in the report specifies the costs and benefits of two different wage increases, tailoring each to the State's three existing minimum wage zones:

- **"Target 1"** would raise home care wages to $40,000 annually ($22.00 hourly) in New York City, $35,000 ($19.25 hourly) on Long Island and in Westchester County, and $30,000 ($16.50 hourly) in the rest of the state.

- "**Target 2**" would raise wages further: to $50,000 annually ($27.50 hourly) in New York City, $45,000 ($24.75 hourly) on Long Island and in Westchester County, and $40,000 ($22.00 hourly) in the rest of the state.

Either of these wage levels would represent a large increase in compensation for New York State home care workers, whose current median annual earnings is only $22,000. Approximately 191,000 workers, or 86 percent, would receive a raise at Target 1 levels. Nearly 207,000, or 93 percent, would receive a raise at Target 2 levels. Economic impact estimates for each target wage level also incorporate the additional cost of providing health insurance to home care workers who lack coverage, as well as increased payroll taxes.

Public investment in improving the compensation of home care workers would yield net economic benefits.

- Target 1 wage increases, health coverage, and payroll taxes would total approximately $4 billion per year, and for Target 2 about $6.3 billion.

- But the combined value of new savings, tax revenues, and economic spillover effects resulting from improved compensation would far exceed these costs. The estimated total on the economic benefit side of the ledger is $7.6 billion for Target 1 wage increases and $12.9 billion for Target 2 increases.

- These savings would be distributed across local, state, and federal levels, with a net gain of $3.7 billion for Target 1 and $6.6 billion for Target 2.

The analysis includes estimates of three types of costs: wage increases, extension of health insurance to workers who would lose their current Medicaid coverage, and new payroll costs associated with wage increases, such as larger employer FICA contributions and higher premiums for disability and workers' compensation insurance. It also estimates the economic benefits of increasing wages, which include new income and sales tax revenues, savings from reduced turnover, productivity gains, and economic spillover effects from workers spending their increased earnings. The results are summarized below.

Economic gains would be distributed across local, state, and federal levels in part because workers' increased spending would not be confined to New York State. Acknowledging this measurement challenge, we estimate economic benefits for New York State overall would approximate $5.4 billion for Target 1 and $9 billion for Target 2, with net gains dependent on how wage increases would be funded.

In short, it is in the State's interest to invest in large-scale pay increases and health insurance coverage for home care workers. Such increases should be tailored to regional variations in the cost of living and designed to ensure that no workers experience benefits cliffs or net decreases in income. It is also critical to ensure that funding is appropriated not only for wage increases but also for the accompanying payroll costs, such as insurance premiums for disability benefits and workers' compensation. Another caveat is that at higher wage levels, many workers who currently receive Medicaid would lose that coverage; it is crucial that the State cover the cost of providing them with health insurance, so that the benefits of higher wages will not be negated.

Improving compensation for home care workers would help to alleviate the existing shortages in the occupation, and also spur employment growth in other fields.

- Higher wages would attract more workers to the home care field and would cause some home care aides who currently work part-time to seek more hours. The result would be an increase of nearly

20,000 full-time equivalent home care workers for Target 1, and over 38,000 workers for Target 2.

- The economic multiplier effects that would result from the wage improvements for home care workers would also create nearly 18,000 jobs in other industries for Target 1, and nearly 30,000 new jobs for Target 2. This is because home care workers would spend their additional earnings on goods and services, including housing, food, transportation and other basic necessities, stimulating job creation in a range of occupations.

- The estimated effects on employment are summarized below. These are one-year effects; their year-to-year continuity would depend on a number of factors, including the relationship between wages in home care and those in other fields.

Overall, the report's analysis shows that allocating state funding to raise home care wages to the proposed target levels would generate net benefits, as the cost of doing so is greatly exceeded by the savings that would result. Raising pay would also help to meet the skyrocketing demand for home care workers and stimulate additional employment growth in other sectors. These findings align with previous research demonstrating the positive economic impacts of wage increases and of public investment in care work.

Costs and Economic Benefits of Home Care Wage Increases (per annum)

	Target 1 Wage Increase	Target 2 Wage Increase
Costs		
Wage Costs	$2,873,200,000	$4,875,890,000
Healthcare Costs	$856,436,000	$982,186,000
Payroll Tax Costs	$235,378,000	$397,102,000
Total Costs	$3,965,014,000	$6,255,178,000
Economic Benefits		
Economic Spillover	$4,597,121,000	$7,801,425,000
New Income Tax Revenue	$1,097,914,000	$1,974,244,000
New Sales Tax Revenue	$141,591,000	$240,284,000
Public Assistance Savings	$495,637,000	$645,336,000
Turnover Reduction	$151,327,000	$252,211,000
Productivity Gains	$1,149,280,000	$1,950,356,000
Total Economic Benefits	$7,632,870,000	$12,863,856,000
Net Economic Gain	**$3,667,856,000**	**$6,608,678,000**

Employment Effects of Home Care Wage Increases

	Target 1 Wage Increase	Target 2 Wage Increase
New Home Care Workers	19,440	38,370
New Jobs, Other Industries	17,600	29,870
Total Employment Gains	**37,040**	**68,240**

Introduction

Between 2021 and 2040, New York State's overall population is projected to grow a modest 3 percent, but the number of adults 65 and over will increase by over 25 percent, and the number of adults 85 and over by nearly 75 percent.[1] The aging of the population will, in turn, dramatically increase the need for long-term care among older residents of the State. Indeed, employment in direct care occupations is rapidly expanding, and will continue to do so at a steadily accelerating rate. Across home- and institution-based settings, the number of home health aide and personal care aide jobs is projected to rise from 440,000 in 2018 to over 700,000 by 2028, making these the two largest occupations in the State. The magnitude of this growth, driven primarily by demand for in-home care, is staggering: home health and personal care aides alone will add as many jobs to the state economy as will the next forty largest occupations combined.[2]

New York's ability to fill these jobs—and retain workers in them—will determine whether older adults will receive the care they need in the coming decades. Every year, employers across the state need to recruit an average of 26,510 new aides simply to keep up with the demand for care. Yet, given high turnover in these disproportionately low-wage jobs, employers also must recruit an additional 71,680 workers each year to replace the thousands of aides who leave these direct care occupations or exit the labor force entirely. As a result, over the 2018-2028 decade, a projected total of nearly 1,000,000 openings for home health aides and personal care aides will need to be filled state-wide—265,100 due to rising demand and another 716,800 to replace workers who exit.[3]

At current levels of recruitment and retention, the State is already unable to keep pace, especially for home care workers—defined here as home health aides and personal care aides who provide assistance to older adults and people with disabilities in their own homes (as opposed to in nursing homes or other group care facilities). A 2018–2019 statewide survey of home care agencies found that, on average, 17 percent of home care positions were left unfilled due to staff shortages. As a result, nearly 15 percent of patients experienced delays in accessing care, and 24 percent were unable to access services at all.[4] Findings from a labor market analysis of home health aides (excluding personal care aides) suggest that the State could face a cumulative shortage of approximately 230,000 aides over the next decade—hindering efforts to fill the nearly 1 million projected openings.[5]

This crisis has been looming for years. Since the 1970s, the expansion of home- and community-based care as an alternative to institutional care, along with the growing preference for aging in place, has spurred rising demand for home care workers. By the mid-1980s, signs of a lasting labor shortage were evident across New York State. "Health Aides in Short Supply," a 1987 *New York Times* headline warned. In the accompanying story, a Nassau County health official explained, "Until we can offer the aides a sense of worth, a sense of recognition, a fair salary, fringe benefits and some sort of career type mobility, we're going to have a problem getting sufficient aides and retaining them."[6]

However, such warnings have gone unheeded. More than three decades later, despite a range of policy and advocacy efforts, home care worker recruitment and retention remain hampered by inadequate wages, benefits, and career ladders.[7] With the aging of the baby boomer generation and the attendant rise in care needs, the problem has grown into a full-blown crisis, one further exacerbated by the COVID-19 pandemic.

Available data suggest that the pandemic has increased demand for home care while depressing the labor supply, widening the gap between care needs and care provision. A survey of 77 New York State home care agencies in Fall 2020 found that 65 percent

experienced an increase in home care referrals during the pandemic, both from hospital discharges and from families and individuals seeking to avoid the risks of nursing homes. Yet 85 percent of agencies reported worsening staff shortages, as the pandemic-related dangers of face-to-face direct care work added to the already existing challenges of recruitment and retention. As a result, 76 percent of the agencies surveyed were forced to delay acceptance of new referrals or deny them entirely in 2020.[8]

Against that backdrop, this report explores the potential impact of seeking to alleviate the labor shortage by substantially raising wages for New York State's home care workers—whether employed through home care agencies, private households, or public programs like Medicaid Consumer Directed Personal Assistance. Our analysis, based on the best available data, offers specific projections of how such an intervention would affect the State economically, and systematically estimates the costs and benefits involved. We are not advancing a specific policy proposal but rather analyzing the likely effects of large-scale improvements in home care compensation.

We find that public funding for wage increases and health insurance coverage would require substantial resources, but that those costs would be more than offset by the potential savings, tax revenues, and economic spillover effects that would result from raising home care workers' pay.

This report examines two different wage increases, tailoring each to the State's three existing minimum wage zones. What we call "Target 1" would raise home care wages to $40,000 annually ($22.00 hourly) in New York City, $35,000 ($19.25 hourly) on Long Island and in Westchester County, and $30,000 ($16.50 hourly) in the rest of the State. "Target 2" would raise wages even further: to $50,000 annually ($27.50 hourly) in New York City, $45,000 ($24.75 hourly) on Long Island and in Westchester County, and $40,000 ($22.00 hourly) in the rest of the State. We also examine the cost of providing health insurance coverage along with the wage increases.

Target 1 wage increases and associated costs would total approximately $4.0 billion, and Target 2 increases would add up to $6.3 billion. Based on our projections, however, the combined value of new savings, tax revenues, and economic spillover effects resulting from those wage gains would far exceed these costs, totaling $7.6 billion for Target Wage 1 and $12.9 billion for Target Wage 2 raises. The economic benefits and savings would be distributed across state, federal, and local government, with a net gain of $3.7 billion for Target 1 and $6.6 billion for Target 2.[9]

In addition to generating new savings and revenues, higher wages would reduce turnover and attract new workers into the direct care field, dampening the labor shortage and thus expanding access to home care. We estimate that over 19,000 new home care workers would enter the occupation per year at Target 1, and 38,000 at Target 2 wages. The economic spillover of home care raises would also create jobs in other industries: 17,600 jobs per year at Target 1 and 29,900 jobs at Target 2 wages.

These findings align with previous research demonstrating the positive economic impacts of wage increases and of public investment in care work. In particular, we build on a 2020 nationwide study by LeadingAge and the University of Massachusetts Boston, which analyzed the effects of paying a living wage to direct care workers and similarly found net economic gains.[10] Our findings are also in accord with research on public investment in care sectors

more broadly, which reveal large effects on economic activity and on job creation both within and beyond care industries.[11] Previous research has even found that public investment in the care sector would generate more job growth (for both women and men) than would similar investment in the construction sector, pointing to a promising strategy for a "care-led recovery" from the COVID-19 recession.[12]

A core premise of this report is that any large-scale transformation of wage and benefit levels in the home care sector will require new public funding. Blanket minimum wage increases, such as those New York has implemented since 2015, are problematic in this sector, because by themselves they fail to alleviate the burden on the agencies and households that employ care workers and who ultimately must pay the higher wage costs. Home care agencies in New York State largely depend on public funding, so when the minimum wage rises but funding does not—as has been the case since 2018—agencies confront enormous difficulties in maintaining, much less expanding, their operations.[13] Wage increases are also unsustainable for many of the private households who pay for home care directly. In the absence of any state or federal long-term care insurance program, home care often imposes tremendous costs—an average of nearly $60,000 annually in New York State.[14] If the minimum wage rises without a corresponding

increase in public subsidies, prohibitive costs can lead households to turn to unpaid family members or to workers paid "off the books" at subminimum wages—both of which are already common strategies.[15]

Although this report focuses on future costs and benefits of wage increases, our analysis also highlights the many financial and social costs already imposed by the home care labor crisis. With over 700,000 workers expected to leave home care by 2028, employers face immense turnover costs as they recruit, hire, and train replacements. Individuals with unmet home care needs are likely to experience hospitalizations that might otherwise be unnecessary, and many will enter nursing homes, where care is far more expensive than that provided by aides in recipients' own homes. Unmet needs for home care may also render state governments vulnerable to legal liabilities: in an ongoing federal lawsuit, a group of Michigan plaintiffs argue that curtailed access to Medicaid home- and community-based services violates their right to non-institutional care options.[16] Finally, as noted above, the gap in paid care work is often filled by unpaid family members, mostly women, who limit or halt their participation in the labor force to care for loved ones, reducing overall economic activity and widening gender inequalities.[17]

Overview of Projected Effects

We estimate three types of costs: wage increases, extension of health insurance to workers who would lose Medicaid coverage, and new payroll costs associated with wage increases, such as larger employer FICA contributions and higher premiums for disability insurance. We then present projections of the resulting economic benefits, from new income tax revenue to reduced turnover and statewide economic growth. Table 1 summarizes each of these projected effects, which result in a net gain of $3.7 billion for Target 1 and $6.6 billion for Target 2.

As we discuss below, the economic gains would be distributed across the local, state, and federal level, in part because workers' increased spending would not be confined to New York State. Acknowledging the measurement challenge this presents, we estimate that the economic benefits for New York State would approximate $5.4 billion for Target 1 and $9 billion for Target 2, with net gains dependent on how wage increases would be funded.

Table 1. Annual Costs, Economic Benefits, and Employment Effects of Home Care Wage Increases

	Target 1	Target 2
Costs		
Wage Costs	$2,873,200,000	$4,875,890,000
Healthcare Costs	$856,436,000	$982,186,000
Payroll Tax Costs	$235,378,000	$397,102,000
Total Costs	$3,965,014,000	$6,255,178,000
Economic Benefits		
Economic Spillover	$4,597,121,000	$7,801,425,000
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Total Economic Benefits	$7,632,870,000	$12,863,856,000
Net Economic Gain	**$3,667,856,000**	**$6,608,678,000**
Employment Effects		
New Home Care Workers (Full-Time Equivalent)	19,440	38,370
New Jobs, Other Industries	17,600	29,870
Total Employment Gains	**37,040**	**68,240**

Cost of Higher Wages

NUMBER OF WORKERS

To estimate the size of the current home care workforce we used American Community Survey (ACS) data for "home health aides" and "personal care aides" who work in non-institutional settings.[18] The estimated total number of home care workers in the State and in each geographical zone within it are shown in Table 2. In total, approximately 223,530 home care workers were employed in New York State in 2019.

CURRENT WAGES

To estimate the cost of raising wages, we begin by calculating the *current* wages of home care workers in the State and in each geographical zone. To do that, we drew on self-reported personal annual earned income data from the 2019 ACS, first transforming it from annual to hourly earnings and then adjusting from 2019 to 2020 levels.[19] Table 3 provides the resulting estimated median and mean wage for home care workers, statewide and for each zone.[20]

COST OF INCREASING WAGES TO TARGET 1 AND TARGET 2

Next, we consider two target wage rates for each zone, identified by the New York State Office for the Aging (NYSOFA) for the purposes of this study. These rates are shown below in Table 4. To convert the annual targets to hourly wages, we assumed a full-time work-load of 35 hours per week and 52 weeks per year, which is consistent with the current median workload of New York State home care workers. To put these target wage rates in context, we provide the hourly living wage rate for an individual worker in a two adult/two child family, and the hourly rates proposed for home care workers in the Fair Pay for Home Care Act.

Either of the target wage levels would represent a large increase in compensation for New York State home care workers, whose current median annual earnings is only $22,000. Approximately 191,000 workers, or 86 percent, would receive a raise at Target 1 levels. Nearly 207,000, or 93 percent, would receive a raise at Target 2 levels.

Table 2. Estimated Number of Home Care Workers by Place of Work, 2019

Geographical Zone	Home Care Workers	Percentage
New York City (5 boroughs)	162,080	72.5%
Long Island and Westchester	24,680	11.0%
Rest of State	36,770	16.5%
New York State	**223,530**	**100.0%**

Table 3. Current Estimated Home Care Wages, New York State, 2020

Zone	Median Hourly Wage[21]	Mean Hourly Wage
New York City (5 boroughs)	$14.08	$15.93
Long Island and Westchester	$14.42	$16.41
Rest of State	$12.76	$16.58
New York State	**$13.80**	**$16.09**

Table 4. Target Home Care Wage Rates, New York State, 2020

Zone	Our Study		Comparisons	
	Target Wage 1	Target Wage 2	Living Wage for a 2 Adult/2 Child Family[22]	Fair Pay for Home Care Act[23]
New York City (5 boroughs)	$22.00 ($40,000)	$27.50 ($50,000)	$26.48	$22.50
Long Island and Westchester	$19.25 ($35,000)	$24.75 ($45,000)	$26.77	$22.50
Rest of State	$16.50 ($30,000)	$22.00 ($40,000)	$22.70	$22.50

To estimate the cost of increasing home care workers' wages, for each geographical zone we calculated the difference between the target wage rate (shown in Table 4) and the current hourly wage of each worker in the ACS sample. We then calculated the annual cost for each worker at 35 hours per week for 52 weeks per year, which is the current median workload for New York State home care workers. The total cost per zone is shown in Table 5.

COST OF FRINGE BENEFITS

In addition to the cost of increasing wages, we estimated the cost of providing home care workers with health insurance coverage, as well as the cost of the additional payroll taxes that employers would incur if wages were raised.

Health Insurance

We estimated the cost of extending health coverage to all home care workers who would otherwise lack coverage at higher wage levels. According to the ACS

data, about 92 percent of New York State's home care workers currently have some type of health insurance coverage. The first group requiring coverage once wages were raised is the 8 percent who currently report having none. The second group is the approximately 45 percent whose current health insurance is from Medicaid. Approximately 35 percent of workers in this group would no longer be eligible for Medicaid once their wages were raised to Target 1 levels, and this figure rises to 41 percent at Target 2 levels.[24]

In developing our estimates, we assumed that the State would fully subsidize the cost of workers or employers purchasing health insurance. To estimate that cost, we consulted several sources to develop regionally sensitive estimates of health care packages for different family types.[25] Combining this data with the ACS, we estimated the annual cost of providing health insurance for workers lacking coverage at Target 1 and Target 2 wage levels. The estimates assume that workers with any children under 26 years old would receive a family plan, while single workers and married workers without children would receive an individual

Table 5. Estimated Annual Cost of Home Care Wage Increases, New York State

Zone	At 35 Hours Weekly for All Workers	
	Target Wage 1	Target Wage 2
New York City (5 boroughs)	$2,372,838,000	$3,856,988,000
Long Island & Westchester	$227,853,000	$449,043,000
Rest of State	$272,510,000	$569,859,000
Total	**$2,873,200,000**	**$4,875,890,000**

plan. The results are shown in Tables 6a and 6b. As we discuss below in presenting our savings estimates, the bulk of this cost would represent a shift in State spending rather than new spending, as the vast majority of these workers are currently covered by Medicaid.[26]

Additional Benefits

In addition to health insurance, the State could choose to provide additional benefits to home care workers, such as a retirement plan. Based on data from a home care program in Wayne County, NY, we expect that a retirement plan would cost approximately 10 percent of total wages—a large cost, but one that previous

research has shown to be highly effective in reducing worker turnover.[27] Similarly, the State or employers could choose to cover other payroll taxes normally paid by workers, like the New York State Paid Family Leave program deduction. Covering that deduction, which costs home care workers between $100 and $200 annually, would require $6.8 million at Target 1 wage levels and $12.4 million at Target 2 levels.

The State might also decide to raise wages for some workers above the Target levels, in order to preserve wage scales within the occupation. This would be a way to maintain a wage differential for workers with greater seniority, for example. This is known as ripple wage effects, or a wage contour. We discuss this possible cost at the end of the report.

Table 6a. Cost of Providing Health Insurance to New York State Home Care Workers, Target 1 Wage Increases

Zone	Number of Uninsured Workers	Cost to Cover Uninsured Workers, Mix of Individual and Family Plans[a]	Number of Workers Losing Medicaid Eligibility	Cost to Cover Workers Losing Medicaid, Mix of Individual and Family Plans	Total Cost to Provide Health Insurance
New York City (5 boroughs)	12,370	n/a	29,480	$567,836,000	n/a
Long Island and Westchester	1,590	n/a	1,390	$26,499,000	n/a
Rest of State	3,240	n/a	4,300	$43,052,000	n/a
Total	**17,200**	**$219,049,000**	**35,170**	**$637,387,000**	**$856,436,000**

[a] Estimates are not available by individual zone due to insufficient sample sizes.

Table 6b. Cost of Providing Health Insurance to New York State Home Care Workers, Target 2 Wage Increases

Zone	Number of Uninsured Workers	Cost to Cover Uninsured Workers, Mix of Individual and Family Plans[a]	Number of Workers Losing Medicaid Eligibility	Cost to Cover Workers Losing Medicaid, Mix of Individual and Family Plans	Total Cost to Provide Health Insurance
New York City (5 boroughs)	12,370	n/a	32,670	$642,198,000	n/a
Long Island and Westchester	1,590	n/a	1,560	$30,469,000	n/a
Rest of State	3,240	n/a	7,140	$90,470,000	n/a
Total	**17,200**	**$219,049,000**	**41,370**	**$763,137,000**	**$982,186,000**

[a] Estimates are not available by individual zone due to insufficient sample sizes.

Our core estimates do not include the costs of these additional fringe benefits and ripple wage effects, but they should be considered in the development of any future policy to improve home care compensation.

PAYROLL TAXES AND EXPENSES

Under the Federal Insurance Contributions Act (FICA), employers are required to pay a specified share of both social security and Medicare payroll taxes. Taken together, the employer share is 7.65 percent of gross pay. Using this rate, we calculated the cost of the additional payroll taxes that would be required if wages were increased to the two target levels. These estimated costs are shown in Table 7 below.

Higher wages would result in additional changes to employer payroll expenses. These changes are modest in comparison to the cost of wages and health insurance, but they are not insignificant. In some counties, employers would be responsible for paying the Metropolitan Commuter Transportation Mobility Tax, also known as the MTA tax. Most home care agencies would face an MTA tax rate of 0.34 percent of quarterly payroll expenses. To calculate changes in workers' compensation premium costs, we assumed,

based on industry averages, that such costs comprise 0.1 percent of annual payroll. Disability insurance is more complex, as premium rates only apply to worker incomes up to $17,680 annually. Thus raises for workers already above that wage level would not affect disability benefits insurance costs; only raises for workers below that wage level would result in cost increases. We calculated that aggregate change in income for the latter group of workers up to the $17,680 cap, assuming an average disability insurance premium cost of 0.3 percent of annual payroll.[28]

Federal unemployment tax applies only to the first $7,000, and state unemployment tax only to the first $11,800, of a worker's income. Thus raising an employee's annual pay from, for instance, $22,000 to $30,000 would *not* affect their employer's unemployment tax costs.

TOTAL COSTS

Table 8 shows the estimated total cost of raising wages to Target 1 and 2 wage levels, paying additional employer payroll taxes and insurance premiums, and providing health insurance to workers who would lack coverage at the two target wage levels.

Table 7. Change in Employer Payroll Taxes and Premium Costs

	Target 1	Target 2
FICA Taxes	$219,800,000	$373,006,000
MTA Tax	$11,452,000	$17,968,000
Disability Insurance	$1,253,000	$1,253,000
Workers' Compensation Insurance	$2,873,000	$4,876,000
Total	**$235,378,000**	**$397,102,000**

Table 8. Total Annual Cost of Home Care Wage Increases

	Target 1	Target 2
Wage Cost (all workers at 35 hours)	$2,873,200,000	$4,875,890,000
Health Insurance Cost, Mix of Plans	$856,436,000	$982,186,000
Employer Payroll Tax and Premium Increases	$235,378,000	$397,102,000
Total	**$3,965,014,000**	**$6,255,178,000**

Savings and Benefits of Higher Wages

NEW INCOME TAX REVENUES

Higher wages would generate new income tax revenue at the local, state, and federal level. To estimate the magnitude of that revenue, we calculated the median income tax liabilities for home care workers after the target wage increases. We determined tax liabilities based on household type: single without children; single with children; married without children; and married with children. We also accounted for common deductions, exemptions, and credits. Table 9 presents the estimated total revenue increases accruing to each level of government.[29]

One component of these income tax changes is the federal, state, and local Earned Income Tax Credit (EITC). Table 10 shows the estimated total EITC savings that would accrue to each tax authority. These savings are included in the broader income tax changes presented above, but we disaggregate them here to illustrate their role in revenue gains and reduced spending, as EITCs are refundable under certain conditions.

In addition to generating new income tax revenue, the proposed wage increases would result in increased employee FICA contributions: $273 million at Target 1 wages and $444 million at Target 2 wages.

SAVINGS FROM REDUCED PUBLIC ASSISTANCE SPENDING

Currently, at least 54 percent of New York State home care workers are covered by Medicaid or receive food or cash assistance through various public programs.[30] Fewer home care workers would be eligible for such public assistance programs if their wages rose. Using available data, we estimate the resulting savings for Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and the School Lunch Program, shown in Table 11.

The largest savings would stem from reduced Medicaid enrollment, which would be split between

Table 9. Estimated Annual Increase in Income Tax Revenue

Tax Authority	Target Wage 1	Target Wage 2
New York City	$124,398,000	$202,295,000
New York State	$286,386,000	$518,211,000
Federal government	$687,130,000	$1,253,737,000
Total	**$1,097,914,000**	**$1,974,244,000**

Table 10. Estimated Annual Savings from Earned Income Credit Reductions

Tax Authority	Target Wage 1	Target Wage 2
New York City	$3,680,000	$5,904,000
New York State	$22,160,000	$36,893,000
Federal government	$73,867,000	$122,975,000
Total	**$99,707,000**	**$165,771,000**

Table 11. Estimated Savings from Reduced Public Assistance Spending, by Program

Program	After Target Wage 1 Increases	After Target Wage 2 Increases
Medicaid	$410,440,000	$518,995,000
Supplemental Nutrition Assistance Program (SNAP)	$77,356,000	$106,707,000
School Lunch Program	$7,841,000	$19,633,000
Total	**$495,637,000**	**$645,336,000**

federal and state governments. Combined with other programs, these savings offset much of the cost of extending health insurance shown in Tables 6a and 6b above. Moreover, this is a conservative estimate, as additional savings would result from reduced reliance on programs like Temporary Assistance for Needy Families (TANF); Women, Infants, and Children nutrition program (WIC); housing subsidies; and home energy subsidies. Due to data constraints, however, it is not possible to project the savings associated with these programs with any precision. See Appendix A for further methodological details.

Benefits Cliffs

Under certain conditions, a worker losing public assistance benefits due to higher wages may, in fact, experience a drop in total income—an effect known as a "benefits cliff." We conducted additional analysis to assess whether Target 1 and Target 2 wage increases might unintentionally produce such effects. Policy analysts have noted that the exact outcome for each worker is difficult to determine, as their annual income, taxes, and benefits depend on many factors, including hourly wage, hours worked, number of dependents, ability to apply for and access benefits, and more.[31] With this challenge in mind, we calculated the impact of raising wages for a hypothetical worker most likely to rely on public assistance programs as an income supplement: a single adult with two children under age 12. We estimate the effects for this hypothetical worker in each geographical zone, calculating the change in their disposable income after Target 1 and Target 2 wage increases.[32]

With higher wages, workers will pay more in taxes and some may lose benefits. We estimated the net impact on their disposable income, detailed in Appendix B. The results show that if the State raises wages and provides health care for those who lose Medicaid, workers in each zone, at each level of raise, will experience a significant net increase in disposable income, even accounting for higher taxes and losses in public benefits. However, in New York City, a single worker with two young children would likely experience larger net income gains with the Target 1 raise than with the Target 2 raise. In the other zones, however, such workers would experience the greatest increase in disposable income with the higher Target 2 raise.

We also analyzed a scenario in which the State does not provide health insurance, and workers who lose Medicaid eligibility purchase it on their own. Here we assumed that the single worker with two children would buy an individual plan for themselves through the New York State of Health Marketplace (Bronze Plan) and a subsidized plan through Child Health Plus for their children.[33] For each zone and target wage level, such a worker would experience a net increase, with one exception: at the Target 1 raise, a single worker with two children in Long Island/Westchester would experience a small drop in disposable income due to the benefits cliff (see Appendix B for details). In this case, the higher raise would not be large enough to compensate for the high cost of health insurance for a worker and two children, and overall disposable income would drop by 1.2 percent—an example that underscores the crucial role of health insurance coverage in boosting worker incomes.

Finally, we examined net income changes for single workers with no children, who are ineligible for many

public benefits. With a wage increase, they would pay more in taxes, but their increase in disposable income would rise in all zones at the Target 1 level, and rise even more at the Target 2 level, even if they must pay for their own health insurance after the raise.[34]

SAVINGS FROM REDUCED TURNOVER

The home care field suffers from high turnover rates due to low wages and poor benefits. Additional challenges include workplace hazards and inadequate training that can lead to injuries.[35] Long-term care workers also experience severe job stress and high rates of absenteeism and burnout.[36] A 2008 study found that 40 to 60 percent of new home health aides leave the job after less than one year. Another 80 to 90 percent leave the field within the first two years.[37]

Turnover has significant costs. As previous research has shown, it is associated with lower quality of care, reduced access to care, and increased demand for and strain on more expensive nursing homes.[38] Turnover also generates substantial "separation costs" for employers, such as the expenses involved in recruiting and hiring, training, orientation, and termination. A 2004 report reviewed eight studies of turnover costs for care workers and found estimates ranging from $951 to $5,276 per employee, with an average of $2,712 per employee.[39] Adjusted for inflation, this is $3,799 in 2020 dollars — almost 16 percent of the median home care worker income in New York State. Boushey and Glynn conducted a review of 30 case studies and found turnover costs averaged 20 percent of wages for workers earning less than $50,000 per year, and 16 percent for those earning less than $30,000.[40] However, this review was not limited to the home care industry, and the home care studies it referenced found below-average turnover costs.

Based on this literature, our estimates assumed turnover costs of 16 percent of median home care worker annual earnings in New York State, or $3,526 per separation. With a wage increase, turnover would be less costly in some respects: for example, a higher wage could attract a larger and more qualified supply of workers, reducing recruitment and training costs. However, other turnover costs, such as processing terminations, could increase. In view of these complex and potentially conflicting effects, we assumed that the total turnover cost per worker would not change as the wage level increases.

Precise turnover rates for New York State home care workers in 2020 are not available. For this study we assumed that annual turnover is 64 percent, the most recent national estimate from the 2019 Home Care Benchmarking Survey.[41]

Most studies find that when wages rise, turnover falls. In one of the most comprehensive studies of wage and benefit increases for home care workers, Candace Howes studied the impact of a living wage policy in San Francisco on worker retention.[42] She found that a $1 wage increase reduced turnover by 17 percentage points; and that adding health and dental benefits reduced turnover by 21 percentage points each. Overall, a living wage policy that almost doubled wages over four years and added health benefits reduced turnover by 57 percent for new home care workers and by 31 percent for all home care workers. In later research, Howes found that turnover reduction resulted only when "good health care" was offered, and not with health insurance plans with restrictive eligibility requirements.[43]

Studies in other states have found similar results. For example, when Illinois increased its hourly reimbursement rate for Medicaid-funded home care services by 47 percent over five years, turnover fell by over 50 percent. In Wyoming, a 46 percent wage increase reduced turnover by 38 percent.[44] However, Howes's is the only study that includes estimates of health care provision on turnover rates. Applying Howes's findings to New York State, we found that turnover would fall by an estimated 31 percent for home care workers. Rounding this down to 30 percent, we projected savings from reduced turnover of approximately $151 million per year, as shown in Table 12.

For the Target 1 wage increase, we included a second scenario, in which turnover falls only 20 percent. Indeed, a slack labor market and continued high unemployment could reduce turnover, dampening the effect of wage increases. Also, the provision of health care benefits may have less of an impact due to the Affordable Care Act, which had not yet been passed when Howes conducted her study. In this second scenario, estimated turnover savings are about $101 million per year.

For the Target 2 raise, we again assumed a 30 percent reduction in turnover. We added a second scenario in which turnover falls by 50 percent, based on the turnover reduction that occurred when Illinois raised home care wages, mentioned above. This increases the estimated savings from turnover to approximately $252 million, as shown in Table 12.

SAVINGS FROM INCREASED PRODUCTIVITY

Previous research on wage increases for low-wage workers consistently finds that such changes are associated with higher productivity. Current workers may become more motivated, healthier, and more efficient in their job tasks when they are paid more. In addition, new recruits, attracted by higher wages relative to other occupations, may be better educated and more highly skilled, and thus more productive.[45] We would expect to see similar changes in the home care field. A broad conception of productivity also suggests that higher home care wages may lead to better health outcomes for clients, reducing hospitalizations and other costly interventions.[46] It is important to note, however, that productivity gains in the context of home care *do not* necessarily reflect a reduction in the quality or quantity of services provided to care recipients.

Productivity impacts, however, are difficult to quantify due to data limitations. Given that constraint, we drew from past studies to estimate potential productivity increases for two scenarios: a high-end estimate, in which productivity gains equal 100 percent of wage increases; and a low-end estimate, with productivity gains at 40 percent of wage increases, shown in Table 13.[47]

Table 12. Estimated Savings from Reduced Turnover, at Two Target Wage Levels

	Savings from Reduced Turnover
Wages Raised to Target 1 Levels	
Scenario 1: Turnover Falls 30%, from 64% to 45%	$151,327,000
Scenario 2: Turnover Falls 20%, from 64% to 51%	$100,884,000
Wages Raised to Target 2 Levels	
Scenario 1: Turnover Falls 30%, from 64% to 45%	$151,327,000
Scenario 2: Turnover Falls 50%, from 64% to 32%	$252,211,000

Table 13. Estimated Productivity Gains from Higher Wages

	Target Wage 1	Target Wage 2
Scenario 1: Productivity Gains Equal 100% of Wage Increase	$2,873,200,000	$4,875,890,000
Scenario 2: Productivity Gains Equal 40% of Wage Increase	$1,149,280,000	$1,950,356,000

ECONOMIC SPILLOVER EFFECTS

Any money that the State invests in additional home care wages will have spillover effects, as workers will spend those additional wages on goods and services, or to pay off debts. Low-wage workers tend to spend a higher share of their wages compared to those earning high wages, who might instead put money into savings.[48] The money spent by home care workers whose wages increase thus could stimulate new economic activity, creating new jobs in other industries. A recent review of such fiscal multipliers concluded that, "Stimulus policies with a high bang for the buck deliver resources quickly, and to the households most likely to need help making ends meet and so will quickly spend rather than save any additional dollar they receive."[49] This suggests that wage increases to low-wage workers would have a substantially greater impact than alternative policies like tax cuts.

There are a variety of methodologies for calculating spillover effects, and previous studies find a relatively large range.[50] Here, we use a standard fiscal multiplier approach which assumes that a given outlay of public spending will result in additional economic output of a specific magnitude. We employed two multipliers used by Weller et al. (2020): a multiplier of 1.8 and one of 1.6.[51] We also calculated the effect of a lower multiplier of 1.4, based on other studies of minimum wage increases in a city or state.[52] Table 14 shows the resulting estimates, which are based on the assumption that raises would be applied to 2020 home care wages and the 2020 home care workforce size. As we note below, the scale of the actual economic impacts could be different in future years, depending on changes in baseline wages and workforce size.

NEW SALES TAX REVENUES

Increased spending would generate new sales tax revenues. A large share of spending, however, would not be taxable, including most food purchases and debt payments. Using 2018 tax and spending data for New York State, we found that sales tax revenues equal 3.08% of total personal consumption expenditures.[53] We applied this percentage to the projected consumer spending levels in order to estimate new sales tax revenues, shown in Table 15.

TOTAL SAVINGS, REVENUES, AND SPILLOVER

Table 16 summarizes the overall economic benefits of raising home care worker wages in New York State. Their total estimated value is $7.6 billion for Target Wage 1 and $12.9 billion for Target Wage 2. Based on

Table 14. Estimated Additional Economic Output Resulting from Higher Wages

	Target Wage 1	Target Wage 2
Scenario 1: Multiplier of 1.8	$5,171,761,000	$8,776,603,000
Scenario 2: Multiplier of 1.6	$4,597,121,000	$7,801,425,000
Scenario 3: Multiplier of 1.4	$4,022,480,000	$6,826,247,000

Table 15. Estimated Sales Tax Revenue Resulting from Increased Economic Output

	Target Wage 1	Target Wage 2
Scenario 1: Multiplier of 1.8	$159,290,000	$270,319,000
Scenario 2: Multiplier of 1.6	$141,591,000	$240,284,000
Scenario 3: Multiplier of 1.4	$123,892,000	$210,248,000

Table 16. Total Savings, Revenues, and Economic Spillover Effects

Source	Target Wage 1	Target Wage 2
Income Tax Revenue Increase, New York State	$286,386,000	$518,211,000
Income Tax Revenue Increase, New York City and Federal	$811,528,000	$1,456,033,000
Sales Tax Revenue Increase	$141,591,000	$240,284,000
Public Assistance Reduction	$495,637,000	$645,336,000
Turnover Reduction	$151,327,000	$252,211,000
Productivity Gains	$1,149,280,000	$1,950,356,000
Economic Spillover	$4,597,121,000	$7,801,425,000
Total	**$7,632,870,000**	**$12,863,856,000**

these projections, the economic benefits would more than offset the cost of raising wages and extending health insurance plans to those without coverage as detailed above ($4.0 billion for Target Wage 1 raises and $6.3 billion for Target Wage 2 raises).

Table 16 shows the estimated effects of a 30 percent turnover reduction for Target 1, and of a 50 percent reduction for Target 2. For productivity gains, we selected the more conservative estimate (40 percent of wage gains), and for economic spillover, our estimate is based on the moderate assumption discussed above, namely a multiplier of 1.6. The sales tax estimates are based on the same assumption (a multiplier of 1.6).

It is difficult to isolate the share of economic benefits that would accrue to New York State alone, as some economic spillover will extend beyond the state's borders. Low-income workers spend a disproportionate share of their wages locally — on housing, childcare, gas, local grocers and restaurants, and the like. But other expenses, including debt payments and online retail, often leave the state. As discussed above, we used a moderate economic multiplier to account for such out-of-state "leakage," yet that multiplier cannot precisely capture the extent to which increased economic activity would benefit New York State specifically. Acknowledging these limitations, we present a tentative estimate of savings and gains that would directly benefit the New York State government

and private sector, one that includes new income and sales tax revenue, reduced state share of Medicaid spending, and economic spillover. We project that the economic benefits for New York State overall would approximate $5.4 billion for Target 1 and $9 billion for Target 2, with net gains dependent on how wage increases would be funded.

EMPLOYMENT EFFECTS

As we noted in the Introduction to this report, labor supply in this industry continues to lag even as demand rises, resulting in a serious shortage of home care workers. The result is that many home care jobs are left unfilled, and staff shortages in turn force home care agencies to turn down prospective clients and cause state programs to accrue waiting lists. While greater investment would create new positions and more hiring capacity, recruiting workers for existing positions remains a formidable challenge for the industry.

It is reasonable to assume that if the State could help raise wages to a living wage, more people would enter the field. Here we build on the work of McClelland and Mok (2012), as well as Weller et al. (2020).[54] As McClelland and Mok detail, existing research on labor supply dynamics suggests that higher wages will attract workers from other occupations or from outside the existing labor force. The additional provision of health insurance would likely

attract even more new workers to the field. Drawing from McClelland and Mok and Weller et al., we assumed that for each 1 percent gap between the average wage for low-wage workers and our Target wage levels, care work employment would increase by 0.1 percent.[55] Adding health insurance coverage would lift this increase to 0.2 percent. In other words, as home care compensation increases relative to other low-wage occupations, a certain number of workers will shift to home care work from other occupations. The results range from a low of 8,390 to 33,090 new home care workers entering the occupation annually, as shown in Table 17.

Higher wages could also spur changes in hours worked among certain groups already employed in the field. Here we focus on home care workers who report in the Current Population Survey that they work part-time for non-economic reasons, which means they may have the ability to adjust their hours if wages were raised. Within this group, however, some workers would likely keep their weekly hours constant. Others might decrease their hours, once they are able to garner the same total income for fewer hours. Still others might increase their hours, incentivized to earn more by higher wages—including those workers who may have formerly limited their hours to maintain eligibility for public assistance. To estimate the net effect on hours, we again follow McClelland and Mok (2012) and Weller et al. (2020), and assume that for every 1 percent gap between current wages and Target wages, workers would increase their hours of work by 0.1 percent, and increase their hours by 0.2 percent if provided with the wage increase plus health insurance. Table 18 shows the results, with a net increase in aggregate hours yielding new full-time equivalents ranging from 1,340 to 5,280.

In addition to increases in the home care labor supply from a wage increase and provision of health care, the new economic activity generated will also create new jobs in other fields. As noted earlier, home care workers will spend the bulk of their additional earnings on goods and services, including housing costs, food, transportation and basic necessities. This

Table 17. Increase in Home Care Workers Due to Wage Increases and Health Care, by Region

Zone	Total Increase in Employment Due to:			
	Raise to Target Wage 1	Target Wage 1 plus Health	Raise to Target Wage 2	Target Wage 2 plus Health
New York City (5 boroughs)	6,960	13,910	12,740	25,490
Long Island and Westchester	700	1,390	1,600	3,200
Rest of State	730	1,460	2,200	4,400
Total	**8,390**	**16,760**	**16,540**	**33,090**

Table 18. Increase in Hours and Full-Time Equivalents (FTEs) Due to Wage Increases and Health Care, by Region

Zone	Total Increase in Full-Time Equivalents Due to:			
	Raise to Target Wage 1	Target Wage 1 plus Health	Raise to Target Wage 2	Target Wage 2 plus Health
New York City (5 boroughs)	1,110	2,220	2,030	4,070
Long Island and Westchester	110	220	260	510
Rest of State	120	230	350	700
Total	**1,340**	**2,670**	**2,640**	**5,280**

in turn will spur job creation in a range of industries and occupations.

Based on the multipliers above, we estimated the extent of new economic activity that would be generated by the Target 1 and 2 home care wage increases. We then estimated the number of jobs that would be created due to this increased activity, in sectors such as grocery stores, gas stations and clothing stores. Here we assumed that growth in the state gross domestic product will generate new jobs in various sectors based on home care workers' increased consumption of goods and services.[56] The results range from 15,400 to 33,610 new jobs, as shown in Table 19.

Although we can estimate overall induced employment, it is beyond the scope of this analysis to examine how higher wages would affect specific industries related to home care. The impact on nursing home employment would be especially relevant for future analysis, as higher wages in home care might draw some workers away from nursing homes. However, such a relationship need not be zero-sum. The state of Connecticut, for instance, has implemented policies to "rebalance" Medicaid long-term supports and services, gradually shifting care provision from nursing facilities to home- and community-based care. As part of this initiative, Connecticut crafted strategies to facilitate worker transitions from jobs in nursing homes to those in community-based care.[57] These strategies recognize that recruiting nursing home workers for home care jobs makes sense given the similar skill sets required. Doing so as part of a coordinated policy effort may both advance Medicaid rebalancing and mitigate the broader home care labor shortage.

WAITING LIST REDUCTION AND PREVENTABLE INSTITUTIONAL CARE COSTS

The shortage of home care workers across New York State leaves many individuals without the services they are authorized to receive. Some of them join waiting lists for services, as in the case of programs administered by the New York State Office for the Aging, such as Expanded In-home Services for the Elderly (EISEP), as well as other federal, state, and locally funded initiatives that support the Aging Network's in-home program. As of February 2021, over 10,000 individuals statewide were on waiting lists for these NYSOFA-administered programs, including 2,950 individuals awaiting personal care services.[58] Even more may be on waiting lists for certain Medicaid-funded programs, but those data are not available.

NYSOFA-administered programs would need to recruit between 700 and 1,000 new home workers in order to meet the needs of the individuals on waiting lists, as personal care aides in these programs assist an average of three to four clients. We estimated above that, statewide and across programs, between 8,300 and 33,000 new workers would enter the home care field annually if wages and benefits were increased. If even a small portion of these workers were recruited into NYSOFA-administered programs, waiting lists for those programs could be significantly reduced, if not eliminated.

Clearing such waiting lists would spur additional savings, as individuals with unmet home care needs may become hospitalized, turn to nursing home care, or develop more complex needs that ultimately require costlier Medicaid home care services. To estimate

Table 19. Estimated Indirect Job Growth Resulting from Higher Wages

	Target Wage 1	Target Wage 2
Scenario 1: Multiplier of 1.8	19,800	33,610
Scenario 2: Multiplier of 1.6	17,600	29,870
Scenario 3: Multiplier of 1.4	15,400	26,140

these preventable costs, we used data collected by the Association on Aging in New York on the outcomes of waitlisted individuals. Based on past outreach to over 1,900 individuals awaiting services in eight counties, the Association determined that 10 percent of them had been admitted to nursing homes, while 6 percent had received Medicaid home-based or community-based care. Assuming similar outcome patterns statewide, the State could preempt nursing home and Medicaid usage for approximately 470 of the current 2,950 waitlisted individuals by ensuring access to home care.[59]

Table 20 illustrates the estimated savings that would accrue if those waitlisted individuals were to receive NYSOFA-administered home care services in lieu of nursing home and Medicaid services.[60] These estimated savings, based solely on documented waiting lists for NYSOFA-administered programs, likely represent only a fraction of total preventable nursing home, hospitalization, and Medicaid LTSS costs. Many individuals who need home care do not join waiting lists, so their outcomes and associated

costs are unknown. Given these limitations, we do not include an estimate of preventable nursing home and Medicaid usage in our total economic impact projections. As a result, we most likely underestimate the potential savings that would result from improved compensation for home care workers.

Table 20. Preventable Costs from Clearing Waiting Lists for NYSOFA-Administered Personal Care Services, 2021

	Preventable Nursing Home Cost	Preventable Medicaid Cost	Total Preventable Cost, Excluding Hospitalizations	State Share of Preventable Cost
Statewide	$43,844,000	$8,806,000	$52,650,000	$26,325,000

Additional Considerations

RIPPLE EFFECT WAGE INCREASES

If the wages of the lowest-paid workers are raised, workers who were previously earning just above the new floor wage may also expect or demand a raise. Or, in order to preserve an existing wage ladder (or "wage contour") employers might raise the wages of workers out of a sense of fairness or to reward factors such as seniority. Such raises are known as "ripple effect" wage increases.

Previous research suggests that ripple effects are usually found in cases of mandated minimum wage increases, although the scope and scale of the resulting raises vary, in part depending on the size of the wage bump and the nature of the labor market. One study found that the 1997 federal minimum wage increase led to smaller raises up to approximately the 15th wage decile, resulting in more workers receiving ripple effect raises than those who received mandated raises due to the minimum wage bump. Specifically, 4 million workers got raises totaling $741 million due to the increase in the mandated minimum wage, while another 11.5 million workers higher up the wage ladder received ripple effect raises of $1.28 billion.[61]

Other research has examined the wage bumps that occur with living wage ordinances. These studies also find ripple effect increases, but the total impact is smaller than those associated with hikes in the minimum wage. For example, studies of living wage laws in California found that ripple effect raises added between 13 and 35 percent to the total cost of the mandated wage increase.[62]

In this study, Target 1 wage levels represent a significant jump over current home care earnings and cover a substantial number of workers in the occupation. For example, raising wages to the Target 1 level would benefit 89 percent of all home care workers in New York City, 84 percent of those in Westchester/Long Island, and 73 percent in the rest of the state. At Target 2, 94 percent of New York City home care workers would benefit, along with 93 percent in Westchester/Long Island, and 88 percent in the rest of the state.

Ripple effect wage increases are optional, in the sense that the employer may or may not include them, and if they do occur, employers can structure the

Table 21. Example of Ripple Effect Wage Increases Compared to No Ripple Effect, Target 1 Wage Increase for New York City

Wage Percentile	Before Raise	New Wage After Raise to Target 1 (New York City)	
	Median wage within each percentile[63]	With no ripple effect	With ripple effect
Up to 50th percentile	$10.33	$22.00	$22.00
50th	$13.38	$22.00	$22.00
60th	$14.78	$22.00	$22.62
70th	$15.45	$22.00	$23.03
80th	$17.00	$22.00	$24.14
90th	$19.71	$22.00	$25.63
100th	$29.57	$29.57	$31.05

contour of raises in a variety of ways. To take account of potential ripple effect raises, Table 21 models an example in which such increases start at the 60th percentile wage group for the Target 1 raises in New York City.

Table 22 summarizes the total cost of ripple effect increases for this hypothetical wage contour, which is the difference between the cost of the targeted wage increases themselves and the higher wages necessary to maintain the wage contour.

PHASED-IN WAGE INCREASES

Our estimates above assume that wage increases and enhanced benefits would be implemented all at once. In practice, wages are often raised in phases, sometimes over as long a period as four or five years. Increasing home care wages to the Target 1 or Target 2 level could be phased in as well.

If this were the case, the cost of the wage bump would be lower in each year, but the savings would be lower as well. A smaller initial wage increase would leave more workers receiving public assistance, and it would have a smaller impact on turnover and productivity. With a smaller increase, fewer workers would be incentivized to increase their hours of work or to enter the field. However, we would expect to see the reductions in costs and savings to be proportional to the estimates provided above.

On December 31, 2020, minimum wages in Long Island/Westchester increased from $13.00 to $14.00 per hour, and from $11.80 to $12.50 in upstate New York. The estimates in this report are based on 2020 data and do not account for this raise. For home care workers who receive these raises, the total cost of increasing their wage to the Target 1 or Target 2 levels will be reduced.

Another factor to be considered in regard to phasing in the increases is that some of the projected costs and savings would occur each year, but others would decrease over time. For example, most estimates suggest that the savings from turnover and productivity gains would phase out over time.

Even if compensation improvements were implemented all at once, the costs and economic benefits estimated in this report would change as the home care workforce further expands. Raising wages, as intended, could attract more workers into the field, mitigating the State's mounting home care labor shortage. If that occurs, the cost of providing the wage and benefit levels in question would grow still further. Yet such workforce expansion would augment the savings and benefits outlined above: a larger, better paid workforce would yield greater tax revenues, economic spillover effects, and savings from reduced hospitalization and nursing home usage.

Table 22. Total Cost of Ripple Effect Wage Increases by Region

Region	Target 1 Raises	Target 2 Raises
New York City	$262,251,000	$420,055,000
Long Island/Westchester	$44,853,000	$47,357,000
Rest of State	$25,275,000	$26,859,000
Total	**$332,379,000**	**$494,272,000**

Recommendations and Conclusions

To tackle the mounting labor shortage in the home care sector, the State must consider bold strategies to transform wages and work conditions, attract new workers to the field, and retain existing ones. Our analysis shows how one such strategy, a major increase in home care compensation, would not only alleviate the labor shortage but also create significant economic benefits for the State. The total cost would be approximately $2.9 billion per year to raise wages to Target 1 levels, and $4.9 billion to raise them to Target 2. Adding health insurance coverage and additional payroll expenses would increase the total cost to $4 billion and $6.3 billion, respectively — representing 1.3 percent and 2 percent of total New York State health care spending.[64]

Although these costs are substantial in relation to current spending on long term care, we have shown that the potential savings are far larger. Indeed, an investment in raising home care worker wages in the short-term would result in vast savings in the medium- and long-term: total economic benefits of $7.6 billion for Target 1 wage increases and $12.9 billion for Target 2 increases, yielding a net gain of $3.7 billion for Target 1 and $6.6 billion for Target 2. Furthermore, these findings may, in fact, underestimate the economic benefits of wage increases because data constraints impede analysis of several public assistance programs as well as preventable health expenditures such as hospitalizations and nursing home admission.

RECOMMENDATIONS:

- Our analysis shows that allocating funding to raise home care wages to the target levels proposed would create net economic benefits, since the cost of doing so is greatly exceeded by the savings that would result. The proposed Fair Pay for Home Care legislation offers one immediate opportunity to create large-scale pay increases similar to those analyzed in this report. In developing such policies, target wage levels should be tailored to regional variations in the cost of living, and should be designed to ensure that no workers experience benefits cliffs or net decreases in income.

- It is critical to ensure that funding be appropriated not only for wage increases but also for the associated payroll costs, such as insurance premiums for disability benefits and workers' compensation.

- Funding healthcare coverage for workers who would lose Medicaid eligibility is also strongly recommended. At higher wage levels, many workers who currently receive Medicaid would lose their coverage. If those workers must then purchase their own insurance, the benefits of higher wages could be negated.

- Both the State and private employers should consider funding additional employee benefits in order to attract new workers and reduce turnover. Retirement plans, and defined benefit pension plans in particular, would have strongly positive effects on worker recruitment and retention.[65]

This report does not address the details of policy design or the policy mechanisms that implementation of the above recommendations would require. Collaboration between the State and diverse stakeholders would be necessary to navigate the complexity of the home care sector and to craft effective policy solutions. Medicaid would likely play a central role because employment through its programs currently undergirds such a large share of the home care workforce.[66] This report is intended to inform future policy efforts by determining how large-scale improvements

to home care compensation would affect New York State economically.

Our findings are not surprising; they are consistent with previous research on the positive economic benefits of wage increases and of public investment in care work.[67] The findings should be of particular interest in the current moment, as New York State enters the second year of the COVID-19 pandemic and confronts a difficult road to economic and social recovery. Studies like ours point to a promising strategy not only for addressing the problems of long-term care but also for spurring broader job growth in the wake of the economic recession. Previous research has found that public investment in the care sector would generate more job growth — for women and men alike — than would similar investment in the construction sector.[68] Moreover, public funding for

care work is an eminently safe investment, ensuring both job creation and economic spillover while being less sensitive to economic fluctuations than industries like tourism and gaming.

This report's focus is on specific economic impacts of improving the compensation of home care workers. As prior studies have noted, however, raising pay for direct care workers would also generate important human impacts, improving the health and well-being of workers and their families.[69] Moreover, because the home care workforce is comprised primarily of women of color and immigrants, elevating compensation would help to mitigate racial and gender inequality more broadly.[70] As advocates and policy-makers consider the economic dimensions of home care wage increases, such overarching social benefits should also be recognized.

Estimating Public Assistance Savings

To estimate program enrollment changes, we used the ACS and the CPS Annual Social and Economic Supplement (ASEC), obtained from Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles and J. Robert Warren, IPUMS-CPS: Version 8.0 [dataset] (Minneapolis, MN: IPUMS, 2020), https://doi.org/10.18128/D030. V8.0. The ACS 2019 file had sufficient sample sizes for each geographic zone. We pooled 2015-2020 files for the CPS ASEC.

We followed Weller et al. (2020) in our approach to public assistance, as we describe in the body of the report in reference to estimating changes to workers' Medicaid coverage. For Medicaid, we used ACS data alone, which offered sufficient sample sizes and variables. From our cost analysis, we estimated the number of workers losing Medicaid eligibility in each zone, at each target wage level. We used that number to calculate Medicaid savings, multiplying the number of newly ineligible workers by New York State's per capita Medicaid spending for adults, adjusted to 2020 dollars ("Medicaid Per Capita Expenditures," Medicaid.gov, 2018, https://www.medicaid.gov/state-overviews/scorecard/how-much-states-spend-per-medicaid-enrollee/index.html). Based on the respondents who would likely lose coverage, we also estimated the number of children who would lose Medicaid coverage, and similarly multiplied that number by New York's per capita Medicaid spending for children. Because such children may lose Medicaid coverage when their parents earn higher wages, the extension of health insurance plans to those families is particularly important.

We used a similar strategy for SNAP, EITC, and School Lunch Program analysis. We first estimated the current number of home care workers enrolled in each program, by zone. Then, for each home care respondent in the ACS file, we assessed whether or not they would likely remain eligible for each program, comparing income eligibility guidelines with the respondent's new family income after Target 1 and Target 2 wage increases. For workers currently earning below the respective target wage levels, we defined new family income as the target income (plus spouse's current total income, if applicable); for home care workers already earning above the target wage levels, we defined new family income as the respondent's current total income (plus spouse's current total income, if applicable).

We then took the income eligibility thresholds for each program, and following Weller et al. (2020:38), we multiplied the thresholds by 110 percent to create higher thresholds that "allow for the possibility of misreported annual income." By comparing each respondent's new, post-raise family income to these thresholds, we determined the number of respondents in each zone who would likely lose program eligibility. However, changes in eligibility are difficult to estimate based on income alone, because most programs also allow individuals to qualify through non-income factors, such as having a child with disabilities or an adult child enrolled as a full-time student. To account for such factors, for each program we isolated the number of home care workers who currently report recipiency even though their income data suggests that they are ineligible; we did so using the CPS or ACS, depending on available program-specific variables. We assumed that this group of workers would retain eligibility at Target 1 and Target 2 wage levels. Further, for some programs, we adjusted for take-up rates if the number of workers who currently appeared income-eligible exceeded than the number who currently reported recipiency. Once we had a final estimate of the number of workers losing program eligibility, we multiplied that number by the average value of each program's benefits, which we determined using the corresponding CPS variables (with the exception of Medicaid, as described above).

APPENDIX B:
Benefits Cliffs

Table B1. Benefits Cliff for Single Worker with Two Children, by Zone, Before and After Raises, *Assuming State Pays for Health Insurance*

	NYC (5 boroughs)			Long Island and Westchester			Rest of State		
	Before raise	After T1 raise	After T2 raise	Before raise	After T1 raise	After T2 raise	Before raise	After T1 raise	After T2 raise
Gross family earnings	$20,500	$40,000	$50,000	$25,713	$35,000	$45,000	$21,130	$30,000	$40,000
Earnings after taxes/credits	$28,957	$43,191	$42,224	$33,035	$40,183	$47,628	$29,445	$36,373	$43,905
Total benefits	$3,651	$1,217	$45	$3,651	$1,217	$45	$3,651	$3,651	$1,217
Disposable Income	$32,608	$44,408	$42,269	$36,686	$41,400	$47,673	$33,096	$40,024	$45,122
Change in disposable income		36.2%	29.6%		12.8%	29.9%		20.9%	36.3%

Note: In this table, we abbreviate Target Wage 1 as "T1" and Target Wage 2 as "T2."

Table B2. Benefits Cliff for Single Worker with Two Children, by Zone, Before and After Raises, *Assuming Workers Must Purchase Their Own Health Insurance*

	NYC (5 boroughs)			Long Island and Westchester			Rest of State		
	Before raise	After T1 raise	After T2 raise	Before raise	After T1 raise	After T2 raise	Before raise	After T1 raise	After T2 raise
Disposable Income	$32,608	$44,408	$42,269	$36,686	$41,400	$47,673	$33,096	$40,024	$45,122
Cost to purchase health care	n/a	$5,465	$5,609	n/a	$5,153	$5,153	n/a	$4,178	$4,394
Disposable income after raise and purchase of health care	$32,608	$38,943	$36,660	$36,686	$36,247	$42,520	$33,096	$35,846	$40,728
Change in disposable income		19.4%	12.4%		-1.2%	15.9%		8.3%	23.1%

Note: In this table, we abbreviate Target Wage 1 as "T1" and Target Wage 2 as "T2."

Cost of Raises in Context

Table C1 shows the projected costs of increased home care worker compensation as a percentage of four figures:

- New York State's Gross Domestic Product, which was $1.751 trillion in 2020;

- The State's operating funds, which are $103.4 billion for 2022;

- Total healthcare expenditures in New York State, estimated at $311.2 billion for 2022 (including spending on all health care services and administrative costs);

- Total long-term care expenditures in New York State, estimated at $38 billion in 2022.[71]

Table C1. Cost of Wage Increases and Health Coverage in Relation to New York State GDP, Operating Budget, and Healthcare Expenditures

Cost	Percentage of State GDP (2020)	Percentage of State Operating Funds (2022)	Percent of Total NYS Healthcare Spending (2022)	Percent of Total NYS Long-Term Care Spending (2022)
Wage increase to Target 1	0.18%	3.0%	1.0%	8.2%
Wage increase to Target 1 plus health coverage	0.23%	3.8%	1.3%	10.4%
Wage increase to Target 2	0.31%	5.1%	1.7%	13.9%
Wage increase to Target 2 plus health coverage	0.37%	6.0%	2.0%	16.5%

NOTES

1 Authors' analysis of "County Projections Explorer," Cornell Program on Applied Demographics, 2018, https://pad.human. cornell.edu/counties/projections.cfm.

2 Authors' analysis of "Long-Term Occupational Employment Projections, 2018-2028," New York State Department of Labor, accessed January 2021, https://www.labor.ny.gov/stats/lsproj.shtm. Projections are only available for home health aides and personal care aides overall, so these estimates include those working in both institutional and non-institutional settings. "Home health aides" and "personal care aides" are occupational titles used in U.S. government statistics. As defined by the U.S. Bureau of Labor Statistics, home health aides differ from personal care aides in that the former are typically supervised by licensed nursing staff and may provide assistance with simple healthcare tasks such as changing bandages, dressing wounds, and administering medication. Both occupations, however, may involve providing assistance with activities of daily living (such as feeding, bathing, toileting, and ambulation) and with instrumental activities of daily living (such as preparing meals, light housekeeping, and doing laundry). Because of their similar and overlapping duties, in practice the two occupations are often hard to distinguish. Furthermore, in New York State, personal care aides employed through Medicaid Consumer Directed Personal Assistance may also perform basic health-related tasks (see Carol Rodat, "New York's Home Care Aide Workforce," PHI, 2010, https://phinational.org/wp-content/ uploads/legacy/clearinghouse/PHI-486%20NY%20Framing.pdf). On the other hand, in New York State, certified home health aides are required to receive 75 hours of training as well as 12 hours of continuing education annually. This report focuses on home health aides and personal care aides who work in private homes, as opposed to in nursing homes or other group care facilities.

3 For detailed national and state projections, see Stephen Campbell, "New Research: 7.8 Million Direct Care Jobs Will Need to Be Filled by 2026," PHI, January 24, 2019, https://phinational. org/news/new-research-7-8-million-direct-care-jobs-will-need-to-be-filled-by-2026/.

4 Home Care Association of New York, "State of the Industry 2019: Financial Condition and Trends in Home and Community-based Care," February 2019, https://hca-nys.org/wp-content/ uploads/2019/02/HCA-Financial-Condition-Report-2019.pdf.

5 Mercer, "Examining the US Healthcare Workforce: Projected Healthcare Labor Market Gaps and Opportunities by State," accessed January 2021, https://www.mercer.us/our-thinking/ career/us-healthcare-labor-market-interactive-map.html#explore-map. Mercer projects that, in 2024, the supply of home health aides in New York State will fall short of demand by 23,000 workers. It is likely that the current annual shortage is already near that number, and that it may grow further due to the COVID-19 pandemic. For more detail on Mercer's projections,

see also Matthew Stevenson, "Demand for Healthcare Workers Will Outpace Supply by 2025: An Analysis of The US Healthcare Labor Market," Mercer Health Provider Advisory, 2018, https:// www.mercer.com/content/dam/mercer/attachments/private/ gl-career-2018-demand-for-healthcare-workers-will-outpace-supply-by-2025-analyisis-healthcare-labor-market-mercer.pdf. For further analysis of the home care labor shortage and its implications, see Paul Osterman, *Who Will Care for Us? Long-Term Care and the Long-Term Workforce* (New York: Russell Sage Foundation, 2017).

6 Sue Rubenstein, "Health Aides in Short Supply," *New York Times*, June 14, 1987, https://www.nytimes.com/1987/06/14/ nyregion/health-aides-in-short-supply.html.

7 Isaac Jabola-Carolus, Ilana Berger, and Julia Solow, "Essential but Undervalued: Understanding the Home Care Workforce Shortage in the Hudson Valley," Hand-in-Hand: The Domestic Employers Network, 2020, https://domesticemployers.org/ wp-content/uploads/2020/07/Hudson-Valley-Home-Care-Shortage-Report-1opt-1.pdf.

8 Home Care Association of New York, "Partial Summary Results from September 2020 HCA Member Survey of Status," document provided to authors, December 2020.

9 Due to rounding, these figures do not correspond precisely with the cost and benefit figures cited earlier in this paragraph.

10 Christian Weller, Beth Almeida, Marc Cohen, and Robyn Stone, "Making Care Work Pay: How Paying at Least a Living Wage Would Benefit Care Recipients, Workers, and Communities," LeadingAge and LTSS Center at UMass Boston, 2020, https://leadingage.org/ sites/default/files/Making%20Care%20Work%20Pay%20Report. pdf.

11 Lenore M. Palladino and Rakeen Mabud, "It's Time to Care: The Economic Case for Investing in Care," (Washington, D.C.: Time's Up Foundation, 2021); and "Public Investment in Home Health Care: A Win-Win Strategy for Employment and Public Health," Working Paper 513 (Amherst, MA: Political Economy Research Institute, 2020).

12 Jerome De Henau, Susan Himmelweit, Zofia Łapniewska and Diane Perrons, "Investing in the Care Economy: A Gender Analysis of Employment Stimulus in Seven OECD Countries," Women's Budget Group, 2016, https://www.ituc-csi.org/ IMG/pdf/care_economy_en.pdf; and Jerome De Henau and Susan Himmelweit, "A Care-Led Recovery from Coronavirus: The Case for Investment in Care as a Better Post-Pandemic Economic Stimulus than Investment in Construction," Women's Budget Group, 2020, https://wbg.org.uk/analysis/ reports/a-care-led-recovery-from-coronavirus/.

13 For details on Medicaid payment rates, minimum wage increases, and the financial state of New York's home care

agencies, see Home Care Association of New York, "Testimony to the Joint Legislative Budget Committee on Health and Medicaid on the 2019-20 Executive Budget," February 5, 2019, https://www.nysenate.gov/sites/default/files/testimony_given_by_the_home_care_association_hca.pdf.

14 Genworth, "Cost of Care Survey," 2020, https://www.genworth.com/aging-and-you/finances/cost-of-care.html.

15 For a comprehensive discussion of this relationship between minimum wage policies and the role of public investment in care work, see: Sarah Thomason, Lea Austin, Annette Bernhardt, Ken Jacobs, and Marcy Whitebook, "At the Wage Floor: Covering Homecare and Early Care and Education Workers in the New Generation of Minimum Wage Laws," UC Berkeley Center for Labor Research and Education, 2018, https://laborcenter.berkeley.edu/at-the-wage-floor/.

16 That right was established by the U.S. Supreme Court's interpretation of the Americans with Disabilities Act, issued in its 1999 decision in Olmstead v. L.C. For details on the developing Michigan case, Waskul v. Washtenaw County Community Mental Health, see United States Court of Appeals, Case 19-1400, Document 65-1, October 29, 2020, https://nclej.org/wp-content/uploads/2020/11/waskul-6th-circuit-opinion.pdf.

17 U.S. Bureau of Labor Statistics, "Unpaid Eldercare in The United States—2017-2018 Data from The American Time Use Survey," 2019, https://www.bls.gov/news.release/pdf/elcare.pdf; Sean Fahle and Kathleen McGarry, "Women Working Longer: Labor Market Implications of Providing Family Care," in *Women Working Longer: Increased Employment at Older Ages*, ed. Claudia Goldin and Lawrence F. Katz (Chicago: University of Chicago Press, 2017), 157–81; and Palladino and Mabud 2021.

18 We used the American Community Survey (ACS) 2019 one-year file to estimate workforce size, weekly hours, and current earnings. The data were accessed through Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek, IPUMS USA: Version 10.0 [dataset] (Minneapolis, MN: IPUMS), 2020, https://doi.org/10.18128/D010.V10.0. We define our target workforce for this study as individuals whose main occupation is in Census occupation code 3601 (home health aides) or 3602 (personal care aides), and whose main industry is Census industry code 8170 (home health care services), 7580 (employment services), 8370 (individual and family services), or 9290 (private households). The resulting estimate of the State's total home care workforce differs from those of other analysts. For example, PHI's Workforce Data Center reports 444,880 home health and personal care aide *jobs* statewide in 2019. The reason for the difference between this and our own more conservative estimate is two-fold. First, we exclude institution-based aides, who are not relevant to our analysis. Second, we estimate the number of *workers*, while others typically estimate the number of *jobs*; this reflects the fact that our figures are based on the American Community Survey, a survey of *households*, while larger estimates

are based on the Occupational Employment Survey, a survey of *employers*. The job figures are larger than the worker figures, in part because some workers hold multiple jobs. For the purpose of estimating the number of workers whose wages would rise to Targets 1 and 2, the proper metric is workers, not jobs. To check our estimate, we compared our workforce figures with data from another household survey, the Current Population Survey (CPS), and found similar results. Neither source is perfect because, in both, workers' occupations are sometimes miscategorized. Further, recent and especially undocumented immigrants tend to be underrepresented in household surveys. We ultimately chose to use the ACS data as the primary source for this report because it is the dataset with large enough sample sizes to conduct analysis for all three of the geographical zones within the State. Further, because the ACS collects data based on respondents' place of work, whereas the CPS data is based on place of residence, we are able to estimate the cost of raising wages for home care workers who reside in one zone and work in another. These data also allow us to account for approximately 3,000 workers who reside in New Jersey, Connecticut, and Pennsylvania but work in New York State. We include these workers in our cost calculations because their pay would be affected by any wage increases implemented in New York State; we also include them in our economic benefit calculations, with the notable exception of savings that would stem from reduced New York State Medicaid coverage and from reductions in New York City earned income tax credits.

19 We depend on the ACS to enable region-specific analysis, but the ACS only collects data on *annual* earnings. We are able to convert this to hourly wages with the ACS data on usual hours worked per week and weeks worked last year. Here we followed the methodological approach documented in Michael Reich, Sylvia Allegretto, Ken Jacobs, and Claire Montialoux, "The Effects of a $15 Minimum Wage in New York State," UC Berkeley Institute for Research on Labor and Employment, 2016, https://irle.berkeley.edu/files/2016/The-Effects-of-a-15-Minimum-Wage-in-New-York-State.pdf. However, instead of the intervalled measurement of weeks worked, we used the new non-intervalled weeks worked variable available in the 2019 ACS, which increases the precision of our hourly wage estimates. We also used the ACS variable for "personal earned income" instead of "personal wage income," in order to include the 3.4 percent of respondents categorized in the ACS data as self-employed. Many of those workers may be miscategorized due to ambiguous employment relations in the home care industry, but the difference between earned income and wage income estimates is modest: the difference between the medians of the two variables is only $200, while the difference between means is less than $100.

20 To adjust wages to 2020 levels, we accounted for both inflation and the minimum wage increases implemented at the end of 2019, which took effect after the 2019 ACS data was collected. We first analyzed wage growth from 2019 to 2020 (January through

November 2020), using hourly wage data from the CPS. For each geographical zone, we computed the median growth in wages among all low-wage occupations, defined as occupations with a median wage of $15 per hour or less in 2019. (This cut-off level was equal to the minimum wage for large employers in New York City and was 135 percent of the minimum wage for workers in the rest of the State.) We then applied the resulting growth rates to the 2019 ACS data, multiplying each respondent's hourly wage by the median percentage increase in their geographical zone.

21 The median hourly wage estimate for New York City home care workers is lower than the current legal minimum wage, likely reflecting widespread minimum wage non-compliance, which is well-documented in this industry. See Annette Bernhardt et al., "Broken Laws, Unprotected Workers," National Employment Law Project, 2009, https://www.nelp.org/publication/broken-laws-unprotected-workers-violations-of-employment-and-labor-laws-in-americas-cities/. In addition, some home care workers who are assigned 24-hour shifts may report in the ACS that they work 24 hours daily, even if they are paid for only 13 of those hours—a payment practice that New York State law permits if employers meet certain conditions for meal and rest breaks. In the ACS data, this discrepancy between hours and pay would also have a downward effect on hourly wage estimates.

22 The living wage levels shown in Table 4 are based on: "Living Wage Calculator," Amy K. Glasmeier and the Massachusetts Institute of Technology, accessed December 2020, http://living-wage.mit.edu/. Living wage rates vary by family composition and represent a minimum subsistence wage that can cover the cost of food, housing, healthcare, transportation, childcare, and basic clothing and personal care necessities. Here we present the living wage for an individual in a household of two working adults and two children. Based on the ACS data, the majority of New York State home care workers are either single with children or married with children. For comparison to our Target 1 and Target 2 wages, we display living wage rates for households with two working adults and two children; rates are even higher for single adults with children. We calculate hourly living wage rates as the median rate per geographic zone, converted to a 35-hour work week and adjusted for inflation to 2020 dollars.

23 The Fair Pay for Home Care Act, introduced in the New York State Legislature in early 2021, proposes raising wages to 150 percent of the highest minimum wage in each region. By 2022, after a scheduled increase in the fast food minimum wage outside New York City, that would mean a minimum of $22.50 per hour for home care workers statewide.

24 To estimate how many workers would likely lose eligibility for Medicaid and other public assistance, we followed Weller et al. (2020). We determined current Medicaid coverage based on whether a worker reports having such coverage in the ACS. Then, to evaluate a worker's Medicaid eligibility at higher wage levels, we used NYS Department of Health 2020 income level guidelines,

obtained from New York State Department of Health, "Medicaid in New York State," accessed November 2020, https://www.health.ny.gov/health_care/medicaid/. For individuals under 65, we compared projected family income to 138 percent of federal poverty thresholds; and for individuals aged 65 and over, we compared projected family income to eligibility thresholds specific to that age category. However, this income test alone is insufficient in assessing Medicaid eligibility, as there are alternative eligibility guidelines for pregnant women, minors, 19- and 20-year-olds living with parents, and individuals with disabilities. To account for these alternative sources of eligibility, we isolated the number of home care workers in the ACS who currently report having Medicaid coverage even though their income data suggests that they are ineligible. Following Weller et al., we assumed that this group of workers would retain Medicaid coverage at Target 1 and Target 2 wage levels.

25 Sources include discussions with New York health care plan administrators, the U.S. Department of Labor's Service Contract Act wage determination estimate for fringe benefits, the New York Healthy Terminal Act, and the Healthy New York program. We used the Healthy New York lowest-cost plan to account for family size and regional variation in rates.

26 The total projected health care costs shown may overestimate the actual costs, as the State should be able to negotiate a lower cost plan, given the size of the workforce and the State's purchasing power. Furthermore, some workers who currently report having no health insurance in the ACS may in fact have some form of coverage, and would not need new coverage at higher wage levels. At the same time, however, survey data tends to underestimate recipiency of social assistance such as Medicaid; thus more workers than we estimate might lose eligibility at higher wages, which would mean both additional costs in new coverage but also additional savings to Medicaid. Because the balance of such effects is difficult to determine, our estimates should be interpreted with caution.

27 Steven G. Allen, Robert L. Clark, and Ann A. McDermed, "Pensions, Bonding, and Lifetime Jobs," *The Journal of Human Resources* 28, no. 3 (1993): 463–81, https://doi.org/10.2307/146155; Richard Ippolito, *Pension Plans and Employee Performance* (Chicago: University of Chicago Press, 1997); and Christian Weller, "Win-Win: Pensions Efficiently Serve American Schools and Teachers," National Institute on Retirement Security, 2017, https://www.nirsonline.org/reports/win-win-pensions-efficiently-serve-american-schools-and-teachers/

28 Average workers' compensation and disability insurance premium costs were provided by the Home Care Association of New York and the Consumer Directed Personal Assistance Association of New York State.

29 Because the proposed wage increases are based on place of work, we also use place of work to define the geographic zones for our income tax calculations. As a result, we do not disaggregate

the small group of New York State nonresidents who nevertheless must pay New York State income taxes. Two exceptions are the New York City resident tax and the New York City Earned Income Credit, which do not apply to residents of any other zone or state. However, because our estimation method is based on a median worker for each household type in each zone, we must assume that our median New York City taxpayer also resides in New York City. This is a valid assumption because, based on our ACS analysis, 96 percent of home care workers employed in New York City are also New York City residents. Finally, we did not include the Yonkers city tax, as the ACS sample size for Yonkers was too small for any analysis of household income changes.

30 The actual percentage is likely higher, given the under-reporting of such recipiency in official survey data. See Kathryn Shantz and Liana Fox, "Precision in Measurement: Using State-Level Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families Administrative Records and the Transfer Income Model (TRIM3) to Evaluate Poverty Measurement," Working Paper SEHSD-WP2018-30, U.S. Census Bureau, 2018.

31 See, for example, Allison Cook, "Benefit Cliffs and Benefit Plateaus: Do Higher Wages Result in Higher Incomes for New York City's Home Care Aides?" PHI, 2017, https://phinational. org/wp-content/uploads/2017/07/benefit_cliff_powerpoint_final. pdf, and The Federal Reserve Bank of Atlanta's "Advancing Careers Initiative," including "Benefits Cliffs across the United States," accessed January 2021, https://www.frbatlanta.org/economic-mobility-and-resilience/advancing-careers-for-low-income-families/benefits-cliffs-across-the-united-states.aspx.

32 We do not include TANF or housing subsidies in these calcula-tions. Similar to PHI, we assume that the barriers to obtaining these are significant for the average worker, due to eligibility requirements and waiting lists. TANF benefits also tend to decline quickly. For most full-time workers, the TANF benefits would be close to zero. Some home care workers that work few hours may be receiving TANF benefits and would likely lose those with a raise or increase in hours.

33 For New York State of Health Marketplace rates see "Individuals and Families," New York State of Health, accessed January 2021, https://nystateofhealth.ny.gov/; for Child Health Plus rates, see New York State Department of Health, "Eligibility and Cost," Child Health Plus, accessed January 2021, https://www. health.ny.gov/health_care/child_health_plus/eligibility_and_cost. htm. We used New York City metropolitan rates for the NYC zone; Nassau County for the Long Island/Westchester zone, and Monroe County (Rochester) for "rest of state" as it has an approximate mid-point rate for both income and program eligibility upstate. We also examined the costs for a Silver Plan, which would raise health care costs and reduce the increase in disposable income. However, for five of the six cases, even after purchasing private

Silver Plan health insurance, there would still be a net increase in disposable income.

34 For more on the benefits cliff and raising wages, see Yannett Lathrop, "Raising the Minimum Wage Leads to Significant Gains for Workers, Not to 'Benefits Cliffs'," National Employment Law Project, 2020, https://s27147.pcdn.co/wp-content/uploads/Policy-Brief-Raising-Minimum-Wage-Leads-Significant-Gains-Workers-Not-Benefits-Cliffs.pdf.

35 Home health aides experience higher rates of back injury than do construction workers and building cleaners, as well as comparable rates of soreness, sprains, strains, and tears (authors' analysis of U.S. Bureau of Labor Statistics, "Case and Demographic Characteristics for Work-Related Injuries and Illnesses Involving Days away from Work," Tables R97, R98, R99, and R100, 2018, https://www.bls.gov/iif/oshcdnew2018.htm).

36 Dorie Seavey and Abby Marquand, "Caring in America: A Comprehensive Analysis of the Nation's Fastest Growing Jobs—Home Health and Personal Care Aides," PHI, 2011, https://www.yumpu.com/en/document/read/41098810/caring-in-america-a-comprehensive-analysis-of-the-nations-phi.

37 Institute of Medicine, *Retooling for an Aging America: Building the Health Care Workforce* (Washington, D.C.: The National Academies Press, 2008), https://www.nap.edu/catalog/12089/retooling-for-an-aging-america-building-the-health-care-workforce.

38 Reagan A. Baughman and Kristin Smith, "The Effect of Medicaid Wage Pass-Through Programs on the Wages of Direct Care Workers," *Medical Care* 48, no. 5 (2010): 426-432; Seavey and Marquand, "Caring in America."

39 Dorie Seavey, "The Cost of Frontline Turnover in Long-Term Care," Better Jobs Better Care, 2004, https://www.leadingage.org/sites/default/files/Cost_Frontline_Turnover.pdf.

40 Heather Boushey and Sarah Jane Glynn, "There Are Significant Business Costs to Replacing Employees," Center for American Progress, 2012, https://www.american-progress.org/issues/economy/reports/2012/11/16/44464/there-are-significant-business-costs-to-replacing-employees/.

41 Home Care Pulse, "Home Care Benchmarking Study," 2020, https://www.homecarepulse.com/benchmarking-study/.

42 Candace Howes, "Living Wages and Retention of Homecare Workers in San Francisco," *Industrial Relations* 44, no. 1 (2005): 139-63.

43 Candace Howes, "Living Wages and Home Care Workers," in Michael Reich, Ken Jacobs and Miranda Dietz, eds., *When Mandates Work: Raising Labor Standards at the Local Level* (Berkeley: University of California Press, 2014).

44 Seavey and Marquand, "Caring in America."

45 Weller et al., "Making Care Work Pay."

46 Krista Ruffini, "Better Workplace Conditions for Long-Term Eldercare Staff Are Key to Promoting Resident Safety amid the Coronavirus Pandemic," Washington Center for Equitable Growth, 2020, https://equitablegrowth.org/better-workplace-conditions-for-long-term-eldercare-staff-are-key-to-promoting-resident-safety-amid-the-coronavirus-pandemic/.

47 Weller et al. assume 100% productivity gains. The more modest assumption of 40% comes from studies on the impact of living wage and minimum wage ordinances (not specific to home care workers) in Robert Pollin, Mark Brenner, Jeannette Wicks-Lim, and Stephanie Luce, *A Measure of Fairness: The Economics of Living Wages and Minimum Wages in the United States* (Ithaca: Cornell University Press, 2008). Kocher and Sahni argue that it is difficult to increase labor productivity in health care due to the way in which the industry is organized as well as its complicated reimbursement rates. See Robert Kocher and Nikhil R. Sahni, "Rethinking Health Care Labor," *The New England Journal of Medicine* 365 (2011): 1370-1372, https://www.nejm.org/doi/full/10.1056/nejmp1109649.

48 Pollin et al., *A Measure of Fairness*.

49 Timothy J. Bartik, "New Evidence on State Fiscal Multipliers: Implications for State Policies," Working Paper 17-275, W.E. Upjohn Institute for Employment Research, 2017, https://doi.org/10.17848/wp17-275.

50 Charles J. Whalen and Felix Reichling, "The Fiscal Multiplier and Economic Policy Analysis in the United States," CBO Working Paper 2015-02 (Washington, D.C.: Congressional Budget Office, 2015); Kevin Jack, "Understanding the Multiplier Effect," New York State Department of Labor, 2005, https://www.labor.ny.gov/stats/PDFs/enys0405.pdf.

51 Weller et al. (2020) also use a high-end multiplier of 2.1 in estimating national gains due to raising wages for workers across the U.S. For a smaller area, however, more money will "leak" out of the region. For example, workers in New York City may spend some of their higher wages in New Jersey. Reflecting the fact that smaller geographic areas tend to have a smaller multiplier, we do not include the 2.1 estimate in this report. Jack (2005) summarizes multipliers by industry for New York State, using IMPLAN input-output modeling, and reports an employment multiplier of 1.78 for the health services industry. See also the fiscal stimulus multipliers in Mark Zandi, "At Last, the U.S. Begins a Serious Fiscal Debate," Moody's Analytics, 2011, https://www.economy.com/economicview/analysis/198972.

52 See Robert Pollin and Jeanette Wicks-Lim, "An Economic Analysis of the Nashville Living Wage Proposals," University of Massachusetts-Amherst PERI, 2009; Robert Pollin, Mark Brenner and Jeanette Wicks-Lim, "Economic Analysis of the Florida Minimum Wage Proposal," Center for American Progress, 2004; Reich et al., 2016, "The Effects of a $15 Minimum Wage."

53 This is an aggregate of sales tax revenues across the state, including city, county and state sales taxes. New York State Association of Counties, "Sales Tax Report," 2019, https://www.nysac.org/files/FINAL%20-%20NYSAC%20Sales%20Tax%20Report%20-%20September%202019.pdf.

54 Robert McClelland and Shannon Mok, "A Review of Recent Research on Labor Supply Elasticities," Working Paper 2012-12, Congressional Budget Office, 2012, https://www.cbo.gov/publication/43675.

55 To find the average wage of low-wage workers, we use the same group of occupations that we used to adjust wages in the above section on costs, namely those where the median wage in New York State was less than or equal to $15 per hour in 2019. An elasticity of 0.1 may, in fact, be somewhat conservative given the income and gender composition of the direct care labor market, but aligns with the assumptions used by Weller et al. (2020). Several studies have found that labor force participation elasticities are higher for low-income people and for both single and married women, compared to overall elasticities—some between the range of 0.2 and 0.3, or even higher (McClelland and Mok 2012). A higher elasticity means it takes a relatively small wage increase to attract low-income workers and single and married women into an occupation or into the labor force, compared to workers overall. We assume such a higher elasticity, 0.2, when accounting for the likely impact of including health insurance as part of home care worker compensation.

56 Following Weller et al. (2020), we assumed that every 1 percentage point growth in GDP would result in a 0.75 percent increase in employment. We also consulted Palladino (2020), "Public Investment in Home Health Care." Her model finds that a $1 billion investment in care work leads to 8,305 new induced jobs.

57 State of Connecticut Department of Social Services, "Strategic Rebalancing Plan: A Plan to Rebalance Long-Term Services & Supports," 2020, https://portal.ct.gov/-/media/Departments-and-Agencies/DSS/Health-and-Home-Care/Medicaid-Long-Term-Care-Demand-Projections/strategic_rebalancing_plan-2020.pdf#page=13

58 Based on data collected by the Association on Aging in New York, recent years have seen a steady increase in the total statewide waiting lists for NYSOFA-administered programs, and the total as of February 2021 appears consistent with this trend.

59 Further research would be required to assess this assumption about statewide rates of nursing home admission and Medicaid recipiency among waitlisted individuals.

60 To calculate these savings, we used the statewide mean nursing home rate, $148,623, based on New York State regional rates (obtained from "Estimated Average New York State Nursing

Home Rates," New York State Partnership for Long-Term Care, accessed January 2021, https://nyspltc.health.ny.gov/rates. htm). For the average cost of Medicaid home- and community-based care, we used an average rate of $50,000, provided by NYSOFA and the New York State Department of Health. The State share of preventable costs is 50 percent of the total, based on the distribution of Medicaid costs between the State and Federal government. This cost proportion was provided by NYSOFA; state-specific rates are also available at "Federal Medical Assistance Percentages," U.S. Department of Health & Human Services, accessed January 2021, https://aspe.hhs. gov/federal-medical-assistance-percentages-or-federal-financial-participation-state-assistance-expenditures.

61 Jeannette Wicks-Lim, "Mandated Wage Floors and the Wage Structure: New Estimates of the Ripple Effect of Minimum Wage Laws," in Robert Pollin, Mark Brenner, Jeanette Wicks-Lim, and Stephanie Luce, *A Measure of Fairness: The Economics of Living Wages and Minimum Wages in the United States* (Ithaca: Cornell University Press, 2008).

62 Michael Reich, Peter Hall and Ken Jacobs, "Living Wage Policies at San Francisco Airport: Impacts on Workers and Businesses," Working Paper No. 98-03, UC Berkeley Institute for Research on Labor and Employment, 2003, https://irle.berkeley. edu/living-wage-policies-at-san-francisco-airport-impacts-on-workers-and-businesses; David Fairris, David Runstein, Carolina Briones, and Jessica Goodheart, *The Los Angeles Living Wage Ordinance: Effects on Workers and Employers* (Los Angeles: Los Angeles Alliance for a New Economy, 2005).

63 As noted earlier, some home care workers report earnings below the minimum wage due to wage theft, unpaid hours during 24-hour shifts, and wage misreporting in survey data.

64 Appendix C outlines the cost of wages in relation to total health expenditures, State GDP, and the State budget.

65 Allen et al., "Pensions, Bonding, and Lifetime Jobs"; Ippolito, *Pension Plans and Employee Performance*; and Weller, "Win-Win: Pensions Efficiently Serve American Schools and Teachers."

66 For more details on the context of New York State's home care policy landscape, see Allison Cook, "New York Home Care: Leaders Reflect on the Changing Landscape," PHI, 2017, https:// phinational.org/wp-content/uploads/2017/07/home_care_in_ new_york_final.pdf; and "Job Quality for New York's Home Care Aides: Assessing the Impact of Recent Health Care and Labor Policy Changes," PHI, 2017, https://phinational.org/wp-content/ uploads/2017/07/issue_2_new_york_9_elements.pdf.

67 Weller et al., "Making Care Work Pay"; Palladino and Mabud, "It's Time to Care."

68 De Henau et al., "Investing in the Care Economy"; De Henau and Himmelweit, "A Care-Led Recovery."

69 Weller et al., "Making Care Work Pay."

70 For more information on the composition of New York State's direct care workforce, see "Workforce Data Center," PHI, 2021, https://phinational.org/policy-research/workforce-data-center/. On the relationship between care work and economic inequality in terms of gender and race, see Rachel E. Dwyer, "The Care Economy? Gender, Economic Restructuring, and Job Polarization in the U.S. Labor Market," *American Sociological Review* 78, no. 3 (June 1, 2013): 390–416, https://doi. org/10.1177/0003122413487197.

71 Gross Domestic Product figures are for the 3rd quarter 2020, from Bureau of Economic Analysis, "Gross Domestic Product by State, 3rd Quarter 2020," December 23, 2020, https://www.bea. gov/sites/default/files/2020-12/qgdpstate1220_0.pdf. Operating budget numbers are from New York State, "Open Budget," accessed January 2021, https://openbudget.ny.gov/overview.html. Healthcare and long-term care expenditures are from: Jodi L. Liu, Chapin White, Sarah A. Nowak, Asa Wilks, Jamie Ryan, and Christine Eibne, "An Assessment of the New York Health Act," RAND Corporation, 2018, https://www.rand.org/content/dam/ rand/pubs/research_reports/RR2400/RR2424/RAND_RR2424. pdf#page=60.

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SLU was established in 2018, as an outgrowth of CUNY's Murphy Institute. The School offers undergraduate and graduate degrees in Labor Studies and Urban Studies designed to meet the needs of working adults as well as traditional-age college students who seek to learn more about the challenges confronting poor and working class populations in the workplace and in the community. It also collaborates with other units of CUNY to offer a range of college-credit programs designed to give workers the academic and technical skills they need for professional advancement. Its faculty includes distinguished scholars in the social sciences as well as expert practitioners in government, labor, and public service. In addition to its academic programs, SLU sponsors research, organizes forums and conferences, and publishes the journal *New Labor Forum*.

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