

Letters and Materials  
for HF 2145 and  
HF 2146 (Greenman)

# **Safety Net Snags:**

THE EFFECT OF PAYROLL FRAUD ON MINNESOTA WORKERS AND  
TAXPAYERS



**NorthStar**  
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## ABOUT NORTH STAR POLICY ACTION

North Star Policy Action is an independent research and communications institute that is dedicated to improving the lives of everyday Minnesotans by advancing bold ideas that change the conversation and bring communities together. We develop and promote data-driven solutions to persistent problems that allow working people to thrive, no matter who they are or where they live

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# Executive Summary

The employer-employee relationship is foundational in the United States. Labor protections, such as minimum wage and overtime pay, begin with being recognized as an employee. The existence of many of our social safety net programs, including Unemployment Insurance and Workers' Compensation, comes from employer and employee contributions. Unfortunately, that foundation is under threat. Rather than hiring people as employees, deceptive employers are exploiting our system by misclassifying their workers as independent contractors.

To understand how this misclassification works, consider a recent example in which individuals were being hired by staffing agencies to work as dishwashers in restaurants. Rather than being hired as an employee of the restaurant, however, these individuals were told they were independent contractors. Imagine their surprise at finding out from the staffing agency that they were now understood as owning a dishwasher business that operated independently within the restaurant.<sup>1</sup> As a result, rather than being protected by federal, state, and local labor laws, the people hired by the staffing agency had to function as business owners, including all the paperwork and tax liabilities that come from owning a business.

When this type of payroll fraud occurs, everyone loses. Workers miss out on crucial benefits and worker protections. Employers who play by the rules are placed at a competitive disadvantage, as those engaging in fraud can undercut them. And taxpayers must cover the costs of social safety net programs that fail to receive legally required benefits due to this fraud.

Adding to the concerning nature of misclassification is the fact that we don't know its extent. One recent study of Minnesota's construction industry estimated that 23% of workers were misclassified, costing each worker roughly \$30,000 annually, along with the state losing out on \$136 million in tax revenue.<sup>2</sup> While helpful, this analysis leaves an open question about the scale and cost of misclassification outside of construction.

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<sup>1</sup> Tamara Chuang, "Gig workers are employees, Denver auditor says as city seeks more than \$1 million in penalties," The Colorado Sun, January 23, 2024, <https://coloradosun.com/2024/01/23/denver-auditor-gig-workers-wage-theft>.

<sup>2</sup> Nathan Goodell and Frank Manzo, "The costs of wage theft and payroll fraud in the construction industries of Wisconsin, Minnesota, and Illinois: Impacts on Workers and Taxpayers," Illinois Economic Policy Institute and Midwest Economic Policy Institute, January 14, 2021, <https://midwestepi.files.wordpress.com/2020/10/mepi-ilepi-costs-of-payroll-fraud-in-wi-mn-il-final.pdf>.

To help answer this question, we ran an analysis to estimate the proportion of workers experiencing payroll fraud in Minnesota in 2019, along with estimates of how much money was lost to crucial state programs due to that fraud and how much workers themselves lost in compensation.<sup>3</sup> We find:

- ◆ **Approximately 316,000 private-sector workers experienced payroll fraud in 2019**, representing 9.4% of all private-sector workers in Minnesota.
- ◆ **These Minnesota workers lost between \$2.9 and \$6.2 billion due to payroll fraud**, including lost compensation in the form of paid leave, overtime pay, health insurance, and retirement benefits.
- ◆ **Payroll fraud cost the Minnesota state government an estimated \$506 million to \$1.3 billion in tax revenue**. This total includes \$276 million to \$836 million in unrealized state income tax collections, \$176 million to \$353 million in Workers' Compensation premiums, and \$54 million to \$108 million in state Unemployment Insurance contributions.
- ◆ **We estimate the total public revenue impact of payroll fraud in Minnesota to be between \$1.04 and \$2.1 billion**. This greater financial penalty reflects payroll fraud's impact on other legally required benefits, including money lost in federal Social Security and Medicare contributions. If we assume this level of payroll fraud exists today and adjust it for inflation to put it in real 2024 dollars, the losses rise to an estimated \$1.3 to \$2.6 billion.

Notably, the methodology underlying these estimates utilizes conservative assumptions, meaning our analysis almost assuredly underestimates the amount and cost of payroll fraud in Minnesota. A more comprehensive and accurate estimate of payroll fraud in Minnesota will ultimately require greater data analysis from state agencies. Even if we accept our likely underestimation as correct, the analysis shows that payroll fraud is widespread in Minnesota, devastates North Star State workers, and punches significant holes in the state's social safety net.

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<sup>3</sup> We focus on 2019 because it was the most recent year for which all necessary data was available that was not significantly affected by the COVID-19 pandemic. Data was also available for 2020, but we were concerned the estimates would not be valid due to the pandemic's impact that year.

# Estimating the Number of Workers Experiencing Payroll Fraud

Scholars have utilized several methodologies for estimating the number of workers experiencing payroll fraud. These analyses have focused almost exclusively on the construction industry, recognizing that construction is an area where payroll fraud is prevalent.<sup>4</sup> The target of our analysis differs, as we are interested in identifying payroll fraud across all industries within Minnesota. As such, many of our methods mirror steps utilized in other analyses, while some of our methods differ.

Generally, identifying payroll fraud starts by estimating the number of self-employed workers (SE). This starting point begins with the understanding that individuals classified as wage-and-salary employees (i.e., W-2 employees) are not treated as independent contractors and therefore are not subject to payroll fraud. To estimate the number of self-employed workers, we subtract the number of wage-and-salary employees (WSE) from the total number of employees (TE).

## Equation 1: $SE = TE - WSE$

Past analyses carrying out this function have utilized household surveys, such as the American Community Survey (ACS), to inform their estimate of the total number of employees (TE). While common, studies have

also suggested that this method may create errors insofar as evidence suggests that the ACS undercounts the total number of jobs<sup>5</sup> and may specifically suffer in its ability to capture self-employment accurately.<sup>6</sup>

To calculate total employment (TE), we rely instead on the total full-time and part-time employment numbers provided by the Bureau of Economic Analysis (BEA).<sup>7</sup> Based on data from the Bureau of Labor Statistics (BLS) and the Internal Revenue Service (IRS), this source avoids the issues that stem from any household survey's reliance on self-reporting. According to the BEA, Minnesota had approximately 3.4 million total private-sector, full and part-time employees in 2019.<sup>8</sup>

To estimate the number of wage-and-salary employees (WSE), we again turn to the BEA. However, we now focus on their data measuring full- and part-time wage-and-salary employment by industry (i.e., W-2 employees). The BEA data indicates that the state had roughly 2.6 million full- and part-time private-sector wage-and-salary employees in 2019.

4 See for example: Russell Ormiston, Dale Belman, and Mark Erlich, "An empirical methodology to estimate the incidence and costs of payroll fraud in the construction industry," Institute for Construction Employment Research, January 2020, <https://iceres.org/wp-content/uploads/2020/06/ICERES-Methodology-for-Wage-and-Tax-Fraud.pdf>. Laura Valle-Gutierrez, Russ Ormiston, Dale L. Belman, and Jody Calemine, "Up to 2.1 million US construction workers are illegally misclassified or paid off the books," The Century Foundation, November 12, 2023, <https://tcf.org/content/report/up-to-2-1-million-u-s-construction-workers-are-illegally-misclassified-or-paid-off-the-books/>.

5 Robert Warren, "2020 American Community Survey: Use with caution, an analysis of the undercount in the 2020 ACS data used to derive estimates of the undocumented population," *Journal on Migration and Human Security*, Volume 10, Number 2, 2022, Pages 134-45, <https://doi.org/10.1177/23315024221102327>.

6 Katherine G. Abraham, John C. Haltiwanger, Claire Hou, Kristin Sandusky, and James R. Spletzer, "Reconciling survey and administrative measures of self-employment," *Journal of Labor Economics*, Volume 39, Number 4, October 2021, Pages 825-60, <https://doi.org/10.1086/712187>.

7 Throughout this entire analysis, the data we receive refers to jobs, not individuals. This is a potentially important distinction, insofar as one individual might have multiple jobs and therefore file multiple W-2s or 1099s, leading to a form of double counting for that individual. To the extent that this takes place, it should boost the number of legitimate jobs we are capturing in our analysis, meaning it will drive down estimates of payroll fraud and create a more conservative estimate of the problem.

8 U.S. Bureau of Economic Analysis, "SAEMP25N Total full-time and part-time employment by NAICS industry" (accessed Monday, March 4, 2024), <https://www.bea.gov/itable>. Our analysis excludes public sector employees. In support of this choice, the BEA's statistics show that there is no self-employment within the Public Administration industry.

Plugging these numbers into Equation 1 reveals an estimated 740,000 self-employed private-sector workers in Minnesota. This estimate is broken down by all private-sector industries in Table 1 below.

With this calculation run, we must now identify who among the self-employed (SE) is correctly classified as self-employed (CSE) and which workers are instead suffering from

payroll fraud (WPF), either because they are paid off-the-books in cash or misclassified as independent contractors (i.e., should be classified as wage-and-salary employees). Subtracting the correctly classified self-employed (CSE) from the total number of self-employed (SE) provides us with an estimate of the workers suffering from payroll fraud (WPF).

**Table 1. Self-Employment in Minnesota, 2019**

Industry	Total Employment (TE)	Wage-and-Salary Employment (WSE)	Self-Employment (SE), TE - WSE
Agriculture, Forestry, Fishing and Hunting	91,586	25,306	66,280
Mining, Quarrying, and Oil and Gas Extraction	8,522	5,821	2,701
Utilities	12,801	12,054	747
Construction	185,156	130,375	54,781
Manufacturing	338,900	324,471	14,429
Wholesale Trade	138,008	128,902	9,106
Retail Trade	354,771	295,382	59,389
Transportation and Warehousing	152,547	97,695	54,852
Information	54,829	46,906	7,923
Finance and Insurance	220,384	155,545	64,839
Real Estate and Rental and Leasing	142,496	36,680	105,816
Professional, scientific, and technical services	240,317	161,020	79,297
Management of companies and enterprises	93,296	89,244	4,052
Administrative and support and waste management and remediation services	171,938	135,791	36,147
Educational services	93,134	72,964	20,170
Health care and social assistance	517,479	477,773	39,706
Arts, entertainment, and recreation	94,194	48,427	45,767
Accommodation and food services	243,298	229,254	14,044
Other services (except Public Administration)	197,813	139,961	57,852
All private sector	3,351,469	2,613,571	737,898



## Equation 2: $WPF = SE - CSE$

To carry out Equation 2, we rely on the US Census Bureau's Nonemployment Statistics series (NES).<sup>9</sup> The "NES Establishments" statistic from this data series provides the number of U.S. businesses with no paid employees by industry. Given that this statistic represents businesses where only the business owner is being paid, we treat the "NES Establishments" statistic as approximating the number of self-employed individuals who reported earnings to tax agencies. As this group reports self-employed earnings, we identify them as Minnesota's correctly classified self-employed population (CSE). According to the NES, nearly 420,000 self-employed contractors reported earnings in Minnesota in 2019.<sup>10</sup>

Drawing on equation 2, subtracting this number of self-employed workers who reported earnings (CSE) from the total number of self-employed workers (SE) identifies all self-employed workers who did NOT report any earnings to tax agencies. Given that these individuals appear to be self-employed but did not report any

earnings from this self-employment, we classify them as workers suffering from payroll fraud (WPF). This analysis indicates that nearly 316,000 Minnesota workers suffered from payroll fraud in 2019. The results of this analysis for each industry can be found in Table 2.

Taking these 316,000 workers as a share of total private-sector employment in Minnesota reveals that approximately 9.4 percent of all private-sector workers in Minnesota suffered from payroll fraud in 2019.

Notably, we employ a conservative method for identifying workers suffering from payroll fraud in Minnesota. For example, our method misses workers who may have been misclassified as independent contractors but still reported their earnings to tax agencies as a self-employed person. Moreover, it misses individuals who were paid "off-the-books", meaning they did not file any tax return, causing our analysis procedure to miss them entirely.<sup>11</sup> As such, the 9.4 percent estimate should be seen as a conservative estimate of the amount of payroll fraud in Minnesota.

<sup>9</sup> Some concerns have been raised in previous analyses about the use of NES data to estimate payroll fraud (see for example, Ormiston et al. 2020, footnote 40 where the authors note that one individual may file a return for multiple businesses, leading to the double counting of correctly classified self-employed individuals and thus an undercount of workers experiencing payroll fraud). To the extent that this critique impacts our results, it should only create an even more conservative estimate of payroll fraud, once again suggesting that our estimates provide a lower bound.

<sup>10</sup> US Census Bureau, 2019 County Business Patterns and Nonemployer Statistics Combined Report. "Minnesota." (accessed Monday, March 4, 2024), <https://www.census.gov/data/tables/2019/econ/nonemployer-statistics/2019-combined-report.html>.

<sup>11</sup> Previous analysis in Massachusetts suggests that roughly 30% of all independent contractors in the state's residential construction industry may fall into the paid "off-the-books" category. It is not clear if this statistic would extrapolate out to other industries, but it is suggestive of how large the undercount in our analysis might be. See Tom Juravich, Russell Ormiston, and Dale Belman, "The social and economic costs of illegal misclassification, wage theft, and tax fraud in residential construction in Massachusetts," Institute for Construction Economic Research, June 2021, <https://faircontracting.org/wp-content/uploads/2022/03/Juravich-Ormiston-and-Belman-Wage-Theft-6-28-21.pdf>.

**Table 2. Workers Suffering from Payroll Fraud in Minnesota, 2019**

Industry	Self-Employment (SE)	Correctly Classified as Self-Employed (CSE)	Workers Suffering from Payroll Fraud (WPF), SE - CSE
Agriculture, Forestry, Fishing and Hunting	66,280	5,398	60,882
Mining, Quarrying, and Oil and Gas Extraction	2,701	162	2,539
Utilities	747	220	527
Construction	54,781	40,099	14,682
Manufacturing	14,429	7,143	7,286
Wholesale Trade	9,106	6,043	3,063
Retail Trade	59,389	38,792	20,597
Transportation and Warehousing	54,852	44,987	9,865
Information	7,923	5,500	2,423
Finance and Insurance	64,839	12,466	52,373
Real Estate and Rental and Leasing	105,816	46,061	59,755
Professional, scientific, and technical services	79,297	63,193	16,104
Management of companies and enterprises	NA*	NA*	NA*
Administrative and support and waste management and remediation services	36,147	29,488	6,659
Educational services	20,170	16,240	3,930
Health care and social assistance	39,706	28,769	10,937
Arts, entertainment, and recreation	45,767	32,730	13,037
Accommodation and food services	14,044	5,353	8,691
Other services (except Public Administration)	57,852	35,436	22,416
All private sector	733,846	418,080	315,766

*\*The NES does not include an estimate for NES establishments within the "Management of companies and enterprises" industry. As such, we do not include this industry in our analysis. This choice creates a more conservative estimate of payroll fraud in Minnesota to the extent that we miss any payroll fraud within the management industry.*

# Estimating Tax Revenue Lost

Similar to identifying workers suffering from payroll fraud, different methodologies have been used to estimate tax revenue lost due to this fraud.<sup>12</sup> In this analysis, we draw on the methodology utilized by the Illinois Economic Policy Institute (ILEPI) in their 2021 analysis of payroll fraud.<sup>13</sup> While the ILEPI report focuses on fraud within the construction industry, it is particularly useful for our purposes because none of the assumptions about lost revenue in their methodology rely on assumptions specific to that industry. It is therefore possible to apply this methodology to our statewide focus.

Our aim here is to identify lost tax revenue in four areas. These include:

- ◆ Lost income tax collections
- ◆ Lost Workers' Compensation (WC) premiums
- ◆ Lost state Unemployment Insurance (UI) contributions
- ◆ Lost legally required benefits

This last category of lost legally required benefits includes revenue deducted from workers' paychecks to cover state and federal government programs. As such, it combines the aforementioned state programs (WC and UI) with federal programs (i.e., Social Security, Medicare, and the federal portion of UI) to provide a more comprehensive sense of the public revenue lost due to payroll fraud.

## INCOME TAX LOST

To identify the revenue lost for these programs, we start by estimating the average annual wages for wage-and-salary workers in Minnesota. This estimate provides a sense of how much income tax is lost due to payroll fraud while also giving us a basis for estimating how much revenue is lost in social insurance program contributions.

To explain this estimation process, consider the example of workers in the educational services industry. Using data from the BEA, we find that the total private-sector wages in that industry in 2019 were roughly \$2.5 billion.<sup>14</sup> When divided by the total number of private-sector wage-and-salary employees in that industry shown in Table 1 (72,964), we can estimate that the average annual wage per educational services employee was \$35,098.

This wage amount can then be used to identify the income tax lost due to payroll fraud. First, the effective state income tax rate for a single individual making \$35,098 in Minnesota is 3.24%, meaning educational service wage-and-salary employees contribute \$1,137 annually in state income taxes, on average.<sup>15</sup>

Given that our method for identifying workers suffering from payroll fraud was based on finding individuals who did not report earnings to tax agencies, we assume that this group paid no income taxes. Thus, if we assume that workers suffering from payroll fraud receive the same annual average wage as wage-and-salary workers (\$35,098),

<sup>12</sup> For example, see: Dale Belman and Aaron Sojourner, "Illegal worker misclassification: Payroll fraud in the District's construction industry," Office of the Attorney General for the District of Columbia, September 2019, <https://oag.dc.gov/sites/default/files/2019-09/OAG-Illegal-Worker-Misclassification-Report.pdf>.

John Schmitt, Heidi Shierholz, Margaret Poydock, and Samantha Sanders, "The economic costs of worker misclassification," Economic Policy Institute, January 25, 2023, <https://www.epi.org/publication/cost-of-misclassification/>.

<sup>13</sup> Goodell and Manzo, 2021.

<sup>14</sup> U.S. Bureau of Economic Analysis, "SAINC7N Wages and salaries by NAICS industry" (accessed Monday, March 4, 2024).

<sup>15</sup> Following ILEPI's methodology, effective state income tax rates are derived from SmartAsset's Income Tax Calculator, found at <https://smartasset.com/taxes/income-taxes>.

we can assume that the state loses \$1,137 in income taxes per misclassified worker within the educational services industry.

However, it is possible that workers suffering from payroll fraud are paid substantially less than their wage-and-salary counterparts, as exploitation of these workers is common. To explore this possibility, we create a second estimate that assumes workers suffering from payroll fraud make half as much as W-2 employees in the same industry. In the case of educational service workers, this creates an estimated annual wage of \$17,549 and an effective state income tax rate of 1.14%, meaning the state would lose \$200 per educational service worker suffering from payroll fraud.<sup>16</sup>

<sup>16</sup> The assumption of workers suffering from payroll fraud making as much as W-2 employees mirrors ILEPI's treatment of construction workers who are paid off-the-books in cash. As we discuss, while this equivalence is possible, it is also conceivable that wages for workers experiencing payroll fraud could be lower than what wage-and-salary employees receive, particularly because the exploitation of these workers often includes low pay. With that said, a third possibility is that wages for workers experiencing payroll fraud could be higher, as the people employing them can get away with not contributing to social insurance programs or other benefits (e.g., health insurance), allowing them to put more of their compensation into wages. If that is the case, the actual income tax revenue lost would be greater than our upper bound estimates.

Utilizing these assumptions, we apply the per-worker amount of income tax (\$200/\$1,137) to the total number of workers suffering from payroll fraud within educational services (3,930), resulting in our estimating that the state loses between \$786,000 and \$4.5 million in income taxes due to payroll fraud within the educational services industry.

The table below provides these same totals for each industry in Minnesota, showing that the state lost out on an estimated \$276 to \$854 million in income tax contributions in 2019. Notably, if we assume this same level of payroll fraud exists today and update the estimates to adjust for inflation, it suggests that the state will lose between \$340 million and \$1.05 billion in income tax revenue in 2024.<sup>17</sup>

<sup>17</sup> This inflation adjustment relies on the 23% inflation rate provided by the CPI from 2019 to 2023. This inflation rate was taken from the Inflation Calculator provided by the Federal Reserve Bank of Minneapolis: <https://www.minneapolisfed.org/about-us/monetary-policy/inflation-calculator>.

**Table 3. State Income Tax Lost Due to Payroll Fraud in Minnesota, 2019**

Industry	Wages Estimates	Effective State Income Tax Rate	State Income Tax Lost Per Worker	Workers Suffering from Payroll Fraud (WPF)	Total state income tax lost (thousands of \$)
Agriculture, Forestry, Fishing and Hunting	\$17,927 - \$35,855	1.22% - 3.3%	\$219 - \$1,183	60,882	\$13,316 - \$72,036
Mining, Quarrying, and Oil and Gas Extraction	\$46,225 - \$92,450	3.82% - 5.31%	\$1,766 - \$4,909	2,539	\$4,483 - \$12,464
Utilities	\$58,704 - \$117,408	4.46% - 5.67%	\$2,618 - \$6,657	527	\$1,380 - \$3,508
Construction	\$34,863 - \$69,725	3.23% - 4.83%	\$1,126 - \$3,368	14,682	\$16,533 - \$49,445
Manufacturing	\$34,043 - \$68,086	3.18% - 4.78%	\$1,083 - \$3,255	7,286	\$7,888 - \$23,712
Wholesale Trade	\$42,532 - \$85,064	3.61% - 5.18%	\$1,535 - \$4,406	3,063	\$4,703 - \$13,497

Retail Trade	\$15,750 - \$31,500	0.65% - 3%	\$102 - 945	20,597	\$2,109 - \$19,464
Transportation and Warehousing	\$28,128 - \$56,255	2.72% - 4.35%	\$765 - \$2,447	9,865	\$7,547 - \$24,141
Information	\$41,955 - \$83,909	3.59% - 5.16%	\$1,506 - \$4,330	2,423	\$3,649 - \$10,491
Finance and Insurance	\$53,685 - \$107,369	4.24% - 5.52%	\$2,276 - \$5,927	52,373	\$119,213 - \$310,403
Real Estate and Rental and Leasing	\$27,363 - \$54,727	2.65% - 4.29%	\$725 - \$2,348	59,755	\$43,330 - \$140,292
Professional, scientific, and technical services	\$48,847 - \$97,694	3.98% - 5.39%	\$1,944 - \$5,266	16,104	\$31,308 - \$84,799
Administrative and support and waste management and remediation services	\$21,320 - \$42,641	1.88% - 3.62%	\$401 - \$1,544	6,659	\$2,669 - \$10,279
Educational services	\$17,549 - \$35,098	1.14% - 3.24%	\$200 - \$1,137	3,930	\$786 - \$4,469
Health care and social assistance	\$26,760 - \$53,520	2.59% - 4.23%	\$693 - \$2,264	10,937	\$7,580 - \$24,760
Arts, entertainment, and recreation	\$19,737 - \$39,474	1.6% - 3.48%	\$316 - \$1,374	13,037	\$4,117 - \$17,909
Accommodation and food services	\$11,748 - \$23,495	0% - 2.2%	\$0 - \$517	8,691	\$0 - \$4,492
Other services (except Public Administration)	\$18,651 - \$37,302	1.38% - 3.37%	\$257 - \$1,257	22,416	\$5,770 - \$28,179
<b>All private sector</b>	<b>\$78,084,330 - \$156,168,660</b>			<b>315,766</b>	<b>\$276,381 - \$854,340</b>

## REVENUE LOST TO SOCIAL INSURANCE PROGRAMS

Extrapolating from annual wages to revenue lost to social insurance programs requires identifying how much of each worker's compensation is devoted to these programs. Here, we rely on the BLS's "Employer Costs for Employee Compensation" report (ECEC).<sup>18</sup>

This report breaks down the compensation provided to workers by employers on an industry-by-industry basis, indicating how much the employer gives in wages and benefits. Notably, this benefit compensation is further broken down into categories like retirement and legally required benefits, including how much an employer devotes to Social Security, Medicare, federal UI, state UI, and WC.

<sup>18</sup> Bureau of Labor Statistics, "Employer Costs for Employee Compensation – September 2019," Table 4 "Employer Costs for Employee Compensation for private industry workers by occupational and industry group," Page 8, [https://www.bls.gov/news.release/archives/ecec\\_12182019.pdf](https://www.bls.gov/news.release/archives/ecec_12182019.pdf).

An example of how this breaks down for workers in the educational services industry is provided in the “Percentage of Compensation” column in Table 4 below.

The calculations for the “Dollar Amount of Compensation” column above begin with the two annual wage estimates for educational service workers (one equal to the average wage for W-2 employees and one estimated at half that amount). With the ECEC identifying educational service wages comprising 71.2% of these workers’ total compensation, we can calculate that employers provide a grand total of \$24,665 to \$49,330 when these wages are added to the 28.8% of compensation offered in other employer benefits.<sup>19</sup>

<sup>19</sup> Following the ILEPI report’s methodology, we calculate the percentage of compensation by taking the average of the industry-specific compensation and the West North Central region’s overall compensation statistics (i.e., Minnesota’s Census division). For example, the share of the education industry’s compensation devoted to legally required benefits for private industry workers was 6.7%, while it was 7.8% for the West North Central region, resulting in the 7.2% average used here.

Included among these benefits are 7.2% of compensation provided in legally required benefits (\$1,778/\$3,556 per worker), 0.4% in state UI (\$92/\$185 per worker), and 1.2% in WC (\$300/ \$600 per worker).

Given that no earnings were reported for the 3,930 educational workers suffering from payroll fraud, it is safe to assume that all of these contributions were lost for each worker. As a result, each of these per-worker totals can be multiplied by 3,930, creating the industry total price tags of \$7 to \$14 million lost in legally required benefits, \$363,000 to \$725,000 lost in state UI contributions, and \$1.2 to \$2.4 million lost in WC premiums.<sup>20</sup>

<sup>20</sup> The ECEC report does not provide industry-specific shares of compensation for each program (e.g., Workers’ Compensation). To create these, we relied on the share that each program comprised of the legally required benefits for all private industry workers (see Table 1- Employer Costs for Employee Compensation by Ownership). For example, Workers’ Compensation made up roughly 16.9% of legally required benefits according to that table, so we assume this share of legally required benefits transfers across each industry, explaining how we derive the 1.2% share for Workers’ Compensation for educational service workers from the 7.2% share given to legally required benefits within this industry (i.e., 1.2% = 16.9% of 7.2%).

<b>Table 4. Lost Programmatic Revenue Due to Educational Services Workers Suffering from Payroll Fraud in Minnesota, 2019</b>			
	Percentage of Compensation	Dollar Amount of Compensation	Total Lost Across All Payroll Fraud
Wages	71.2%	\$17,594 – \$35,098	
Total Compensation	100%	\$24,665 – \$49,330	
Legally Required Benefits	7.2%	\$1,778 – \$3,556	\$6,988,428 – \$13,976,855
State Unemployment Insurance	0.4%	\$92 – \$185	\$362,699 – \$725,399
Workers’ Compensation	1.2%	\$300 – \$600	\$1,179,647 – \$2,359,293



The table below displays these same programmatic totals for each industry.<sup>21</sup> Taken together, these indicate that Minnesota lost \$54 to \$108 million in state UI contributions, along with \$176 to \$353 million in WC premiums. Added to the \$276 to \$836 million lost in state income taxes, Minnesota lost an estimated \$506 million to \$1.3 billion in revenue due to payroll fraud in 2019.

Moreover, when the money lost to state UI and WC is added to employer contributions for other federal programs, such as Social Security and Medicare, the total tax revenue lost to legally required benefits rises to between \$1.04 and \$2.1 billion. Again, if this estimate is updated to adjust for inflation, the totals rise to between \$1.3 and \$2.6 billion in real 2024 dollars.

<sup>21</sup> We do not provide the programmatic compensation breakdown for each industry here, but these calculations are available from the authors by request.

**Table 5. Lost Programmatic Revenue due to Payroll Fraud in Minnesota, 2019**

Industry	Legally Required Benefits (thousands of \$)	State Unemployment Insurance (thousands of \$)	Workers' Compensation (thousands of \$)
Agriculture, Forestry, Fishing and Hunting	\$149,002 – \$298,005	\$7,733 – \$15,467	\$25,152 – \$50,303
Mining, Quarrying, and Oil and Gas Extraction	\$14,053 – \$28,107	\$720 – \$1,459	\$2,372 – \$4,744
Utilities	\$3,553 – \$7,106	\$184 – \$369	\$600 – \$1,200
Construction	\$65,996 – \$131,993	\$3,425 – \$6,850	\$11,140 – \$22,280
Manufacturing	\$28,438 – \$56,876	\$1,476 – \$2,952	\$4,800 – \$9,601
Wholesale Trade	\$16,199 – \$32,397	\$841 – \$1,681	\$2,734 – \$5,469
Retail Trade	\$36,599 – \$73,198	\$1,899 – \$3,799	\$6,178 – \$12,356
Transportation and Warehousing	\$34,502 – \$69,004	\$1,791 – \$3,581	\$5,824 – \$11,648
Information	\$10,439 – \$20,878	\$542 – \$1,084	\$1,762 – \$3,524
Finance and Insurance	\$282,090 – \$564,179	\$14,640 – \$29,281	\$47,617 – \$95,234
Real Estate and Rental and Leasing	\$182,766 – \$365,532	\$9,485 – \$18,971	\$30,851 – \$61,702
Professional, scientific, and technical services	\$79,936 – \$159,872	\$4,149 – \$8,297	\$13,493 – \$26,986
Administrative and support and waste management and remediation services	\$16,516 – \$33,032	\$857 – \$1,714	\$2,788 – \$5,576
Educational services	\$6,988 – \$13,977	\$363 – \$725	\$1,180 – \$2,359
Health care and social assistance	\$31,155 – \$62,311	\$1,617 – \$3,234	\$5,259 – \$10,518
Arts, entertainment, and recreation	\$28,161 – \$56,321	\$1,462 – \$2,923	\$4,754 – \$9,507
Accommodation and food services	\$12,012 – \$24,023	\$623 – \$1,247	\$2,028 – \$4,055
Other services (except Public Administration)	\$46,390 – \$92,780	\$2,408 – \$4,815	\$7,831 – \$15,661
All private sector	<b>\$1,044,795 – \$2,089,591</b>	<b>\$54,225 – \$108,450</b>	<b>\$176,361 – \$352,723</b>

# Estimating the Impact on Workers

When payroll fraud occurs, it is not just taxpayers who are hurt through lost revenue, but also the workers who experience this fraud. Workers suffering from payroll fraud lose access to the many forms of compensation that employees generally receive above and beyond their wages. These additional forms of compensation include supplemental pay (often pay for overtime), paid leave, insurance (primarily health insurance), and retirement benefits.

Following a similar methodology to one developed by the Economic Policy Institute (EPI),<sup>22</sup> we can use these additional forms of compensation to identify how much workers lost due to payroll fraud by industry in Minnesota in 2019. Once again, we begin with the educational services industry to exemplify how this methodology works.

We start with the same average annual wage for W-2 employees in educational services calculated in the previous section (\$35,098). We also utilize the estimates for compensation derived from the 2019 ECEC report, indicating that wages comprised an average of 71.2% of total compensation for workers in the educational services industry.<sup>23</sup> Additional value to the worker was provided in the form of paid leave (7.4% of total compensation), supplemental pay (1.6%), insurance (8.3%), and retirement and savings (4.3%).

Applying these percentages to the \$35,098 average wage allows us to calculate the average dollar amount received by educational service W-2 employees for each form of compensation, as seen in the second column of Table 6. Factoring these additional benefits in, W-2 employees in educational services received \$45,767.55 in total value from their job.

<sup>22</sup> Heidi Shierholz, John Schmitt, and Margaret Poydock, "EPI comments on DOL's proposed rulemaking on employee or independent contractor classifications under the Fair Labor Standards Act," Economic Policy Institute, December 13, 2022, <https://www.epi.org/publication/epi-comments-on-dols-proposed-rulemaking-on-employee-or-independent-contractor-classification-under-the-fair-labor-standards-act/>.

<sup>23</sup> Bureau of Labor Statistics, "Employer Costs for Employee Compensation – September 2019," Table 4 "Employer Costs for Employee Compensation for private industry workers by occupational and industry group," Page 8, [https://www.bls.gov/news.release/archives/eccec\\_12182019.pdf](https://www.bls.gov/news.release/archives/eccec_12182019.pdf). See note 14 for the way we combine industry and geography compensation figures to derive our estimates.

**Table 6. Lost Worker Compensation in Educational Services Due to Payroll Fraud in Minnesota, 2019**

	W-2 Employee	Worker Experiencing Payroll Fraud, Low Wage Estimate	Worker Experiencing Payroll Fraud, High Wage Estimate
Wages (71.2%)	\$35,098	\$35,098	\$41,328
Paid leave (7.4%)	\$3,656		
Supplemental pay (1.6%)	\$783		
Insurance (8.3%)	\$4,091		
Retirement and savings (4.3%)	\$2,139		
Total value of job to worker	\$45,768	\$35,098	\$41,328
Total value lost due to payroll fraud- Dollars Lost (% Lost)		\$10,669 (23.3%)	\$4,439 (9.7%)



Following EPI's methodology, we can then derive two estimates for the value lost to workers experiencing payroll fraud. In the first estimate, we assume that these workers receive an identical wage to W-2 employees. With these workers failing to receive the additional benefits of paid leave, supplemental pay, insurance, and retirement and savings, their total compensation remains at \$35,098.20, more than \$10,000 (23.3%) less than their industry colleagues who are treated as W-2 employees.

In the second estimate, we assume that workers experiencing payroll fraud are paid better than W-2 employees, with employers covering the cost of health insurance and retirement benefits. While providing a larger total value, workers experiencing payroll fraud still lose more than \$4,400 (9.7%) in total compensation under this more conservative estimate due to losses in areas like supplemental pay and paid leave.

Table 7 provides the results when this methodology is applied to all industries in Minnesota in 2019. Notably, the value lost varies considerably based on the industry's average wage and the industry's level of compensation beyond wages. Where workers experiencing payroll fraud in the well-compensated and more generous utilities industry lose between 12.3% and 31.4% (\$21,118 and \$53,861) of their total compensation, those in the less well-paying and less generous accommodation and food services industry see estimated losses between 9.2% and 20.6% (\$2,715 and \$6,100).

The final column in Table 7 multiplies these per worker losses by the total number of workers experiencing payroll fraud, as provided in Table 3. Adding these totals together reveals Minnesota workers lost an estimated \$2.9 to \$6.2 billion in total job value due to payroll fraud in 2019. An adjustment for inflation reveals that this same level of payroll fraud today would lead to workers losing between \$3.6 and \$7.7 billion.

**Table 7. Lost Worker Compensation due to Payroll Fraud in Minnesota, 2019**

Industry	Total Value Lost per Worker (Low Wage Estimate)			Total Value Lost per Worker (High Wage Estimate)		
	Dollars Lost	% Lost	Industry Total Lost (thousands of \$)	Dollars Lost	% Lost	Industry Total Lost (thousands of \$)
Agriculture, Forestry, Fishing and Hunting	\$11,708	24.6%	\$712,802	\$4,491	9.4%	\$273,442
Mining, Quarrying, and Oil and Gas Extraction	\$32,139	25.8%	\$81,600	\$14,227	11.4%	\$36,123
Utilities	\$53,861	31.4%	\$28,385	\$21,118	12.3%	\$11,129
Construction	\$21,510	23.6%	\$315,804	\$8,768	9.6%	\$128,729
Manufacturing	\$25,110	26.9%	\$182,949	\$11,583	12.4%	\$84,390
Wholesale Trade	\$31,515	27.0%	\$96,531	\$12,911	11.1%	\$39,547
Retail Trade	\$8,621	21.5%	\$177,571	\$3,905	9.7%	\$80,432
Transportation and Warehousing	\$20,842	27.0%	\$205,605	\$8,539	11.1%	\$84,234
Information	\$30,582	26.7%	\$74,100	\$15,305	13.4%	\$37,083

Finance and Insurance	\$40,834	27.6%	\$2,139	\$21,041	14.2%	\$1,102,004
Real Estate and Rental and Leasing	\$16,531	23.2%	\$987,807	\$7,683	10.8%	\$459,091
Professional, scientific, and technical services	\$29,974	23.5%	\$482,700	\$15,498	12.1%	\$249,575
Administrative and support and waste management and remediation services	\$11,278	20.9%	\$75,097	\$5,342	9.9%	\$35,572
Educational services	\$10,669	23.3%	\$41,931	\$4,439	9.7%	\$17,447
Health care and social assistance	\$17,340	24.5%	\$189,646	\$8,066	11.4%	\$88,222
Arts, entertainment, and recreation	\$12,265	23.7%	\$159,894	\$5,746	11.1%	\$74,908
Accommodation and food services	\$6,101	20.6%	\$53,021	\$2,715	9.2%	\$23,599
Other services (except Public Administration)	\$10,787	22.4%	\$241,802	\$4,617	9.6%	\$103,493
All private sector			<b>\$6,245,854</b>			<b>\$2,929,021</b>

## NET VALUE LOST TO WORKERS

A final aspect of this analysis is to consider additional costs that may occur to workers experiencing payroll fraud. A central aspect of our analysis up to this point has been that workers experiencing payroll fraud do not pay any income tax, but as discussed earlier, that is almost assuredly not true of all workers in this category. Some workers who should be treated as employees but instead are misclassified as independent contractors likely still pay taxes based on the income they receive.

Notably, such workers face a considerable penalty for their misclassification. Where W-2 employees must only cover the employee's share of taxes for Medicare and Social

Security, independent contractors are forced to double their contribution to cover both their share of tax and their employer's share. As a result, rather than paying 7.65% of their income to cover taxes for Medicare and Social Security, these misclassified workers must devote 15.3% of their pay.<sup>24</sup>

Moreover, as covered in EPI's methodology, these misclassified workers must also cover the clerical costs associated with their independent contractor status, including invoicing, bookkeeping, and small business tax filings. Factoring these additional costs into the analysis reveals a more comprehensive set of losses facing misclassified workers.<sup>25</sup>

<sup>24</sup> Medicare and Social Security contributions are based on taxing the amount a worker receives in income (wages + paid leave + supplemental pay) minus any contributions to business-related expenses that could be written off from this income (in this case, paperwork costs for independent contractors).

<sup>25</sup> See note 4 in Shierholz, Schmitt, and Poydock, 2022 for a detailed explanation of the methodology behind the clerical cost estimate. In short, it includes the cost for bookkeeping software, tax filing software, and labor costs for administrative time put in by the misclassified worker.

Table 8 reveals these net losses using the educational services industry example. The first row begins with the total value estimates derived in Table 6, while the remaining rows cover the paperwork costs facing misclassified independent contractors and

the share of a worker's pay that is contributed to Social Security and Medicare. Factoring these additional costs in shows that the net value of a job for a misclassified worker in educational services is reduced by 20.1% to 32.2%.

**Table 8. Lost Net Value for Misclassified Educational Services Workers in Minnesota, 2019**

	W-2 Employee	Misclassified Worker, Low Wage Estimate	Misclassified Worker, High Wage Estimate
Total value of job	\$45,767.55	\$35,098.20	\$41,328.21
[Minus] Paperwork Costs		\$898.09	\$1,014.90
[Minus] Worker contribution to Social Security and Medicare	\$3,024.62	\$5,232.62	\$6,167.94
Net Value of Job	\$42,742.93	\$28,967.49	\$34,145.37
Total Lost due to Misclassification		\$13,775.44 (32.2%)	\$8,597.56 (20.1%)

These same costs are factored in for each industry in Table 9, revealing that misclassification costs for workers range from 19.8% (Accommodation and Food Services) to 39.4% (Utilities). We do not provide a total dollar value lost here

across the whole state, recognizing that we do not have an estimate of how many workers experience this specific form of misclassification given that our analysis in Table 2 captures workers who did not file taxes.

**Table 9. Lost Net Value for Misclassified Workers in Minnesota, 2019**

Industry	Net Value Lost per Worker (Low Wage Estimate)		Net Value Lost per Worker (High Wage Estimate)	
	Dollars Lost	% Lost	Dollars Lost	% Lost
Agriculture, Forestry, Fishing and Hunting	\$14,880	33.5%	\$8,882	20.0%
Mining, Quarrying, and Oil and Gas Extraction	\$39,794	34.2%	\$24,908	21.4%
Utilities	\$63,295	39.4%	\$36,082	22.5%
Construction	\$27,483	32.2%	\$16,894	19.8%
Manufacturing	\$30,717	35.3%	\$19,474	22.4%
Wholesale Trade	\$38,589	35.4%	\$23,127	21.2%
Retail Trade	\$11,436	30.6%	\$7,516	20.1%
Transportation and Warehousing	\$25,589	35.5%	\$15,363	21.3%
Information	\$37,366	35.0%	\$24,669	23.1%
Finance and Insurance	\$49,347	35.7%	\$32,897	23.8%
Real Estate and Rental and Leasing	\$21,202	31.9%	\$13,848	20.8%
Professional, scientific, and technical services	\$38,017	31.9%	\$25,985	21.8%
Administrative and support and waste management and remediation services	\$15,011	29.9%	\$10,078	20.1%
Educational services	\$13,775	32.2%	\$8,598	20.1%
Health care and social assistance	\$21,870	33.1%	\$14,163	21.4%
Arts, entertainment, and recreation	\$15,675	32.5%	\$10,257	21.2%
Accommodation and food services	\$8,267	30.0%	\$5,453	19.8%
Other services (except Public Administration)	\$14,083	31.4%	\$8,955	20.0%

# Comparison to Official State Numbers

The preceding analysis relied on federal government statistics from both the BEA and the NES. To check the robustness of that analysis, we requested corresponding records from Minnesota's Department of Revenue (DOR). In response, the DOR provided the total number of wage-and-salary tax returns (W-2s) they received in 2019, along with the total compensation associated with those returns. They similarly provided this information for self-employed tax returns for non-employment compensation (1099-NECs).

Similar to the BEA and NES records, these DOR records provide us with crucial information, with the number of W-2s received serving as an estimate of the number of wage-and-salary employees in the state, while the 1099-NECs give us an estimate of the number of correctly classified self-employed workers. Moreover, the compensation statistics give us an estimate of the average salaries for Minnesota workers, allowing us to again derive estimates of tax revenue lost due to payroll fraud.

Before moving into this analysis, there are a couple of important caveats. Mirroring the BEA and NES statistics, several assumptions remain when utilizing the DOR records. For example, the DOR records still miss any individuals who experience payroll fraud by being paid "off-the-books" because there are no tax records for these individuals. In addition, we are still assuming that all people who did file taxes are correctly classified, while it is likely the case that many individuals who are misclassified still file taxes under an incorrect category. As a result of these two assumptions, using the DOR numbers means we are still almost assuredly undercounting the amount of payroll fraud.

In addition, the DOR numbers are only provided at the economy-wide level, rather than being broken down by industry as was the case for the federal statistics previously utilized. This removes some of the precision of the analysis but still allows for statewide estimates to be created.

Finally, to fully carry out the analysis using the DOR numbers, we must draw on some BEA statistics because there is no estimate from the DOR of total employment, and therefore no way to generate an estimate of total self-employment that captures individuals who fail to file their taxes. From this perspective, it is not the case that the estimates produced using the DOR numbers are more accurate or superior to the previous analysis, but they do provide another reference point and a further robustness check for our original analysis.

## NUMBER OF IMPACTED WORKERS

Table 10 provides a comparison of the records provided by DOR (left column) and the corresponding estimates produced earlier through our original analysis utilizing federal statistics (NSPA- right column). To start, DOR reported receiving over 3.4 million W-2 tax returns,<sup>26</sup> indicating nearly 400,000 more wage-and-salary employees than the estimate we derived from the BEA (3 million).<sup>27</sup> To utilize this number for our

<sup>26</sup> We believe that the discrepancy between the DOR's reported W-2 total and the BEA's wage-and-salary employment estimate comes from a difference in data sources. The BEA relies on data from the Quarterly Census of Employment and Wages (QCEW), which itself takes data from state Unemployment Insurance (UI) numbers. Notably, some individuals who receive W-2s are not covered under UI. For example, individuals who have not worked the minimum number of hours to qualify for UI coverage would file a W-2 with the DOR but not be captured by the QCEW or BEA. For this reason, the DOR is likely to receive more W-2s than would be collected under the BEA's system of relying on UI data.

<sup>27</sup> Note that we indicate a total of 3 million wage-and-salary employees here, while Table 1 listed 2.6 million. The difference here stems from Table 1 excluding the 431,000 public sector workers in Minnesota in 2019. As the DOR numbers did not exclude this population, we provide the BEA estimate of total employment in Table 10 which also includes the public sector.

analysis, recall our equation for estimating self-employment (SE) involved taking the difference between total employment (TE) and wage-and-salary employment (WSE).

Unfortunately, as mentioned above, the DOR does not have an estimate of total employment, making it impossible to utilize this data to generate an estimate of total self-employment. To deal with this limitation, we once again rely on the BEA’s estimate for total self-employment of 733,846.

With this total self-employment estimate in hand, we then turn to identifying how many of these individuals are correctly classified and how many are suffering from payroll fraud using the following equation:

Equation 2:  $WPF = SE - CSE$

As seen in Table 10, the DOR reported receiving 396,370 1099-NEC filings.<sup>28</sup> Given that these individuals filed self-employment taxes, we treat this as the number of correctly classified self-employed individuals in the state. Notably, the 396,370 reported number is slightly smaller than the correctly classified self-employment estimate we derived from

<sup>28</sup> In their data report to us, the DOR indicated they received 326,913 1099s that included Social Security Numbers (SSNs) and 69,457 1099s without SSNs, creating our total correctly classified self-employment estimate of 396,370. They also indicated that they had 86,605 filings from people who provided both W-2s and 1099s. For the purposes of this analysis, we categorize those 86,605 people as correctly classified self-employed to create a more conservative estimate, though they just as easily could have been counted only as W-2 workers, which would have increased the amount of payroll fraud found in this analysis.

the NES of 418,080, though they are quite similar.

The final row in Table 10 lists the result of inserting these different estimates into Equation 2. Using the DOR numbers means subtracting the 396,370 correctly classified self-employed individuals from the total self-employment estimate of 733,846. The result is an estimated 337,376 workers suffering from payroll fraud in Minnesota, according to the DOR data.

From this perspective, our original analysis based on federal data found a slightly smaller degree of payroll fraud in Minnesota, though the difference is relatively modest (21,710 people or 6.9%). This slight difference from our initial estimate of payroll fraud provides further confidence in our analysis.

TAX REVENUE LOST

To derive estimates of tax revenue lost, we must begin by estimating the average salaries of workers experiencing payroll fraud, as this provides us with the amount of money that these workers would pay in state income tax if they were correctly classified.

In our original analysis, we assumed that workers suffering from payroll fraud received either the same wage as their W-2 colleagues or half of that wage total. Where our original analysis created these estimates at the industry level, if we utilize this same assumption at an economy-wide level using

Table 10. Total Workers Suffering from Payroll Fraud, DOR v. NSPA		
	DOR	NSPA
Total Wage-and-Salary Tax Returns (WSE)	3,447,030	3,044,911
Total Self-Employment (SE), TE – WSE	733,846	733,846
Total Correctly Classified Self-Employed Returns (CSE)	396,370	418,080
Workers Suffering from Payroll Fraud (WPF), SE – CSE	337,476	315,766



the BEA data, it creates estimates of workers suffering from payroll fraud receiving an upper bound of \$59,753 or a lower bound of \$29,876.<sup>29</sup>

The DOR numbers allow for this estimated annual average salary to be created differently. Here, we can divide the total number of 1099-NEC returns (396,370) by the total compensation reported on these returns (\$17,712,656,199).<sup>30</sup> The result is an average estimated self-employed annual wage of \$44,687. We can then assume that workers suffering from payroll fraud would receive this same average salary, meaning the DOR numbers suggest that workers suffering from payroll fraud received compensation that is between the upper and lower bound estimates used in our original analysis.<sup>31</sup>

<sup>29</sup> The upper bound average salary estimate (\$59,753) is calculated by dividing the state's total private-sector industry wages (\$156 billion) by the state's total number of private-sector wage-and-salary employees (2,613,571). The lower bound estimate (\$29,876) is then derived by dividing this upper bound estimate in half.

<sup>30</sup> Once again, this compensation total reflects all 1099s (those filed with and without SSNs).

<sup>31</sup> This is not a perfect comparison to our original analysis, as our earlier estimates concerned the pay for workers experiencing payroll fraud, while the DOR numbers reference pay for the correctly classified self-employed.

If we apply the effective state tax rate for \$44,687 (3.73% or \$1,667 lost per worker) and multiply it by the total number of impacted workers (337,476), it suggests that the total income tax revenue lost to the state would be roughly \$563 million. Notably, this estimate falls between the upper bound estimate derived in our original analysis (\$854 million) and the lower bound estimate (\$176 million) but is a bit closer to the upper bound.

## REVENUE LOST TO SOCIAL INSURANCE PROGRAMS

Turning to revenue lost to social insurance programs, our original estimates again differ due to the different wage amounts for self-employed workers derived from the DOR statistics. If workers suffering from payroll fraud are being paid \$44,687 instead of the \$29,876 or \$59,753 we originally estimated, then the amount that they would have theoretically paid into social insurance programs had they been classified as W-2 employees also falls between these estimates. For example, a worker who is paid \$59,753 would contribute roughly \$1,111 in Workers' Compensation premiums, while one being paid \$44,687 would contribute \$831.

**Table 11. Tax Revenue Lost Due to Payroll Fraud According to DOR Statistics**

	DOR
Total Correctly Classified Self-Employed Returns (1099-NEC)	396,370
Total Correctly Classified Self-Employed Compensation (1099-NEC) (thousands of \$)	\$17,712,566
Estimated Annual Average Salary for Self-Employed Workers	\$44,867
Effective State Income Tax Rate	3.73%
Tax Revenue Lost Per Worker	\$1,667
Total Workers Suffering from Payroll Fraud (WPF)	337,476
Total Tax Revenue Lost (thousands of \$)	\$562,513

Table 12 carries out this same analysis for each social insurance program, looking at the amount lost per worker based on these different levels of compensation. To start, we utilize the ECEC compensation statistics for all workers in the West North Central region, which indicate that wages comprise 69.9% of total compensation on average. If we assume that the wages received by workers suffering from payroll fraud are \$44,687, total compensation for that worker if they were correctly classified would then be \$63,930. By comparison, an assumed wage of \$59,753 suggests a total compensation of \$85,484, as seen in the right column.

From here, the ECEC statistics are again used, in this case to obtain the percentages of total compensation that go to legally required benefits (7.9%), State UI (0.4%), and Workers' Compensation (1.3%). Taking these percentages from the total compensation

estimate derived from the DOR number suggests that the state loses \$256 in UI per misclassified worker, along with \$831 in lost in Workers' Compensation premiums. Again, these estimates fall between the estimates we originally derived as seen by comparing the DOR and NSPA columns in Table 12.

When multiplying these per worker totals by the 337,476 estimated workers suffering from payroll fraud according the DOR numbers, the estimated total revenue lost to the State's Unemployment insurance comes to \$96 million (between the \$54 to \$108 million in our original analysis), the total lost in Workers' Compensation premiums comes to \$280 million (between our original \$176 to \$353 million estimates), and the total lost in all legally required benefits comes to \$1.7 billion (between our original \$1.04 to \$2.1 billion estimates).

Table 12. Money Lost to Social Insurance Programs Per Worker, DOR v. NSPA			
	% of Compensation	DOR	NSPA
Total Compensation	100	\$63,930	\$42,742 - \$85,484
Wages	69.9	\$53,861	\$29,876 - \$59,753
Legally Required Benefits	7.9	\$5,050	\$3,377 - \$6,753
State UI	0.4	\$256	\$171 - \$342
Workers' Compensation	1.3	\$831	\$556 - \$1,111



# Conclusion

The findings above indicate widespread payroll fraud in Minnesota, leading to significant revenue declines for crucial social insurance programs and tremendous losses in compensation to working Minnesotans. While alarming, there are important limitations to consider within this analysis. As payroll fraud is illegal and hidden, it is a difficult concept to estimate. There is no objective data demonstrating how much payroll fraud actually exists.

Instead, we engage in an estimation of payroll fraud. This practice requires using data sources that are approximations of important measures and making several assumptions about those approximations. In doing so, there are sure to be gaps between the concepts we want to capture and the methods we are using to estimate them. In these gaps, we endeavor to use conservative methods to ensure our findings provide a lower bound of the problem. Ultimately, a more accurate estimate of payroll fraud in Minnesota necessitates greater data analysis from state agencies.





**NorthStar**  
POLICY ACTION



March 25, 2025

Professional Distinction

Personal Dignity

Patient Advocacy

Minnesota House of Representatives  
House Workforce, Labor & Economic Development Finance & Policy Committee  
75 Rev. Dr. Martin Luther Dr. Jr. Blvd.  
St. Paul, MN 55155

Dear Co-Chairs Baker and Pinto and Members of the Committee,

With over 22,000 members, the Minnesota Nurses Association (MNA) is the leading advocate for bedside nurses in Minnesota, representing roughly 80 percent of the state's active hospital nursing workforce. We are dedicated to protecting and advancing the rights of nurses and healthcare workers through collective action, ensuring fair wages, safe working conditions, and strong labor protections that benefit both our members and the patients they serve. We are writing to express our strong support for HF2146 and HF2145, legislation that is critical in addressing the rampant and growing issue of worker misclassification, which threatens the stability of employment protections, fair wages, and benefits across industries – including healthcare.

Worker misclassification is a widespread and insidious problem that strips workers of essential rights, including access to unemployment insurance, overtime pay, and workers' compensation. While misclassification has long plagued industries like construction and transportation, it is now making alarming inroads into healthcare. A recent report by the Roosevelt Institute, "Uber for Nursing: How an AI-Powered Gig Model is Threatening Healthcare," details how technology-driven gig models are rapidly infiltrating the nursing profession. This shift is undermining patient care, exacerbating burnout, and diminishing employment protections for nurses.

House File 2146 is essential in establishing regulations and measurement mechanisms to track the extent of misclassification and ensure workers receive the legal protections they are entitled to. Without such oversight, employers can continue exploiting legal loopholes, leaving workers vulnerable to economic insecurity and lacking basic protection.

Additionally, House File 2145 strengthens enforcement by increasing penalties against employers who engage in misclassification within the unemployment insurance program. Stronger deterrents are necessary to curb this exploitative practice and ensure that employers abide by fair labor laws. Without these enhanced penalties, businesses may continue prioritizing profits over worker rights, exacerbating an already precarious situation for Minnesota's workforce.

The healthcare industry cannot afford to follow the path of gig economy exploitation. Nurses and healthcare professionals require stability, fair wages and benefits – not a race to the bottom that prioritize profits over patient care. We urge

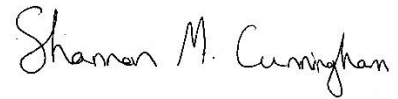
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Web: [www.mnnurses.org](http://www.mnnurses.org)



AFL-CIO

the committee to recognize the urgency of this issue and pass these bills to protect Minnesota workers and the future of our healthcare system. We appreciate your leadership in ensuring that Minnesota remains a state that values and protects its workforce.

Sincerely,

A handwritten signature in black ink that reads "Shannon M. Cunningham". The signature is written in a cursive, flowing style.

Shannon Cunningham  
Director of Governmental and Community Relations  
Minnesota Nurses Association



March 25, 2025

Chair Pinto, Chair Baker, and Members of the House Workforce Committee:

As the state's labor federation, we represent over 1,000 local unions with over 300,000 members working in the public sector, private sector, and building trades across the state. We are writing to express our support for HF2145 and HF2146.

Employers who misclassify their workers as independent contractors deny them all of the rights and benefits associated with employment, including minimum wage and overtime protections, collective bargaining rights, access to health insurance and paid sick time, and eligibility for social insurance programs like work comp and paid leave. It harms law-abiding businesses and drains public revenues. This is a longstanding and widespread problem across the state as has been documented by the Office of the Legislative Auditor.

In 2024, Minnesota enacted legislation consistent with recommendations from the Attorney General's Task Force on Worker Misclassification to strengthen and streamline enforcement of the state's worker misclassification laws and establish an Intergovernmental Misclassification Enforcement and Education Partnership to coordinate across the agencies tasked with enforcing various misclassification laws. That law now allows DLI to assess additional penalties for each misclassified individual for cases under their jurisdiction to deter bad actors from violating the law. HF2145 aligns those penalties with regard to DEED's enforcement of misclassification under the UI and Paid Leave programs they administer. HF2146 requires the Partnership to submit annual reports estimating various metrics of misclassification that will aid in our understanding of this growing problem and aid in future enforcement.

Worker misclassification harms workers, businesses, and public revenues. These bills will help us to understand and stop this growing and pervasive problem. Please support HF2145 and HF2146.

Best regards,

Melissa Hysing  
Legislative Director



December 2024

# Uber for Nursing

How an  
AI-Powered  
Gig Model Is  
Threatening  
Health Care

By Katie J. Wells and  
Funda Ustek Spilda

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## About the Authors

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## Acknowledgments

This report is based on the ongoing research of the Fairwork project at the University of Oxford. Dr. Katie J. Wells and Dr. Funda Ustek Spilda lead this research in the US context.

The data collection process was reviewed and approved by the University of Oxford's Research Ethics Committee. The reference number is SSH OII C1A 19002.

The authors would like to thank Fairwork, the Ford Foundation, the Roosevelt Institute, and Georgetown University for their financial support of various stages of the project. The research team would also like to thank Annika Lin, Isabella Strata, Anna Yuan, and Noa Rosinplotz for their research assistance, Aastha Uprety for editorial assistance, Katherine De Chant for publication design, and Hannah Groch-Begley for strategic and organizational support. The authors are also grateful to reviewers Dr. Mark Graham, Isabella Stratta, Eliza McCullough, Dr. Kafui Attoh, Dr. Declan Cullen, Dr. Veena Dubal, Alexandra Mateescu, Dr. Becky Givan, and Tim Newman for invaluable feedback. Special thanks are extended to the 29 nurses and nursing assistants who generously shared their time, experiences, and expertise. Any errors, omissions, or other inaccuracies are the authors' alone.



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## Executive Summary

The gig economy's labor model and its algorithmic management technologies now have a foothold in one of the largest labor sectors in the country: health care. On-demand nursing companies such as CareRev, Clipboard Health, ShiftKey, and ShiftMed have promised hospitals more control and nurses more flexibility. Through original interviews with 29 “gig” nurses and nursing assistants, this brief finds that these apps encourage nurses to work for less pay, fail to provide certainty about scheduling and the amount or nature of work, take little to no accountability for worker safety, and can threaten patient well-being by placing nurses in unfamiliar clinical environments with no onboarding or facility training. On-demand nursing platforms are also using the Uber playbook to lobby state legislatures in an attempt to exempt themselves from existing labor regulations. In the wake of the COVID-19 pandemic, nurses have fled the profession as a result of poor working conditions, creating what some have incorrectly identified as a “nursing shortage.” As gig nursing platforms falsely promise to empower workers and meet their needs, it is up to legislators, policymakers, civic leaders, and community organizations to act to solve the real problems at the root of this crisis.

## Introduction: Uber for Nursing

The gig economy's labor model and its algorithmic management technologies now have a foothold in one of the largest labor sectors in the country: health care. Since 2016, some of the largest US hospital systems have integrated “gig” nurses into their day-to-day health-care operations ([Evans 2023](#)). New Uber-style apps use algorithmic scheduling, staffing, and management technologies—software often touted by companies as cutting-edge “AI,” or artificial intelligence—to connect understaffed medical facilities with nearby nurses and nursing assistants looking for work.

On-demand nursing firms such as CareRev, Clipboard Health, ShiftKey, ShiftMed (which has no business relationship to ShiftKey), and nearly a dozen others are attractive to nurses and nursing assistants who seek more control over their work hours and schedules, especially in the wake of the COVID-19 pandemic. Promotional materials for ShiftKey, one of the largest firms in this new sector, promise workers the ability to “set your own schedule,” transform the way you work,” and “opt for independence and work on your own terms.” The advertisements for Clipboard Health, CareRev, and ShiftMed use similar language of freedom, flexibility, and autonomy: “Change the way you work,” “work the way you want,” “no midnight calls needed,” and (a personal favorite) “you call the shifts.” After a nurse downloads an on-demand nursing app and submits the requisite documents, they can use the app to indicate their interest in a 6-, 8-, or 12-hour shift at a hospital, nursing home, assisted living facility, surgical center, dental office, or, in some states, correctional facilities. An algorithmic scheduling software program, which is the heart of these new companies, then approves the worker for a shift, notifies both the medical facility and the worker, allows the worker to clock in and out, and, finally, sends a paycheck.<sup>1</sup>

The on-demand nursing industry promises hospitals and medical administrators a different set of controls, namely the capacity to seamlessly staff facilities, reduce manager workloads, and lower labor costs. ShiftMed promises that its algorithmic management software can “transfor[m] nurse scheduling with the power of AI” and “empower healthcare providers to intelligently route labor needs to the lowest-cost workforce” ([ShiftMed 2024](#)). ShiftKey advertises that its software program, called SAMI (Schedule Automation Marketplace Integration), will “streamline the scheduling process” ([ShiftKey 2024a](#)), help maintain staff-to-patient ratios (some of which are mandated by state and federal laws), and lessen the need for administrators ([ShiftKey n.d.](#)). CareRev describes its software, “Smart Rates” ([2024](#)), as a health-care workforce management system that uses “AI-driven” labor pricing.

The idea of “gig nursing”—the term we’ll use in this brief to refer to this app-managed, on-demand, largely contractor-dependent style of labor—has begun to garner widespread praise. *FastCompany* named ShiftKey one of the most innovative companies

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<sup>1</sup> In some cases, hospitals opt for manual selection and assignment of available workers.



of 2024 ([Hess 2024](#)) and *Business Insider* recognized Clipboard Health as one of the most promising start-ups of 2023 ([Torrence et al. 2023](#)). But the attention that these firms receive stands in stark contrast with an inattention to the people who work for and receive care from these apps. This brief asks: What are the impacts of on-demand nursing firms on their workforces and on the quality of patient care?

To answer this question, we examine policy reports, scholarly publications, government documents, business filings, media stories, online forums (Reddit, Facebook, and Better Business Bureau), and, most significantly, transcribed interviews and detailed surveys from 29 individual workers (all but 2 of whom are female) who entered and, in some cases, left gig nursing jobs between November 2023 and September 2024. These informants, whose average age is 33 years old, shared with us their experiences working as registered nurses (n=15) or certified nursing assistants (n=14) for one or more of the following companies: ShiftMed, ShiftKey, Clipboard Health, and CareRev. Data collection for this study was part of an international research project—Fairwork, which is based at the University of Oxford and WZB: Berlin Social Science Center and spans 39 countries in five continents—to assess digital labor firms across principles of fair work, namely on issues of pay, contracts, management, and representation.

Analysis of these various data identify serious safety and health risks for workers and patients. The nurses and nursing assistants who use these apps must pay fees to bid on shifts, and they win those bids by offering to work for lower hourly rates than their fellow workers. Poor internet or cell service in rural areas can cause the apps to fail, resulting in missed paychecks for work performed. These apps also rate the nurses they hire based on facility feedback and internal algorithmic determinations. If a worker must cancel a shift due to sickness or personal conflict, their rating goes down, and they often lose out on future shifts or can be banned from the app altogether. In at least one case, a nursing assistant went into work at a hospital while sick with COVID-19 because she could not figure out how to cancel a shift without lowering her rating. At most hospitals and medical facilities, no orientations are required for gig nurses and nursing assistants. Workers do not know where supply closets are located, how to access patient portals with medical histories and current medication lists, and whom to contact in the chain of command. With gig nursing, there is often little to no continuity of care. Despite hospitals' attempts to automate nursing, care work is inherently tricky to de-skill and predict. Shifts do not neatly end when the apps say they do as, of course, patients' health-care needs do not end just because the clock says they should. Human frailty—the essential subject of nursing—defies algorithmic management.

This brief outlines the existing research on health-care-focused algorithmic scheduling, staffing, and management technologies, provides a labor history of nursing and working conditions, and presents the results of our interviews with nurses and nursing assistants. Alongside these findings, we highlight private equity's involvement with both health-care staffing agencies and medical facilities in worsening health-care work and patient safety. Finally, we call for policymakers and community organizations

to address the identified challenges and improve labor conditions and the quality of care in the health-care industry. We warn that Wall Street's takeover of US health-care infrastructure and Silicon Valley's introduction of gig nursing apps are a dangerous duo that is eroding our health-care system and eviscerating our ability to take care of each other.

## Background

### A Shortage of Decent Workplaces

The US health-care industry has long struggled to employ as many nurses as patients need ([Bonczek et al. 2024](#)). During World War II, for instance, a significant number of nurses left hospitals to join the armed forces. In response to this workforce gap, the federal government established the Cadet Nurse Corps to increase funding and education for future nurses ([Gallagher 2023](#)). These struggles have often been referred to as “nursing shortages,” a phrase that suggests a dwindling supply of nurses.

Today, Jean Whelan (2021) argues, the phrase “nursing shortage” is a misleading description of what ails the health-care industry. The US currently has more than 5 million licensed registered nurses, which is more than the country has ever had ([Smiley et al. 2023](#); [Seow 2023](#)), and 1.4 million nursing assistants ([Data USA n.d.](#)). Of those 5 million registered nurses, about 3.3 million are employed ([BLS 2024a](#)). For the current openings of 187,000 nursing jobs ([BLS 2024a](#)), there are more than enough nurses. In fact, the US Department of Health and Human Services (HHS) predicts that 43 US states will have a surplus of registered nurses in 2030 ([HRSA 2017](#); [NCSBN 2018](#)).

And yet, 94 percent of nurses reported moderate to severe levels of understaffing in their workplaces ([Diaz 2023](#); see also [Plescia and Gooch 2022](#)). HHS found “monumental” staffing issues in nursing homes ([Grimm 2024](#)), and the International Council of Nurses suggested that the current nursing crisis should be treated as “a global health emergency” ([AACN 2024](#)).

The problem, then, is not a shortage of available nurses and nursing assistants, explains Karen Lasater ([2024](#)). The problem is a growing number of nurses and nursing assistants who refuse to accept chronically understaffed, underpaid, unsafe, and high-stress workplaces ([Muir et al. 2024](#)).<sup>2</sup> In other words, many nurses are not unwilling to work or unwilling to work full-time; they are simply unwilling to work with hazardous conditions, organizational failures, ill-maintained facilities, scheduling rigidity, and low pay ([Muir et al. 2024](#); [Lasater et al. 2024](#)). During the COVID-19 pandemic, more than 100,000 registered nurses left the industry due to workplace stresses ([Seow 2023](#); [Auerbach et al. 2024](#)). But this pandemic-induced exodus of mostly

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<sup>2</sup> For discussion of chronic understaffing, see [Andel et al. 2021](#).

older workers was more than made up for by the arrival of younger workers, and the nursing workforce has not suffered any long-term shrinkage post-pandemic ([Auerbach et al. 2024](#)).

Over the last 50 years, financialization, consolidations, and the rise of business administrators in medicine have built a new for-profit health-care empire organized around capital-intensive procedures, consolidated corporate power, and risk-intensive working conditions. In 1965, there were nearly no investor-owned hospitals in the US. But by the mid-1980s, about 15 percent of all US hospitals were owned by investors (Ermann and Gabel 1986). Forty years later, the percentage of investor-owned, for-profit hospitals had nearly doubled to 30 percent of community hospitals in 2022

Wall Street's takeover of US health-care infrastructure and Silicon Valley's introduction of gig nursing apps are a dangerous duo that is eroding our health-care system and eviscerating our ability to take care of each other.

([Lingel et al. 2022](#)). Alongside this expansion of corporate ownership in the health-care industry, hospital profits ballooned by 411 percent from 1999 to an all-time high of \$88 billion in 2017 ([National Nurses United 2020](#)). At the same time, rural areas have seen more than 100 hospitals close in the last decade and 700 more at risk of imminent closure ([Olsen 2024](#)). New management practices such as decreased lengths of stay for patients and increased responsibilities for nurses have taken hold across the health-care industry ([Brewer 1998](#)). Business endeavors to cut costs have kept nursing wages stagnant and led to an increasing number of medical facilities that are purposefully understaffed ([Brewer 1998](#)).

The threats posed by corporate ownership in the health-care industry have worsened since the entry of private equity firms, which have bought up record levels of medical facilities and medical staffing agencies in the last four years ([Bugbee 2022](#); [Gallagher 2023](#); [American Hospital Association 2021](#)). Private equity firms, which are distinct from venture capital firms that focus only on start-ups, use money from wealthy individuals and institutions to purchase and take direct control over the management and operations of an established business ([Stienon and Boteach 2024](#); Appelbaum and Batt 2014). Their goal is to restructure businesses in ways that will maximize returns for investors, not improve the long-term health of businesses themselves ([Stienon and Boteach 2024](#)). Often, this restructuring involves dismantling the businesses altogether to sell them piece by piece. Private equity-controlled medical facilities are usually saddled with debt, lower and unpaid wages, unsafe work environments, and declining quality of patient care ([Gupta et al. 2021](#); [Appelbaum and Batt 2020](#); [Rafiei 2022](#)). As Adam Gaffney and coauthors ([2024](#)) note, “Nationwide, private equity acquisition causes a 24 percent fall in hospitals’ assets and a 25 percent rise in patients’ hospital-acquired complications, such as infections and falls.”



In little over a decade, the country's largest for-profit hospital chain—Steward Health Care—bought, ravaged, and then shuttered six hospitals in Massachusetts ([Brangham et al. 2024](#)). In response, US Senator Elizabeth Warren introduced in mid-2024 a bill to stop such “legal looting” of the US health-care system. She explained her rationale for action: “A private equity firm bought Steward Health Care, sold the land from under the hospitals, and walked away with a fat profit while the hospitals failed and workers and patients suffered” ([Serres 2024](#)). When the US Senate Health, Education, Labor and Pensions Committee sought answers about the company's operations in a summer hearing, Steward Health Care's CEO defied the subpoena and the committee voted unanimously to hold the CEO in contempt ([Vogel 2024](#)).

Private equity's acquisition and subsequent raiding of two of the largest health-care staffing agencies in the country is an important piece of any story about why so many nurses turn to gig nursing. When the private equity companies Ares Management and Leonard Green and Partners acquired a majority stake in CHG Healthcare, a health-care staffing agency, the private equity companies did two things. First, they followed a routine private equity move of adding hundreds of millions of new debt to the staffing agency as a way to finance the acquisitions of other companies. Then, they extracted more than \$1.5 billion in dividends from the staffing agency. Not long after, Moody's lowered CHG's credit rating from stable to negative. Just as private equity is looting and closing hospitals across the country, so too is it raiding travel nursing agencies ([Bugbee 2022](#)).

Researchers across the social sciences and public health disciplines argue that a new political economy of medicine has arrived ([Apaseo-Varano and Varano 2004](#); Whelan 2021; [Gallagher 2023](#)). Gabriel Winant explains the dangers of this new model and its chronic understaffing of nurses and nursing assistants: “Health care is run increasingly on a ‘lean’ basis, at the bare minimum of staffing, and then, when there is a need to increase supply, firms like CareRev are positioned to profit; it's good for them and good for hospitals but bad for workers and bad for patients” ([Vicks 2022](#)).

It is in this context that new on-demand nursing companies have attracted significant venture capital investment. ShiftKey, which says it operates in 10,000 health-care facilities in the US, raised \$300 million in 2023 and is now valued at \$2 billion ([Vedantam and Metinko 2023](#)). Clipboard Health's latest valuation was \$1.3 billion after having raised \$90 million in capital ([Wiggers 2022](#)). ShiftMed raised \$47 million in 2024 and \$200 million the year before ([Citybiz 2024](#); [Hall 2023](#)).

## Existing Research on Gig Nursing

A small number of scholars and journalists have begun to examine the nature, genesis, and effects of the on-demand nursing industry and its new algorithmic management technologies on nurses and nursing assistants ([Lien 2023](#); [Hilgers 2023](#); [Gallagher 2023](#); [Sumagaysay 2023](#); [Lecher 2023](#); [Asher-Shapiro 2023](#); see also [Khan 2016](#)). Current



nursing demographic data suggests that gig nursing roles are primarily filled by women and people of color (see below) and have little to no worker protections or benefits. Given this reality, there is deep concern that gig nursing companies are exacerbating gender and racial inequalities ([Yang et al. 2023](#)).

In a foundational study about the gig nursing industry, Chia Yu Lien ([2023](#)) finds that the consequences of gig nursing include “negatively impacting facility operations, nursing staff cooperation, and quality of care” by, for instance, inducing higher rates of catheter use and medical errors. Lien does not mince words: Gig nursing services have worsened, rather than alleviated, the quality and quantity of nursing jobs. In using gig nursing services, nursing home managers make a Faustian bargain: To offset the premium costs for gig nurses (who often command higher rates than in-house staff), a nursing home takes in more clients, resulting in more work for its employed staff. Employed staff then find “themselves receiving lower salaries, having higher caseloads, working on weekends and holidays and often providing extra services for which they [are] not compensated.” Lien concludes that gig nursing jobs hurt the quality of care in health-care facilities, ignite workplace tensions between gig nurses and full-time staff, and eliminate much-needed managerial oversight in these facilities.

Many nurses are *not* unwilling to work or unwilling to work full-time; they are simply unwilling to work with hazardous conditions, organizational failures, ill-maintained facilities, scheduling rigidity, and low pay.

Other observers of this new industry—which, worldwide, we have only found evidence of in the US and France<sup>3</sup>—offer similar warnings about the risks that gig nursing poses to patient care: “Hospital clinicians often express concerns that gig nurses, due to their transient nature and relative unfamiliarity with specific hospital systems, equipment, and protocols, may not provide the same level of high-quality care as longer-term, full-time nurses” ([Yang et al. 2023](#)). On-demand gig nursing “drops uninitiated strangers into already stressful situations and can have the paradoxical effect of making work harder for full-time staff trying to care for their patients while also bringing new staff up to speed” ([Vicks 2022](#)).

Collectively, this emerging research suggests that on-demand nursing firms are part of a long-term and well-documented erosion of worker rights and an ongoing shift of risk from employers to low-wage workers (for discussion, see [Dubal 2022](#); Schor 2021; Ravenelle 2019; Wells et al. 2023; Dolber et al. 2021; Smith and Pinto 2020). While on-demand nursing companies claim they are disrupting the health-care industry, the underlying algorithmic management technologies they rely on are posed to reinforce and exacerbate existing inequalities for nurses and nursing assistants as well as worsen the quality of patient care. Kim A. Aquino ([2021](#)) is explicit about the dilemma that the US health-care industry faces with regard to staffing: It is a “dilemma of reconciling the

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<sup>3</sup> [Mediflash](#) is one such French company.

cost-cutting concerns of corporations in the industry with the potential cost-saving solution that the exploitative platform economy offers.”

## A Brief Labor History

The emergence of gig nursing firms for medical facilities is novel with its use of algorithmic scheduling and management technologies. But third-party staffing firms themselves are not new to nursing work. For the first half of the 20th century, most nurses who worked in hospitals did so through a third party called a private-duty registry. In the 1930s, private-duty registries organized ongoing contracts for local nurses en masse; these were collective agreements, not individual ones. By contrast, contemporary travel nurse agencies, such as CHG Healthcare mentioned above, facilitate short-term contracts for individual workers to cover the shifts of full-time nurses who are on parental or medical leaves ([Lien 2023](#); [Zhavoronkova et al. 2022](#)).<sup>4</sup> The private-duty registries were women-run and helped level the playing field for an overwhelmingly female workforce in a male-dominated medical field. They also established a substantial vehicle for nurses to negotiate pay, schedules, and working conditions (Whelan 2021).

In the 1950s, nursing employment underwent a significant shift. Hospitals began to directly hire and manage their own pools of staff nurses (Whelan 2021), which led to the demise of private-duty registries and their strong workplace standards ([D'Antonio et al. 2010](#)). This shift meant a collective loss of workplace power for women, especially for Black female private-duty nurses (Whelan 2021). Hospitals, which for decades had systematically discriminated against Black nurses (Hine 1989), now had the upper hand in the workplace.

Hospitals also had the loudest voices in policy debates. Discussion about nursing routinely overlooked quality-of-workplace issues like low pay, discrimination, and poor conditions ([D'Antonio et al. 2010](#)). In the 1960s, hospitals lobbied successfully for federal intervention to expand nursing education ([Yett 1966](#)). Rather than asking why so many nurses had left their jobs in the 1950s, federal action focused on increasing the supply of new nurses to take open spots or using student nurses who would toil long hours for little or no pay.

The struggle for workplace rights for nurses and “professional recognition,” write Jessa Lingel et al. ([2022](#)), was always wrapped up in the masculinized medical field and a society that framed nursing as “women’s work.” The gendered nature of the nursing workforce contributed to a notion that nurses were “predominantly temporary workers for whom attractive working conditions were an unnecessary luxury” (Whelan 2021).

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<sup>4</sup> Travel nursing agencies, which emerged in the 1970s as a way for hospitals to supplement their lean staffing models with travel nurses, are typically given multi-week contracts at the same facility by an intermediary staffing agency. But their future is unclear in the era of the gig nurse.

Beyond the medical field, nurses also struggled for a voice within feminist movements, which historically “undervalued the agency of women in feminized career paths” ([Lingel et al. 2022](#)). Racial discrimination additionally hindered labor activism among nurses. White nurses created organizations such as the American Nurses Association, which explicitly excluded Black nurses until the mid 1960s (Hine 1989).

Today, about 20 percent of US nurses are unionized, which is higher than the 12 percent unionization rate of the general working population ([Lingel et al. 2022](#)). Unionization rates correspond with better patient outcomes, such as lower mortality rates and “fewer hospital-acquired illnesses” ([Krachler et al. 2021](#); see also [Dube et al. 2016](#); [Sojourner et al 2015](#)). During the pandemic, nursing homes with unionized workers had fewer rates of COVID-19 infection among staff and patients and fewer patient deaths in comparison to nonunionized nursing homes ([Dean et al. 2022](#)).

In recent years, a number of campaigns by unionized nurses have made important contributions to the labor movement by demanding decent patient care ([Hirsch et al. 2024](#); [Krachler et al. 2021](#); but see Givan 2016 on the fraught relationship between labor movements and nurses).<sup>5</sup> National Nurses United, the largest union for registered nurses, held a June 2022 webinar on the topic of gig nursing and later warned that gig nursing firms will harm all nurses in the long run ([National Nurses United n.d.](#); [Coleman-Lochner 2023](#)). However, when the union released in 2024 a guiding set of principles “for AI Justice in Nursing and Health Care,” the issue of gig nursing did not appear. Initial research suggests that gig nursing is most common in nonunionized medical facilities, which may contribute to the smaller amount of attention the issue has received so far from existing unions, whose workplace concerns for employed nurses are already considerable.

## Current Nursing Demographics

The US health-care industry’s largest workforce is made up of registered nurses and certified nursing assistants (CNAs) ([Committee on the Future of Nursing 2021](#)). Registered nurses hold bachelors or associate degrees after completing multiple years of postsecondary education, while nursing assistants must complete high school plus a one- to two-month training program. There are significant differences between the demographics of these two groups, but one similarity is stark: Both professions are still disproportionately staffed by female workers. In 2022, about 88 percent of nurses and 89 percent of nursing assistants were women ([Buerhaus et al. 2017](#); [Data USA n.d.](#); [Norris 2023](#)). While the share of men in nursing steadily increased over the last 20 years, that percentage has now plateaued ([AACN n.d.](#)).

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<sup>5</sup> In this way, nursing activism can be seen as precursor of sorts to the [Bargaining for the Common Good](#) labor activism model.

Racially, the US registered nurse population largely mirrors the country's racial demographics.<sup>6</sup> According to 2022 data, nurses are 80 percent white or Caucasian, 6.3 percent Black or African American, 7.4 percent Asian, 2.5 percent more than one race, and less than 1 percent each for Native American or Alaska Native, and Native Hawaiian or Pacific Islander ([AACN 2024b](#)). In addition, 6.9 percent of the nursing workforce report their ethnicity as Hispanic ([AACN 2024b](#)). In contrast, more than half of certified nursing assistants identify as Black or as people of color ([Data USA n.d.](#); [Squillace et al. 2009](#)) and hold some of the lowest-paid jobs in health care ([Asher-Shapiro 2023](#)).

## Worker Experiences

### The Black Box of On-Demand Nursing Apps

Ashley, a 31-year-old certified nursing assistant in rural Pennsylvania, has worked in hospitals and nursing homes through the ShiftKey app.<sup>7</sup> Though Ashley has worked on the app for the last two years, there's a lot she doesn't know about it—like how the company allocates shifts. She is not the only one in the dark. In the gig nursing world, there is zero transparency about how jobs are algorithmically allocated or automatically scheduled. Different shifts will show up on different workers' phones—often for different amounts of pay. On the same day, at the same hour, in the same hospital, two different gig nurses can be paid different amounts by the same app. The gig nursing industry looks more like a black box than a clear process or a fair set of rules. The industry's opaque and personalized pay structures create what Veena Dubal ([2023](#)) terms “algorithmic wage discrimination,” a kind of discrimination in which workers are paid different hourly amounts based on ever-changing calculations and informational asymmetries. Gig nursing apps may determine pay by what the firm knows about how much a nurse was willing to accept for a previous assignment, how often they bid for shifts, or how much credit card or other kinds of debt they might hold. These uncertainties combine to create frustrating and precarious conditions for the workers who rely on these apps.

#### Competing for a Shift

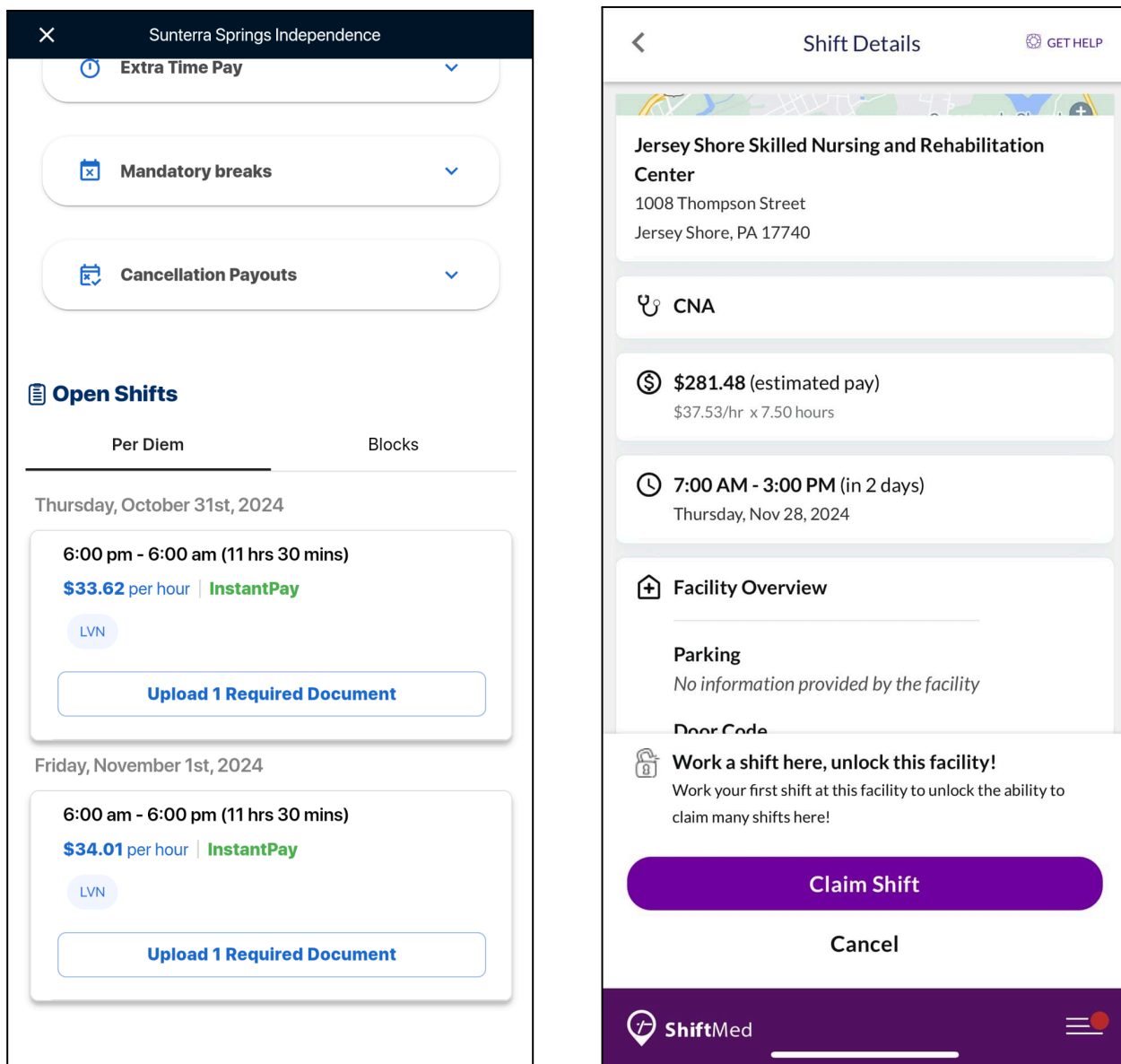
To sign up for shifts on a gig nursing app, workers agree to a background check and upload three sets of documents about (1) their active professional licenses or certificates, (2) their vaccine records for, in most cases, hepatitis B and COVID-19, and

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<sup>6</sup> Between 2000 and 2018, the nursing workforce became less white and more Black and Hispanic ([Committee on the Future of Nursing 2021](#)).

<sup>7</sup> In discussion with authors, February 9, 2024.

(3) negative test results for tuberculosis and a drug urine screening. There are no interviews as part of the job application—the hiring process has been relegated to algorithmic software systems that screen and evaluate applicants. Performance management, too, has been reduced to a series of metrics that are difficult if not impossible for workers to contest. Gig nurses—like Uber drivers and DoorDash delivery couriers—also receive a series of ratings. Some of these ratings are given by the medical facilities for attendance, timeliness, and onsite performance. Other ratings—which have similarly little transparency—are given by the on-demand nursing companies. ShiftMed, for instance, gives a reliability score to workers based on how many shifts they complete, how early they cancel shifts, and whether they stay late on a job (which can, oddly, hurt one's score). Higher reliability scores lead to earlier access to shifts while lower ratings result in temporary or permanent suspensions and, workers suspect, lower pay offerings.



These screenshots of the ShiftKey and ShiftMed apps show how workers can view and select open shifts.



For Dana, a 29-year-old nurse in St. Louis, Missouri, one of the hardest parts of working on the CareRev app is not knowing whether she will actually get to work a shift that she accepted. Even after she is matched with a shift at a nearby hospital and arranges childcare for her son, she won't know for sure if she'll be able to earn money that day. She says, "It's a gamble . . . I'll wake up at 5:00 in the morning and I'll find out if I'm canceled or not."<sup>8</sup> If a hospital cancels her shift more than two hours before the start time, CareRev does not compensate her at all. If the cancellation is closer to the planned start time, she sometimes earns two to four hours of what she was supposed to have earned if she worked the entire shift.<sup>9</sup> Hospitals may also shorten shifts while a nurse is on the job; in these cases, the app does not pay the nurse for any of the unworked hours. (Of course, nurses are not paid for any unexpected additional hours they may work.) If Dana were to cancel a shift at the last minute or leave in the middle of a shift, she would be penalized. Her attendance rating would dip, which would negatively impact her access to future shifts or the app itself.

To work on the CareRev app, Dana must be on-call for all of the shifts she selects but is only paid for her actual hours worked. Almost all of the workers we interviewed shared frustrations about the way gig nursing companies do not compensate nurses for canceled or shortened shifts. Several workers described with resentment the experience of receiving a cancellation notice in the app just as they arrive at a facility's parking lot. When this happened to Robin, a 41-year-old health-care worker living near Miami, Florida, she couldn't find another shift and did not work that day.<sup>10</sup>

## A Race to the Bottom for Wages

For workers, the old adage of equal pay for equal work has gone out the window. Personalized pay is all the rage ([Teachout 2023](#)). On-demand nursing companies such as Clipboard Health and ShiftKey encourage workers to join in on personalized pay schemes by bidding against each other. On ShiftKey, Ashley not only expresses her availability for a shift but bids for one against peers by indicating the lowest hourly rate for which she will work. To win the shift, she lowers and lowers her rate until it's well below a living wage. Like other gig workers who spend a considerable amount of work time not being paid (see [Attoh et al. 2024](#)), Ashley is not paid for the time she spends each month updating her profile, reviewing available positions, bidding for shifts, and sending messages in the app about errors in her wages. Some days, she says, ShiftKey feels like a race to the bottom. Others agree—four workers in this study earn so little as gig nurses or nursing assistants that they qualify for Medicare or Medicaid. Two others had no health insurance at all—Ashley is one of them.<sup>11</sup>

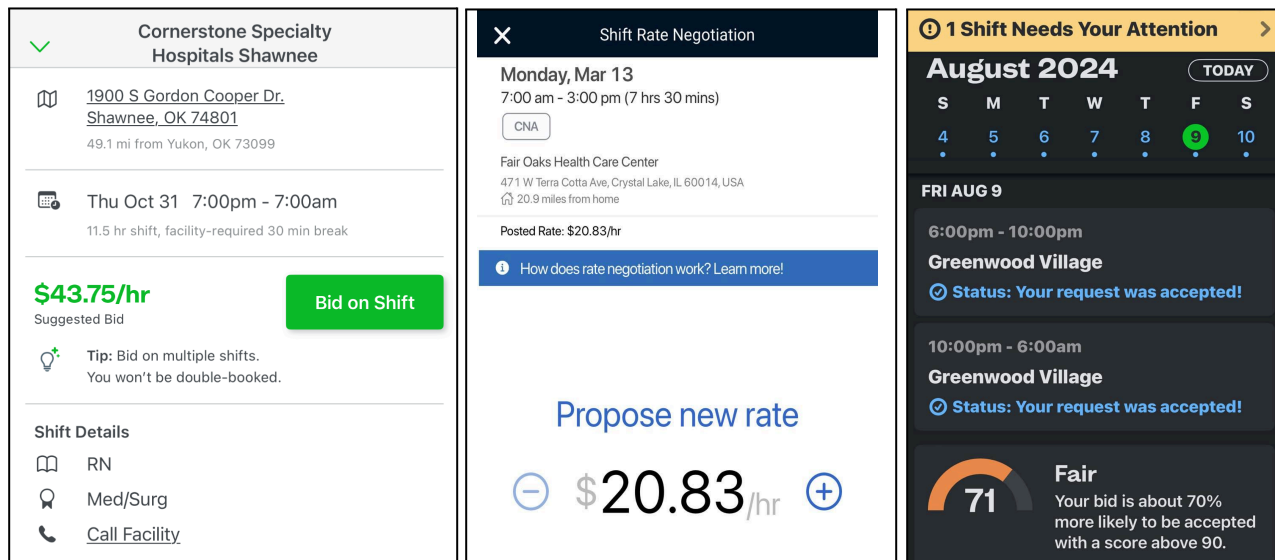
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<sup>8</sup> In discussion with authors, April 3, 2024.

<sup>9</sup> The cancellation policies vary from company to company, and even within an app, some shifts may guarantee cancellation pay while others do not.

<sup>10</sup> In discussion with authors, February 6, 2024.

<sup>11</sup> Clipboard Health, ShiftKey, ShiftMed, and CareRev do not require workers to obtain any health insurance for themselves.



Screenshots show how workers bid for gigs. Left to right: ShiftKey, Clipboard Health, ShiftKey.

On ShiftKey, Ashley earns an average of \$23 per hour, which is more than what she earned as a substitute teacher. For each shift, Ashley is required to pay \$6 in fees.<sup>12</sup> For many workers on gig nursing apps, the withdrawal of these oft-hidden fees from their paychecks is a surprise. Each day Ashley works, she is required to pay \$3.67 for a “safety fee” (which the company describes as “costs associated with background checks, drug screens [if applicable], verification of credentials, and fraud detection and prevention”), \$2.14 for occupational accident insurance, and \$0.21 for medical malpractice insurance ([ShiftKey 2024b](#); [2024c](#)). It is not clear why these fees are priced per day, given that nurses do not get background checks or drug screens each day they work on the app. By the end of 2024, these fees will increase to a new total of \$7 per shift. Ashley is also charged \$2 per shift if she elects to cash out immediately rather than waiting a week for her pay to be transferred. Workers wish they could find out exactly what amount the facility pays to the gig nursing firm for their labor and whether it is therefore gratuitous for the firm to extract fees from both the worker and the facility for each hour of a nurse’s labor.

When all of these costs are taken into consideration, Ashley’s actual take-home pay as a nursing assistant drops sharply to roughly \$13 per hour. She is not alone with these kinds of low-wage earnings. Of the 29 workers in this study, 14 say they could not make a living if on-demand nursing apps were their only source of income.

Still, the rates on ShiftKey can be higher than what both employed nursing assistants and nurses earn, and it is this higher rate that often attracts these workers to gig nursing jobs. The average hourly rate for employed nursing assistants is \$18.33 and for nurses is \$45.42 ([BLS 2024a](#); [2024b](#)). By contrast, in this study, the average hourly rate reported by gig nursing assistants is \$22; for gig nurses, it is \$59. While the nursing app

<sup>12</sup> In previous years, ShiftKey charged workers lower fees—roughly \$72 per year—for background checks and drug screenings.

wages are often well-above most cities' and states' minimum pay rates, average nursing wages, and even travel nursing wages, the payout from on-demand nursing apps does not take into consideration the material expenses, such as equipment, licenses, and uniforms, for which workers are responsible. Gig nurses, for instance, must pay for and maintain differently colored scrubs (and sometimes shoes) for different facilities. Moreover, the payout does not account for the significant payroll taxes for which workers are responsible. ShiftMed is a welcome outlier in this regard as it treats its workers as W-2 employees with some basic labor rights.

## High Risk, Low Rewards

The risks of gig nursing are also higher than that of employed work. For nurses and nursing assistants, ShiftKey and its peer companies provide no paid sick leave or unemployment insurance. As Ashley puts it: "You get treated differently [because] you're not an employee."<sup>13</sup> By contrast, traditional health-care staffing agencies often treat temp nurses and nursing assistants as employees. When companies like CareRev, ShiftKey, and Clipboard Health classify nurses and nursing assistants as self-employed, many of the costs and risks of doing business are shifted onto the workers. These workers are excluded from the protections of local, state, and federal law on minimum wage, overtime pay, workers' compensation, retirement benefits, employment-based health insurance, and paid sick days.

Workers must also agree to be tracked on their smartphones to clock in and clock out at facilities, and to keep their location tracker on while en route to a facility. Some workers expressed frustrations about not getting full pay for shifts worked if the internet or cell service in a specific area is weak or prevents them from logging into the app and officially beginning their workday.

Dana wishes she could find a full-time job as a nurse that would pay decently and wouldn't require weekends.<sup>14</sup> She feels as if hospitals like to hire new nursing school graduates rather than pay more for mid-career or senior positions that would be a better match for nurses like herself. She explains:

The only reason that I'm doing this right now is because I have no choice. This is what I went to school for and this is what is going to [do to] pay my bills in this . . . scary economic, you know, crisis that we have going on right now where you can barely afford to be alive . . . So, this is what I have to do in order to survive, even though, you know, it's not what I really want to do. But I hate saying that because I love being a nurse. But I hate being a nurse right now with [what] these greedy, immoral, corporate companies have done to health care.

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<sup>13</sup> In discussion with authors, February 9, 2024.

<sup>14</sup> In discussion with authors, April 3, 2024.





## Safety and Health Risks for Workers

For the past year, Kristin, a 40-year-old certified nursing assistant who lives near Portland, Oregon, has earned most of her income from Clipboard Health.<sup>15</sup> She also does accounting work for her father's construction business and data entry at a friend's small business. She has always been involved in care work, but it wasn't until the pandemic wreaked havoc on her day care for kids with disabilities that she turned to nursing. Though Kristin appreciates the ability on Clipboard Health to not pick up shifts when she isn't available, such as when her kids are home from school or have doctor's appointments, she has been surprised by how much physical risk she routinely faces—and how little the company cares for her well-being.

One time, while moving a patient, Kristin developed a hernia: "I was on the floor in tears and throwing up from just the pain. And I could not get ahold of anybody. They called the paramedics for me. And then I couldn't get approval to leave, and the paramedics left without me." She was eventually able to speak with a facility director who assigned her duties to someone else and let her go. To make matters worse, Clipboard Health did not pay her for any hours of that shift because, the company said, she walked out. Her account was then deactivated for two weeks. Kristin says, "It sucks that there's nobody that you can get ahold of immediately . . . If there's an emergent need, you're not getting help."

She also wishes there had been easier channels for communication when she tested positive for COVID-19. When Kristin couldn't figure out how to cancel her shift on Clipboard Health's app without losing attendance points (which would affect her ability to access work later in the month), she contacted the facility and asked them to cancel her shift. They refused. And so Kristin, despite being sick with COVID-19, showed up for the nursing job.

Her story is not unique. Almost every worker in this study reported frustrations with the lack of supervision and management for jobs on Clipboard Health, ShiftKey, CareRev, and ShiftMed. Aisha, a 24-year-old certified nursing assistant in Atlanta, Georgia, works full-time at a long-term care facility.<sup>16</sup> For years she has supplemented her income with work for DoorDash or UberEats. Two years ago, she signed up to work for ShiftKey at area nursing homes and found a palpable amount of isolation:

You really have no one to talk to if . . . you're needing help . . . It's really no communication with anybody other than yourself . . . There's no one for you to complain to if there's any mistreatment . . . or abuse [of patients] there. You really don't know the chain of command. . . .

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<sup>15</sup> In discussion with authors, June 11, 2024.

<sup>16</sup> In discussion with authors, March 21, 2024.



Aisha compares the risks of gig nursing work to those of app-based food delivery, which often takes her to strange neighborhoods at night. For ShiftKey, she has shown up late at night to facilities where the doors are locked and she can't get in contact with anyone to open them. Even inside certain hospitals or nursing homes, she sometimes feels unsafe: "You really don't know anything about the facilities." Gig nurses are not required to complete any paid training or onboarding at most facilities. They are dropped into facilities like new avatars in a survivalist video game. The result of gig nurses' isolation isn't just a lack of solidarity with peers (be it other gig workers or employed staff) but exclusion from any sort of professional development or professional culture that maintains shared norms and practices.

While on-demand nursing companies claim they are disrupting the health-care industry, the underlying algorithmic management technologies they rely on are posed to reinforce and exacerbate existing inequalities for nurses and nursing assistants as well as worsen the quality of patient care.

Worker after worker voiced similar concerns with communication and the lack of supervision by both facilities and gig nursing companies. One even admitted that in these nonsupervised workplaces, she has to be careful not to lower her own standards of care. Crystal, a 32-year-old nurse for ShiftMed in upstate New York, says: "Ideally, there should be a nursing supervisor [on site] that should check you in and tell you where to go . . . It's not very often that I'm even in the building with a manager."<sup>17</sup> Six other workers expressed the desire for there to be a phone number instead of a chatbot on the app for workers to contact if they had any questions or concerns while on the job. Three workers who experienced racial discrimination on a shift did not know to whom to report the infractions and ultimately did not. (However, as contractors rather than employees, most gig nurses are not covered by antidiscrimination laws.)

Collectively, 13 of the 29 workers in this study report taking excessive risks to their own health and safety while on a job for Clipboard Health, ShiftKey, CareRev, or ShiftMed. Crystal, who picks up shifts on ShiftMed to supplement her earnings from a full-time job at a hair salon, says she is often assigned to care for 30 residents at a time in a nursing home. She, like several other workers in this study, brings her own vitals equipment—such as a blood pressure cuff, pulse oximeter, and thermometer—because, she has learned, not all facilities have those tools available. "Nobody actually works for these facilities because they are poorly run," she thinks.<sup>18</sup> A ShiftKey worker agrees about the difficulty of the job: "I have 30 people that I'm responsible for toileting every two hours. That's a lot of work for one person."<sup>19</sup> Two workers we interviewed shared upsetting experiences of being floated to areas of a hospital for which they had little

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<sup>17</sup> In discussion with authors, August 27, 2024.

<sup>18</sup> In discussion with authors, August 27, 2024.

<sup>19</sup> In discussion with authors, February 9, 2024.



training. In these cases, the workers were not paid extra for the more difficult assignment; they were only paid for their original assignment.

Most concerning was the experience of a certified nursing assistant who had just completed a double shift (16 hours) at a long-term care facility when her supervisor told her that there was no one to relieve her so she would have to stay an additional 4 hours. She called ShiftMed, which is the only on-demand nursing company in this study with a phone number for workers to easily contact, and was told that she could be required by the facility to stay and that the extra hours were not against the law.<sup>20</sup>

Gig nursing jobs are made harder by the fact that workers largely work them without supportive colleagues. The tension between gig workers and regular staff at facilities was a common theme across all 29 interviews. One worker says, “I would get a lot of like, snarky comments like under their breath like, ‘Well, you’re making the big bucks, so you should do that [task].’”<sup>21</sup> Another says, “They just don’t like us ‘cause we’ll get paid more than them.”<sup>22</sup> As a reminder, gig nurses and gig nursing assistants are often paid higher wages per hour than employed staff, but, unlike most employed staff, are responsible for significant expenses and earn no benefits.

Several other workers say that regular staff sometimes ignore gig nurses and that gig nurses are assigned the toughest hospital wings and the hardest patients, some of whom are verbally abusive. Dana, who we quote above, tells us: “Yesterday, I felt like I was given a very difficult assignment because of my position [as] a gig nurse . . . I felt like I was given the worst patients. I had such a hard day yesterday. I left, and I cried.”<sup>23</sup>

“It’s a gamble . . . I’ll wake up at 5:00 in the morning and I’ll find out if I’m canceled or not.”

Workers repeatedly said in interviews that they often do not have time to go to the bathroom or get a drink of water while working for apps. There is no one looking out for them. Aisha, the CNA from Atlanta, says, “I just feel like I am on an island by myself a lot.”<sup>24</sup> Such isolation, which is rampant in the gig economy, discourages worker solidarity (see [Wells et al. 2021](#)).

Legally, workers also face risks as gig nurses. CareRev and Clipboard Health require their health-care workers to arbitrate any issues outside of a court of law. In a rare move that a former Department of Labor attorney has called “crazy” ([Adams 2023](#)), workers for CareRev and Clipboard Health are also required to indemnify the companies and the facilities that use the companies. In doing so, gig workers are agreeing to pay for any potential losses or damages that they may cause, thus protecting the company, not the worker. Additionally, gig nursing companies require

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<sup>20</sup> In discussion with authors, March 1, 2024.

<sup>21</sup> In discussion with authors, January 10, 2024.

<sup>22</sup> In discussion with authors, July 29, 2024.

<sup>23</sup> In discussion with authors, April 3, 2024.

<sup>24</sup> In discussion with authors, March 21, 2024.

workers to waive their right to class action, which effectively prevents workers from bringing claims collectively. ShiftKey's contract stipulates that termination is allowed for any reason and, in an unusual move, bans workers from using any third-party apps or data-scraping tools to gain insight into the ShiftKey app. ShiftKey's contract is also remarkable in another regard: It says that if a nursing licensure board or hospital takes a disciplinary action against the worker, it is the responsibility of the worker to tell ShiftKey. As a result, if a worker loses their license and still works on the ShiftKey app, the worker is liable—not the ShiftKey company itself. The ongoing transfer of risks from companies to workers is unmistakable.

## Safety and Health Risks for Patients

Shakayla, a 38-year-old nurse in Los Angeles, California, sees risks in patient safety when she works through the ShiftMed app. For the last year, she has picked up shifts using ShiftMed to supplement her income as a regular travel nurse for a health-care staffing agency. The difference between the kinds of facilities where she works as a travel nurse and a gig nurse are stark. On ShiftMed shifts, she says: “There have been times when I’ve been unable to access patient records or find supply closets.”<sup>25</sup> There are also broken machines and missing equipment, she says. By contrast, “You go to a hospital in a different area that has funds and resources . . . It’s just like night and day, honestly.” Shakayla likes the stability, benefits, and rapport with her coworkers at her regular job and dislikes how work booked through ShiftMed can pose risks to patient safety, but inflation and increases in the cost of living mean that she keeps opening the ShiftMed app.

Other workers report that the lack of management and resources can result in major safety lapses for patients, such as gig nurses not being able to get updated information on patient medications or instructions about whether patients need help with feeding. One nurse for ShiftKey called the circumstances “a rotten situation because [the patients] just have all these random folks taking care of them.”<sup>26</sup> Since no orientation or paid safety training is usually required for shifts on Clipboard Health, ShiftKey, ShiftMed, and CareRev, there is no continuity of care. Workers report hospitals, surgical centers, and long-term care facilities breaking all sorts of rules, such as not properly locking up controlled substances and medications or looking the other way when workers show up to a shift under the influence of drugs. The most difficult part of the job, a different worker on Clipboard Health shared with us, is “seeing the care that is provided is not adequate.”<sup>27</sup> A CareRev nurse said that hospitals use the apps because they are “desperate” and “have no staff at all.” She continued: “I think it’s just a Band-Aid

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<sup>25</sup> In discussion with authors, August 29, 2024.

<sup>26</sup> In discussion with authors, March 27, 2024.

<sup>27</sup> In discussion with authors, July 29, 2024.

because once hospitals can't pay these high rates . . . no one's going to do [this care work].”<sup>28</sup>

In this study, only one worker reported taking a shift at a unionized medical facility. It is not clear how much, if at all, major unionized facilities are using gig labor. It is also not clear where gig nursing is geographically concentrated in the US, if it is at all, despite worker claims of its high concentration in poor and rural areas.

## Gig Nursing Retention

Crystal, who we quote earlier, tried to pursue a staff job outside of the ShiftMed app after finding a facility that she felt was better run than the rest, but she wasn't able to apply for the posted job because the facility had a noncompete clause in its contract with ShiftMed.<sup>29</sup> Other gig nurses in Wisconsin report a similar problem with CareRev and noncompete clauses, which have impinged on their ability to take full-time or even part-time work at hospitals that had contracts with gig nursing companies.

The vast majority of workers in this study (19 out of 29) said that they plan to continue working for Clipboard Health, ShiftKey, ShiftMed, or CareRev because, overall, they like the job. Two of these workers even said they would leave health care altogether if they weren't able to continue with gig nursing jobs. The gig nurses and nursing assistants we interviewed said over and over again how important flexible schedules are to their lives, especially their own caregiving, be it for children, spouses, or elders. These responses complicate the picture of gig nursing, but they do not negate the concerns expressed above. On Reddit threads, in Facebook groups, and on the Better Business Bureau's website, hundreds of workers echo the frustrations outlined in this study.

Out of the 29 workers in this study, 14 say they could not make a living if on-demand nursing apps were their only source of income.

The fact that many workers are willing to take on the risks of the health-care sector via unregulated technology should be a reflection of the failures of the existing labor market in general and the erosion of labor standards in the health-care industry in particular—not merely the design failures of gig nursing. In other words, the risks and concerns that workers expressed will not be automated away if the current algorithmic systems are replaced by better ones and trained on more data with

more use cases. For many workers, the possibility of employment that involves flexible schedules is enticing and worth pursuing. The question before civic leaders and government officials is how to balance the flexibility that attracts gig nurses while also addressing the workplace concerns of those same workers and patients who need care.

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<sup>28</sup> In discussion with authors, May 23, 2024.

<sup>29</sup> Noncompete clauses are now prohibited by a September 2024 rule of the Federal Trade Commission ([FTC 2024](#)).



In other workplaces, the varying concerns expressed by the nurses we interviewed are often addressed by regulators who evaluate and regulate labor standards, public safety hazards, and patient safety.

## Policy Landscape

While litigation, legislation, and political debates about gig nursing are largely nascent, on-demand nursing companies have joined the robust and ongoing lobbying effort to enact minimal, and sometimes zero, government oversight of app-based work. Uber has been at the forefront of this decade-long and nationwide campaign to minimize federal, state, and municipal regulation, especially around labor standards (Wells et al. 2023; [2024](#)). One of the biggest legal issues on the table before Uber as well as on-demand nursing companies is the question of whether workers are being correctly classified as independent contractors, as the companies contend.

Since 2022, a number of laws and legal amendments have been drafted to define digitally dispatched health-care workers as independent contractors. Just as Uber convinced municipal regulators in 2012 that digitally dispatched chauffeurs needed a new business category and exemptions from existing regulatory structures, so too are on-demand nursing companies trying to convince state-level regulators that there is something magically different about their business operations and thus they should be exempted from existing legislation. A California ballot initiative in 2022 to define digitally dispatched health-care workers as independent contractors was withdrawn ([Sherer and Poydock 2023](#)), but the campaign around it was not an aberration. That same year, a Minnesota omnibus bill put forward the phrase “health care worker platform” to describe on-demand nursing companies that use “an internet platform” to assign workers to jobs. Minnesota Governor Tim Walz declined to sign the bill into law, which would have specified that workers for these companies act as independent contractors.<sup>30</sup> Similarly, a draft Ohio appropriations bill tried to do nearly the same thing with nearly identical language.<sup>31</sup>

However, not all efforts to establish “health-care worker platforms” as unique business entities that should be excluded from existing labor standards and public safety regulations have stalled. In 2022, the state of Colorado adopted a bill that does just that. Colorado now defines a “health-care worker platform” as:

Any person, firm, corporation, partnership, or association that maintains a system of technology that provides a media or internet platform for a health-care worker to be listed and identified as available for hire by health-care facilities seeking health-care workers. Under a platform, the health-care facility sets the hourly rates and other terms of hire and *the health-care worker, as an*

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<sup>30</sup> See [Minnesota S.F. No. 4410 \(2nd Engrossment\)](#) and [bill tracking](#).

<sup>31</sup> See [draft of Ohio H.B. 33](#).

*independent contractor and not as an employee or agent of the entity that maintains the platform, decides whether to agree to the hourly rates and other terms of hire (emphasis added) ([Colo. S.B. 22-210 2022](#); [NALTO 2023](#)).*

This new Colorado law tries to preempt both local regulation<sup>32</sup> and the kinds of misclassification lawsuits that have entangled ShiftKey and Clipboard Health. In several states, ShiftKey workers contend that nursing homes have wrongly withheld their wages and overtime pay. What's important to keep in mind about these legal battles is that the cases are not being brought directly against ShiftKey. The workers, who are prevented from filing class action lawsuits, are suing the nursing homes that treated them as employees (i.e., asked workers to stay late) but did not compensate them as such with overtime pay ([Henreckson 2024](#)). Of course, ShiftKey, as the entity that facilitates the recruitment, hiring, and scheduling of these workers, is implicated in the cases. In California, Clipboard Health has seen numerous wage claims filed against it and, in 2022, agreed to a \$2.2 million settlement over unpaid overtime to its workers ([Sumagaysay 2023](#)).

What is often lost in debates about the costs of misclassification is that it is not just workers who lose, but the public and our federal, state, and local governments too. Gig companies avoid contributions to social programs and force the public to pay for essential services for their workforce. These misclassification schemas also hurt businesses such as ShiftMed and Gale Healthcare Solutions (another popular on-demand nursing app) that play by the rules—actually classifying gig nurses as employees—and fairly pay into Social Security, unemployment insurance, and paid family leave programs ([Staffing Industry Analysts 2023](#)).

“Yesterday, I felt like I was given a very difficult assignment because of my position [as] a gig nurse . . . I felt like I was given the worst patients. I had such a hard day yesterday. I left, and I cried.”

To make this case, Gale Healthcare Solutions has built a coalition of other W-2-based on-demand nursing companies and pushed the Department of Labor “to clarify that most temporary nurses be considered W-2 employees, not independent contractors, of the agency they work through” ([Payne et al. 2023](#)). These gig nursing companies offer their W-2 health-care workers both the flexibility to choose their own shifts and the protections inherent in being an employee. But, it is impractical and unsustainable for these companies to have to compete with ShiftKey and other firms that shirk their responsibilities to workers and the public. Moreover, the risks posed by gig nursing to worker safety and patient well-being will not be remedied alone by the reclassification

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<sup>32</sup> For a discussion on gig work preemption trends, see Wells et al. ([2024](#)).

of workers into employees. As interviews with ShiftMed workers reveal, significant problems remain even when workers are classified correctly.

## Conclusion

Across the US, gig companies present themselves as quick fixes to what many have argued are really structural problems in the contemporary health-care industry. In the wake of the COVID-19 pandemic, companies like ShiftKey, Clipboard Health, CareRev, and ShiftMed have seized an opportunity and appealed to our common sense. Just as the gig economy sold itself as offering workers some control over their lives, gig nursing companies promise to empower nurses. As such, we must see the rise of on-demand nursing as a symptom of a problem—not the problem itself. Nursing professor Karen Lasater ([2024](#)) is explicit:

Policymakers need not solve for a low workforce supply issue; the US has a robust and growing supply of registered nurses with enough new nurses to more than replace retiring nurses through 2035. Instead, policies are needed to address the low retention caused by employers' chronic understaffing, rigid scheduling options, and lack of responsiveness to clinicians' recommendations to improve care, which drives nurses to burnout and [to] depart for better working conditions.

The real problem is twofold: Health-care institutions are suffering, and the workforce is struggling to find decent jobs. Is there a problem with health-care staffing? Yes. Is gig nursing the answer? Likely not. Even with apps that treat workers as part-time employees, as ShiftMed does, considerable risks remain for workers and patients, especially regarding continuity of care. Still, gig labor models have been deployed at a wide scale in the health-care industry. To expand upon the findings based on companies studied in this brief, future research should consider the nature of the Mercy hospital system, one of the 25 largest systems in the US, and its development of an employee-based app scheduling system for its established workforce ([Lewis 2023](#)).

On-demand nursing companies exercise employer-like control over their workers yet ascribe to workers a “second-class status of nonemployees” ([Sherer and Poydock 2023](#)). These companies want the power that comes with being an employer while disowning the duties and responsibilities enacted over the past century by federal and state lawmakers. The companies, however, frame the question of worker misclassification not as an issue of eroded labor rights but as a referendum on freedom, empowerment, and progress. According to the then-CEO of CareRev, “Nurses are ultimately empowered by becoming independent contractors” ([Reed 2022](#)). An executive of ShiftKey put it this way: “You’re seeing a lot of tension between people who are ready to embrace empowered work and people who are still fighting the old guard, the old way of working” ([Fast Company Executive Board 2023](#)).



We are not opposed to technological change in the health-care sector. What we argue is for the inclusion of worker voices and patient well-being in decisions about when, where, and under what conditions technology makes sense in the health-care industry. As policy researcher Beth Gutelius ([2024](#)) reminds us, “One powerful way to shape the impacts of new technologies on an ongoing basis is to advance a set of policies that expand the right to organize and bargain collectively, increase protections at work, and enforce existing regulations.” If we do not, the health-care workplace will continue to degrade, and, as Rachel Norris ([2023](#)) warns, “The next pandemic could be far more deadly, not because the virility of the next virus is higher but because we will have fewer caregivers to save us.”

13 of the 29 workers in this study report taking excessive risks to their own health and safety while on a job for Clipboard Health, ShiftKey, CareRev, or ShiftMed.

The results of the study presented here are important and they should be taken in a wider context. Even though we have studied care work in several countries to date and have been in conversations with policymakers about the de-skilling of care, the case of gig nurses is the first time we see direct threats to a health-care workforce, let alone a workforce of this size and importance. Although others have documented the Uberization of child- and eldercare ([Ticona and Mateescu 2018](#)), gig nursing companies suggest an important turn in the US: the erosion of not only shifts and wages, but regulation of the profession

itself. The immediate risks to public safety, worker rights, and urban infrastructure posed by Uber could pale in comparison to the risks posed by new on-demand nursing companies, which engage major public and private health-care institutions. That a person who is not familiar with a hospital, its patients, its patient histories, or its management structures, can just arrive one day and pick up from the previous worker who finished their shift would be unimaginable only a few years ago.

In the context of the wider technological turn in the health-care industry, this brief offers a warning. It is important to not lose sight of the enormous amount of skill, coordination, understanding of human vulnerability and frailty, and treatment of patients with utmost decency required to provide good quality care. Technology could provide solutions to automate and unburden the nurses and health-care workers from the everyday management tasks of their work; however, decision-making around such solutions should include the nurses themselves, from design to deployment.

Our conclusion is straightforward. The patterns identified in this study raise questions about the extent to which working conditions and patient well-being in the on-demand nursing industry conform to contemporary labor standards and safeguard patient care. We call for legislators, policymakers, civic leaders, and community organizations to intervene in assessing, evaluating, and regulating the US health-care system in the face of the rising threat of gig work in nursing.

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## Appendix A: Methodology

Data collection for this study was part of an international research project (“Fairwork”)—spanning 39 countries in five continents—to assess gig labor firms across principles of fair work.

From November 2023 to September 2024, the research team conducted and transcribed 29 interviews with gig nurses and nursing assistants for ShiftMed, ShiftKey, Clipboard Health, and CareRev. The researchers enlisted workers through online recruitment on the LinkedIn website as well as snowball techniques. To mitigate any possible coercion, the researchers did not conduct interviews or surveys as patients or at any health-care facilities. Workers received a small financial reward for participation.

The interviews were conducted remotely through Microsoft Teams and were roughly an hour in length. Workers were asked questions about their employment histories, workplace experiences, and feelings about the gig economy in general. Demographic and educational information was also collected. The data was then anonymized and coded for emergent themes.

There is insufficient evidence to assess whether the workers who participated in this study are representative of all gig health-care workers in the US. To date, there are no robust estimates of the size and characteristics of this new sector’s workforce. But the data collected and reviewed here is evidence of the structures that gig nurses and nursing assistants, however many, navigate and the kinds of worker challenges that they face in one of the newest and possibly largest sectors of gig work.

To contextualize these findings, this report draws on analyses of policy documents, media stories, lobbying records, business filings, scholarly publications, and online forums (Reddit, Facebook, and Better Business Bureau). In addition, the research team interviewed outside stakeholders, including journalists and union representatives.

## Appendix B: Participant Summary Chart

Pseudonym	Age and Gender	Current State	CNA or Nurse	Time on the App(s)	Interview Date
Aisha	24F	Georgia	CNA	2–3 years	21-Mar-24
Alice	31F	California	CNA	1 year or less	2-Feb-24
Amber	38F	Illinois	nurse	2–3 years	12-Mar-24
Ashley	35F	Indiana	CNA	2–3 years	9-Feb-24
Audrey	33F	California	nurse	1 year or less	4-Mar-24
Beatrix	34F	Washington	nurse	2–3 years	4-Sep-24
Bertha	22F	Maryland	CNA	1 year or less	3-Sep-24
Carey	31F	Georgia	CNA	> 3 years	27-Nov-23
Crystal	32F	New York	nurse	> 3 years	27-Aug-24
Dana	29F	Missouri	nurse	2–3 years	3-Apr-24
Darlene	30F	California	CNA	2–3 years	1-Mar-24
Jasmine	43F	Missouri	nurse	1 year or less	22-Mar-24
Jenia	28F	California	nurse	2–3 years	23-May-24
Kristin	40F	Oregon	nurse	1 year or less	11-Jun-24
Kyle	48M	Oklahoma	nurse	2–3 years	27-Mar-24
Layla	29F	Wisconsin	nurse	> 3 years	6-Mar-24
Leticia	31F	Pennsylvania	CNA	2–3 years	9-Feb-24
Marjorie	31F	South Carolina	CNA	2–3 years	28-Mar-24
Melanie	53F	Maine	CNA	1 year or less	30-Aug-24
Paola	30F	Missouri	CNA	2–3 years	29-Jan-24
Ricardo	22M	Massachusetts	CNA	1 year or less	29-Jul-24
Robin	41F	Florida	nurse	> 3 years	6-Feb-24
Seneca	30F	New York	CNA	2–3 years	1-Mar-24
Serena	21F	Wisconsin	CNA	2–3 years	5-Mar-24
Shakayla	38F	California	nurse	1 year or less	29-Aug-24
Sharon	35F	Wisconsin	nurse	1 year or less	29-Nov-23
Suri	30F	Florida	nurse	2–3 years	5-Mar-24
Tracey	33F	Wisconsin	nurse	> 3 years	10-Jan-24
Yasmine	26F	California	CNA	1 year or less	1-Aug-24





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## Opposition to HF 2145 (Greenman) - Duplication of Existing Statute

Chairman Pinto and Honorable Members of the Workforce, Labor, and Economic Development Finance and Policy Committee,

The Builders Association of Minnesota, a statewide business association representing nearly 900 home builders, remodelers, developers, and other industry professionals, writes to express our significant concerns regarding HF 2145 (Greenman).

We believe that HF 2145 is redundant and unnecessary due to the existing provisions within Minnesota Statutes 181.722 and 181.723. Specifically, we draw your attention to the following:

- **Minnesota Statutes 181.722, Subdivision 1:**
  - This subdivision explicitly prohibits the failure to classify, represent, or treat an individual who is an employee as such, in accordance with applicable local, state, and federal laws.
  - It further clarifies that violations under this clause are in addition to any other violations of local, state, or federal law.
- **Minnesota Statutes 181.723, Subdivision 7 (3):**
  - This subdivision prohibits the failure to report or disclose an individual who is an employee, as an employee, when required to do so under any applicable local, state, or federal law.
  - It also states that each failure to report or disclose an individual as an employee constitutes a separate violation.

These existing statutes clearly address the issues that HF 2145 seeks to regulate. Furthermore, the Department of Labor and Industry (DOLI) commissioner already possesses the authority to impose fines of up to \$10,000 per violation.

Given the comprehensive nature of the current legal framework, we respectfully ask: **Why is HF 2145 deemed necessary?**

We believe that enacting this duplicative legislation would create unnecessary confusion and regulatory burdens for businesses in Minnesota, without providing any tangible additional

protection for workers. We urge the committee to carefully consider the existing statutes and the potential negative impact of HF 2145.

Thank you for your time and consideration.

Sincerely,

Grace Keliher, Executive Vice President

The Builders Association of Minnesota