



The Use of Contract Staff in Nursing Homes Remains High After the COVID-19 Pandemic

KEY POINTS

- In light of workforce shortages exacerbated by the COVID-19 pandemic, contract nursing staff have become an important but costly strategy to address nursing home staffing deficits.
- Within nursing homes, the use of contract nursing staffing increased sharply between 2020 and 2022, with the percent of RNs, LPNS, and NAs hours per resident day (HPRD) filled by contract workers increasing from 3%, 4%, and 4% in 2020 to 7%, 11%, and 12% in 2022, respectively. Since the end of the Covid-19 Public Health Emergency on May 11, 2023, nursing homes have decreased their use of contract nursing staff, although it remains substantially higher at 9% of HPRD in 2023 compared to 3% of HPRD pre-pandemic.

BACKGROUND

As the population ages in the coming decades, the demand for long-term services and supports will also increase, and the workforce providing that care will need to keep pace with this growing demand. Currently, over one million Americans rely on nursing homes for care, yet nursing homes face challenges in recruiting and retaining staff. Nursing homes rely on registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) to provide care, but staff shortages that increased during the COVID-19 pandemic persist, and are associated with lower quality care.^{1,2} Insufficient staffing also leads to more workplace injuries, which in turn cause additional turnover. Workplace safety, low pay, and poor job quality are leading causes of low tenure and high vacancy rates among nursing home staff.³

During the COVID-19 pandemic, nursing home staff faced a new set of challenges, including limited access to testing and shortages of personal protective equipment (PPE). These difficulties drove many nursing staff to consider employment elsewhere.^{4,5} For NAs, who provide most of the care in nursing homes, higher paying and safer job opportunities became available both during the pandemic and as the economy emerged from lockdown.⁵

To counteract staffing shortages, many nursing homes used contract agencies to temporarily fill vacancies of permanent workers with contract workers.⁶ These contract workers are not employees of the nursing home and operate under a contractual arrangement. Nursing homes that rely more heavily on these arrangements tend to perform worse in quality assessments.^{7,8} One possible reason is that the

temporary nature of contract work compromises continuity of care.⁹ Also, the use of contract workers may adversely affect the morale of existing employees, because the contract workers often lack familiarity with the work environment and residents, yet are usually paid more than the permanent nursing home employees.⁵

In this study we examined the use of contract staff in nursing homes before, during, and after the COVID-19 pandemic. We analyzed the distribution of staffing hours between permanent employees and contract staff and differences in the use of permanent employees and contract staff by facility characteristics. We assessed the additional costs nursing homes incurred when staffing contract labor positions and how that changed during the COVID-19 pandemic. We also looked at the overall labor market for nurses, reporting the number that were employed by nursing homes relative to contract staffing agencies, and their wages in these respective settings. Together, these analyses provide insight into the ways that nursing homes may respond to staffing shortages, and potential future staffing concerns.

DATA AND METHODS

We used several data sources and methods to assess how the use of contract staff has changed over time. Our first analysis focused on nursing home staffing levels, which we report as the hours per resident day (HRPD) for RNs, LPNs, and NAs that are employees of nursing homes and the corresponding HRPD for contractors. We conducted these analyses using data from the 2017–2023 Payroll Based Journals (PBJ) which is a mandatory system for nursing homes to submit data on staffing hours, employee turnover, and contracted staff to Centers for Medicare & Medicaid Services (CMS).¹⁰ The PBJ quarterly public use files include daily hours worked by nursing and other staff. We aggregated the PBJ data to annual levels, removing facility-days where the number of nursing home residents was equal to zero. The PBJ public use files exclude nursing homes with a quarterly average of more than 12 total nurse HRPD or greater than 5.25 hours of nurse aide HRPD, as well as nursing homes that did not report during the last day of a quarter. We further limited our analyses to nursing homes that we could link to the CMS Provider Data Catalogue,¹¹ which provides information on ownership and number of beds, and to LTCFocus,¹² which is compiled by the Brown University Center for Gerontology and Healthcare Research and provides information on whether nursing homes are part of multi-facility chains. After these sample restrictions, we had an average of 14,934 nursing homes per year for this analysis.

We next used data from the Skilled Nursing Facility (SNF) Medicare Cost Reports from 2017 to 2021 to examine how nursing home labor costs and staffing levels for employees vs. contract workers have changed over this period.¹³ Medicare providers are required to submit an annual cost report in a standard format comparable across states and nursing homes. Labor costs include wages and benefits for employees and the nursing home's total expenditure on contract agency staff. We divided total costs for employees and contract agency staff by the labor hours paid to employees and the labor hours of contract agency staff to get average hourly labor costs for employees and contractors, respectively. We included only nursing homes for which we could link PBJ and nursing home characteristics for the same year, and nursing homes that provided a full 12-month fiscal year. We excluded nursing homes with clearly anomalous data on staffing costs, including those where the annual average hourly costs of

nursing employees are less than \$1 or greater than \$200. Following those exclusions, we had an average of 11,020 nursing homes per year in the cost analyses. In 2021, 43% of those nursing homes used contract nurses, compared to 19% in 2017. We next focused exclusively on those facilities that used staff employees alongside contract workers. This represented about 20% of nursing homes per year or an average of 3,020 nursing homes per year. We constructed a measure of the relative labor costs of a contract labor hour to an employee labor hour for each facility and averaged this measure across facilities in each year.

To provide a national labor market perspective, we used 2019 and 2023 data from the Bureau of Labor Statistics (BLS) Occupational Employment and Wage Survey (OEWS).¹⁴ OEWS data provide estimates of employment and wages from a sample of employers surveyed over a 3-year period, using occupations as defined by the Standard Occupational Classification (SOC) system for the labor force overall and by industry, as defined by North American Industry Classification System (NAICS). We extracted the annual hourly median wages (in 2023 dollars) and employment for RNs, LPNs, and NAs in the Nursing Facilities (nursing homes) and Employment Services (contract agencies) industries, using NAICS categories.^a Employment services consist of the contract agencies that supply contract nurses to nursing home and other health care settings, like hospitals and home health agencies. Unfortunately, data were not available to indicate where those employed by contract agencies work, but they provide a perspective on the labor market for nurses.

FINDINGS

Staffing in Nursing Homes Before, During, and After the COVID-19 Pandemic

Table 1 shows the mean HPRD for RNs, LPNs, and NAs employed by nursing homes annually from 2017 to 2023. Before the pandemic (2017–2019), there was little to no growth in nursing staff hired directly by nursing homes as measured by HPRD. However, during the pandemic years (2020–2022), the HPRD of nursing home-employed staff declined. RN employment declined by 15%, and LPN and NA employment each fell by 12%. The pandemic led to a surge in the use of contract labor, with contracted RNs, LPNs, and NAs all experiencing more than a 100% rise in HPRD. In 2023, this surge in contract labor ended and nursing homes scaled back their reliance on contract labor and increased their use of permanent employed staff.

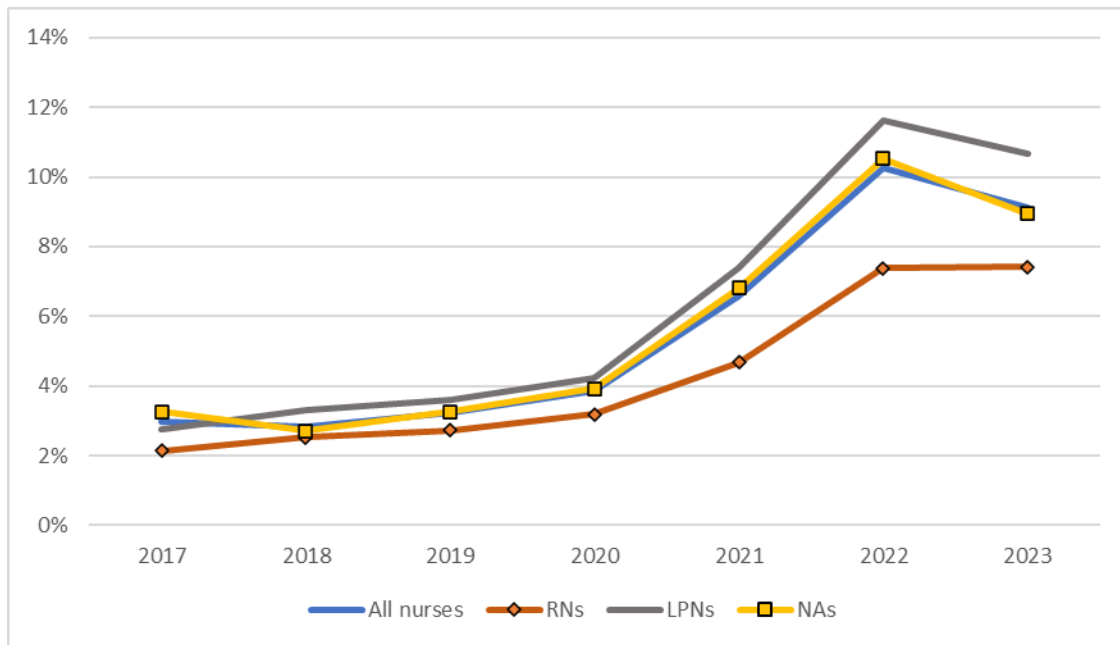
^a We use the SOC codes for RNs (291140), LPNs (292061), and NAs (311131). We use the NAICS codes for Nursing Facilities (623110) and Employment Services (561300).

Table 1: Mean Hours Per Resident Day for Nursing Home Employees and Contract Staff, 2017-2023										
	2017	2018	2019	2020	2021	2022	2023	Percent change		
								2017–2019	2020–2022	2022–2023
Employees										
RNs	0.57	0.58	0.60	0.64	0.61	0.55	0.55	5%	--14%	0%
LPNs	0.84	0.84	0.84	0.87	0.83	0.77	0.78	0%	-12%	1%
NAs	2.19	2.21	2.19	2.20	2.04	1.93	2.00	0%	-12%	4%
Total	3.60	3.64	3.63	3.72	3.47	3.24	3.33	1%	-13%	3%
Contract workers										
RNs	0.01	0.02	0.02	0.02	0.03	0.04	0.04	100%	100%	0%
LPNs	0.02	0.03	0.03	0.04	0.07	0.10	0.09	50%	150%	-10%
NAs	0.07	0.06	0.07	0.09	0.15	0.23	0.20	0%	156%	-13%
Total	0.11	0.11	0.12	0.15	0.24	0.37	0.33	9%	147%	-11%

Source: 2017-2023 Payroll Based Journals (PBJ). **Notes:** We report the hours per resident day (HRPD) for registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) who are employees of nursing homes and the corresponding HPRD for contract workers.

The percentage of HPRD nurse employees filled by contract nurses in nursing homes was stable until 2019 (Figure 1) with substantial growth beginning in 2020, the beginning of the COVID-19 pandemic. The use of total contract nurse staffing peaked in 2022, after which the rate of contract LPN and contract NA use fell by about one percentage point and the rate of RN contract use remained about the same. Although the contracted staffing levels remain higher in 2023 than they were before the pandemic, it is unclear how the rates will stabilize in the future.

Figure 1: Contract Hours as a Percent of Total HPRD in Nursing Homes, 2017-2023

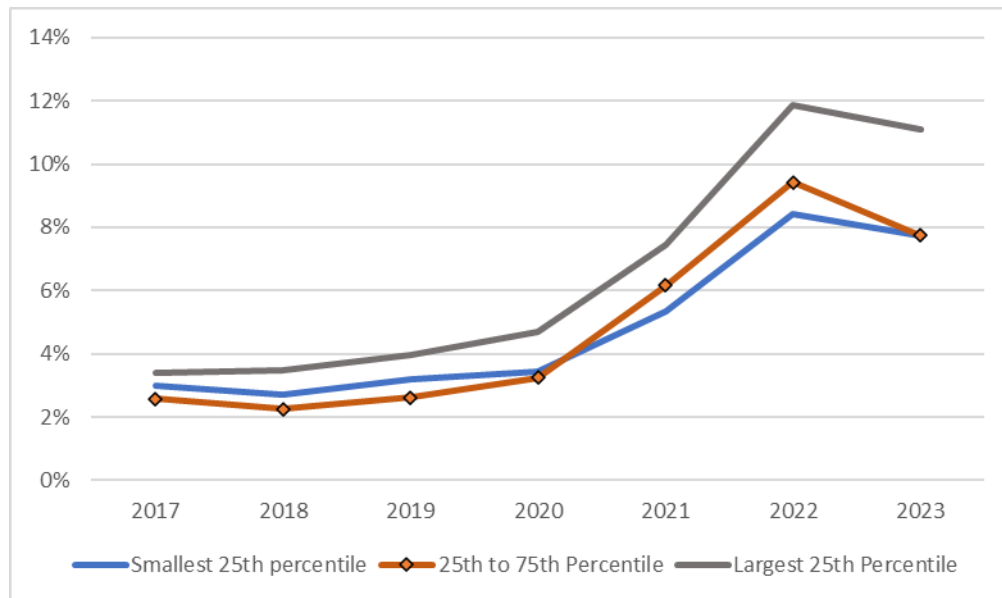


Source: 2017-2023 Payroll Based Journals (PBJ). **Notes:** We graph the hours per resident day (HRPD) for contract registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) as a percentage of the total HPRD for RNs, LPNs, and NAs, respectively.

Use of Contract Staff by Nursing Home Size

The use of contract staff during this time varied by nursing home size, ownership status, and chain affiliation. Figure 2 shows the difference in contracting rate by size of the nursing home. To examine these differences, we calculated the overall proportion of contracted staff by HPRD. We calculated the “contracting rate” by combining RN, LPN, and NA contracting HPRD relative to total RN, LPN, and NA HPRD. The use of contracting staff increased in all nursing homes in response to the pandemic but was most prevalent in the largest nursing homes and increased the most in the largest homes over time. These facilities increased their contracting rate from 4% before the pandemic (2019) to 11% after the pandemic (2023), with a peak of 12% in 2022.

Figure 2: Contracting Rate by Nursing Home Size (Number of Beds), 2017-2023

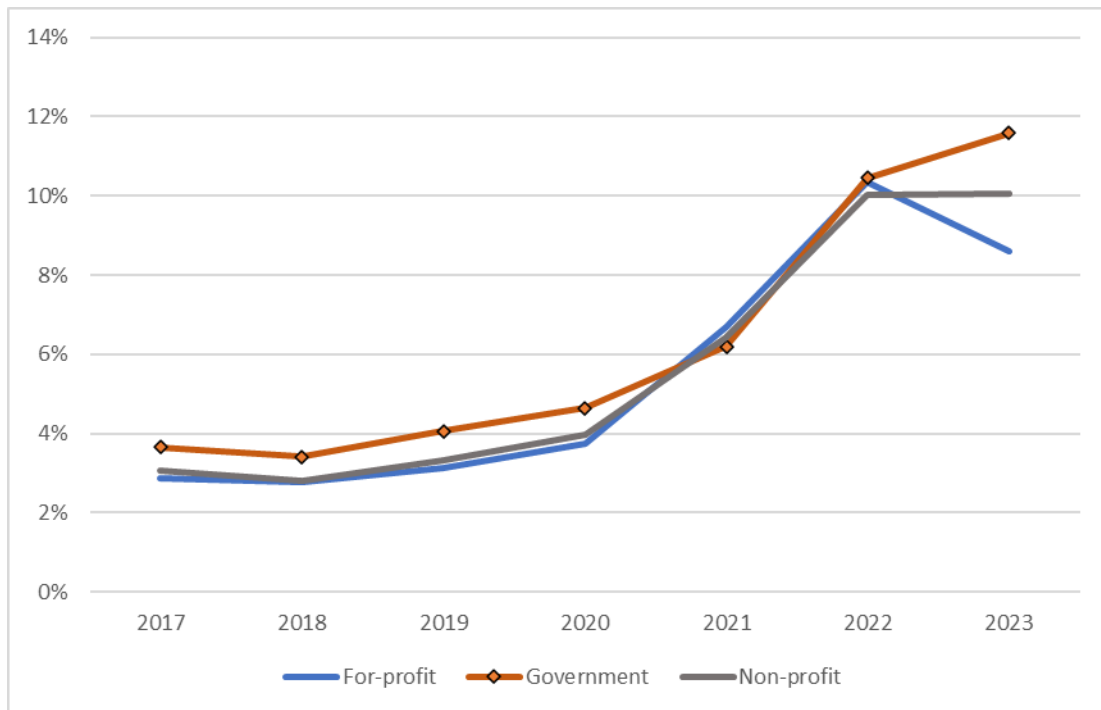


Source: 2017-2023 Payroll Based Journals (PBJ). **Notes:** We graph the contract staff hours per resident day (HRPD) for registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) as a percentage of the total HPRD.

Use of Contract Staff by Nursing Home Ownership Status

The contracting rate also varied by nursing home ownership (Figure 3). Prior to the pandemic, government-run nursing homes used more contract staff (4% of HPRD) than did for-profit or non-profit homes, which used contract staff for 3% of their HPRD. During the pandemic, however, for-profit nursing homes increased their use of contract staff from 4% in 2020 to become level with non-profit and government nursing homes at about 6.5% in 2021 and 10% in 2022. Following the first two years of the pandemic, starting in 2022, for-profit nursing homes reduced their use of contract labor (by about 2 percentage points), although the use remains greater than prior to the pandemic. Government-owned nursing homes, however, continued to increase their use of contract staffing, while non-profit nursing homes had no change.

Figure 3: Contracting Rate by Ownership Status of the Nursing Home, 2017-2023



Source: 2017-2023 Payroll Based Journals (PBJ). **Notes:** We graph the contract staff hours per resident day (HRPD) for registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs) as a percentage of the total HRPD.

Use of Contract Staff by Nursing Home Chain Affiliation

Chain affiliation also was associated with the use of contract labor. Before and after the pandemic, independent nursing homes had a higher concentration of contract labor usage than did nursing homes that were part of a chain. Nursing homes are part of a chain if they share an ownership affiliation with other facilities. Contract nursing staff in nursing home chains represented about 3% of their HRPD before the pandemic (2019) and 9% after (2023). For non-chains, that share was 4% before the pandemic (2019) and 11% after (2023). Because data for 2022 are missing, we do not show graphical trends. However, during the height of the pandemic in 2021, chain facilities used more contract labor than independent nursing homes (7% vs. 6%).

The Cost of Contract Labor Relative to Permanent Nursing Home Staff

The increases in contract staff during the pandemic led to an increase in labor costs for nursing homes. Table 2 reports the mean per hour labor costs from 2017 through 2021, not adjusting for inflation, as reflected in the 2017-2021 SNF Medicare Cost Reports. During this period, the growth in hourly labor costs for permanent employees of the facility was 18% for RNs, 20% for LPNs, and 26% for NAs. Labor costs for contract workers over this period were substantially higher and increased at a faster rate. Contract RN labor costs increased by 31%, contract LPN costs increase by 24%, and contract NA costs

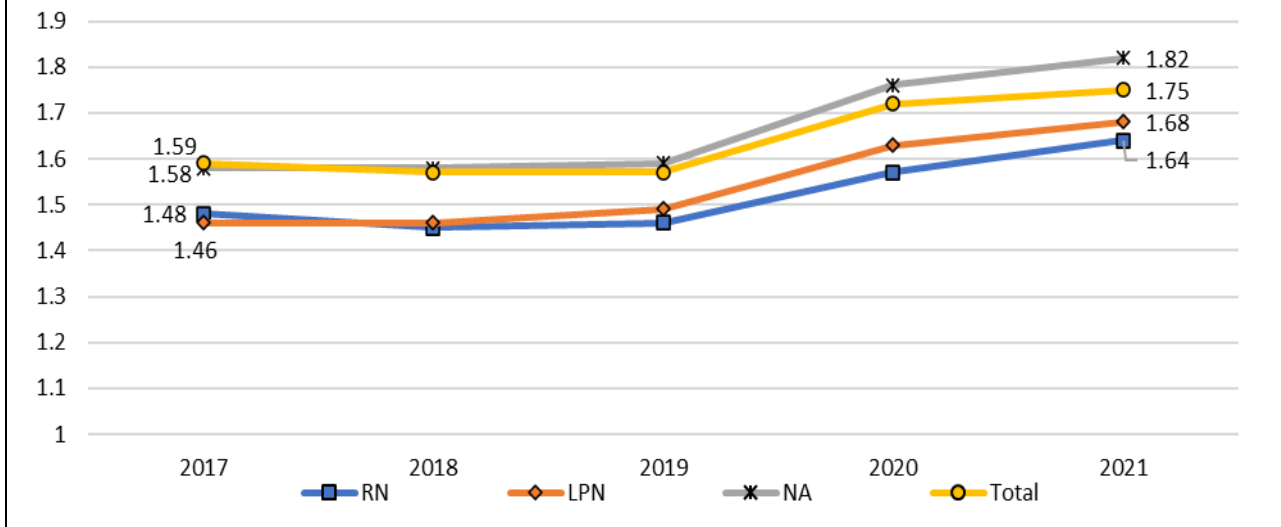
increased by 41%. This surge led to large cost differentials by 2021. Contract NAs cost nursing homes over \$36 per hour by 2021, which was \$15.81 (80%) higher than the labor costs for non-contract NA staff. LPN contract labor costs per hour exceeded LPN staff costs by \$21.92 (65%), and RN contract labor costs per hour exceeded RN staff costs by \$25.46 (59%).

Table 2: Mean Hourly Labor Costs for Nursing Home Employees and Contract Staff (not adjusted for inflation), 2017-2021						
	2017	2018	2019	2020	2021	Percent change 2017–2021
Employees						
RNs	\$36.50	\$37.82	\$38.62	\$40.87	\$42.95	18%
LPNs	\$27.82	\$28.78	\$29.63	\$31.46	\$33.39	20%
Nas	\$16.01	\$16.71	\$17.43	\$18.79	\$20.22	26%
Total	\$21.40	\$22.29	\$23.14	\$24.89	\$26.55	24%
Contract workers						
RNs	\$52.42	\$55.25	\$56.44	\$64.16	\$68.41	31%
LPNs	\$41.23	\$43.01	\$44.53	\$51.47	\$55.31	34%
Nas	\$25.53	\$27.01	\$28.27	\$33.11	\$36.03	41%
Total	\$34.96	\$36.23	\$37.26	\$43.30	\$46.00	32%

Source: 2017-2021 Center for Medicare and Medicaid Services SNF Medicare Cost Reports. **Notes:** Labor costs include wages and benefits for employees and total costs paid for contract labor. We divide total employee costs by the number of labor hours paid to employees and the total contract labor costs by the labor hours of agency staff to get average hourly labor costs for employees and contract workers, respectively.

At all points in time, contract labor was relatively more costly than permanent employed labor (Figure 4). Prior to the pandemic (2017-2019), contract labor was 45% to 60% more expensive than facility spending per hour on their permanent employees. This difference grew sharply in 2020 and continued to increase. By 2021, labor costs per hour for contract staff were 75% higher than for permanent employees across all nursing staff categories combined, with NA contract labor cost the highest at 82% more than nursing home-employed staff.

Figure 4: Relative Labor Costs of Contract Labor Compared to Permanent Employed Labor within Nursing Homes, 2017-2021



Source: 2017-2021 Center for Medicare and Medicaid Services SNF Medicare Cost Reports. **Notes:** Labor costs include wages and benefits for employees and total costs paid for contract labor. We divide total employee costs by the number of labor hours paid to employees and the total contract labor costs by the labor hours of agency staff to get average hourly labor costs for employees and contract workers, respectively. Relative labor costs are the average hourly labor costs of contract labor divided by the average hourly labor costs of permanent employees for registered nurses (RNs), licensed practical nurses (LPNs), and nursing assistants (NAs).

Relative Labor Costs by Size and Type of Nursing Home

With the exception of government nursing homes, Table 3 shows relative labor costs were stable until 2019 by type and size of the nursing home. After 2019, relative costs grew 52% in large nursing homes, which was higher than small and medium-sized nursing homes. For-profit nursing homes' relative labor costs increased at a higher rate from 2019 through 2021 (34%) than non-profits nursing homes' costs (26%). Facilities that were part of chains maintained higher cost ratios throughout the study period, but relative costs grew by more in independent nursing homes (43%) than in chains (27%).

Table 3: Relative Labor Costs by Type and Size of Nursing Home, 2017-2021

	2017	2018	2019	2020	2021	Percent change (2019–2021)
Size by number of beds						
Lowest 25 th percentile	1.64	1.64	1.65	1.76	1.79	22%
Middle 50 th	1.66	1.62	1.62	1.76	1.79	27%
Highest 25 th percentile	1.45	1.42	1.42	1.60	1.64	52%
Ownership						
For-Profit	1.61	1.55	1.55	1.71	1.74	34%
Non-Profit	1.54	1.56	1.56	1.67	1.68	26%
Government	1.87	2.16	2.05	1.86	1.98	8%
Chain status						
Chain	1.65	1.64	1.64	1.75	1.81	27%
Non-chain	1.50	1.45	1.46	1.65	1.66	43%

Source: 2017-2021 Center for Medicare and Medicaid Services SNF Medicare Cost Reports. **Notes:** Labor costs include wages and benefits for employees and the nursing home’s total expenditure for agency staff. We divide total employee costs by the number of labor hours paid to employees and the total contract labor costs by the labor hours of agency staff to get average hourly labor costs for employees and contractor workers, respectively. Relative labor costs are the average hourly labor costs of contract labor divided by the average hourly labor costs of permanent employees.

National Employment and Wage Estimates from 2019 and 2023

Employment Growth for RNs, LPNs, and NAs

The increased labor costs for nursing homes are consistent with national wage and employment data. Between 2019 and 2023, the number of nurses employed by nursing homes decreased for each level of nursing, while the number of nurses working for contract agencies increased significantly (Table 4). Between 2019 and 2023, employment levels among RNs in nursing homes declined by 17.82%. In contrast, the number of RN contract workers more than doubled (128.55%) across all settings. LPN employment experienced an 18.22% decline in nursing homes, but the number of LPNs employed as contractors across all settings increased by 56.02%. NA employment in nursing homes fell by 19.01% but the number of NAs employed as contractors across all settings increased by 58.23%. While contract nursing staff grew significantly, we are unable to determine if that growth was specific to nursing homes; those staff could be employed in any setting, including nursing homes, hospitals, or home health care services.

Table 4: Employment Growth for Nurses in Nursing Homes and as Contractors, 2019-2023

Occupation and Industry	2019	2023	Percent growth (2019–2023)
Registered Nurses			
Nursing homes	151,300	124,340	-17.82%
Contract agencies	57,270	130,890	128.55%
Licensed Practical Nurses			
Nursing homes	209,440	171,290	-18.22%
Contract agencies	21,690	33,840	56.02%
Nursing Assistants			
Nursing homes	566,240	458,590	-19.01%
Contract agencies	37,590	59,480	58.23%

Source: 2019 and 2023 Bureau of Labor Statistics (BLS) Occupation and Bureau of Labor Statistics Employment and Wage Survey (OEWS). **Notes:** We report the number of employees in the Standard Occupational Classification (SOC) for RNs (291140), LPNs (292061), and nursing assistants (311131) by industry, as defined by North American Industry Classification System (NAICS). The NAICS industries are Nursing facilities (nursing homes; 623110) and Employment Services (contract agencies; 561300). Employment services employees can be employed as contractors of the nursing home or in other health care settings, like hospitals and home health agencies.

Hourly Wage Estimates for RNs, LPNs, and NAs

The wage gaps between nurses employed in nursing homes and nurses employed by contracting agencies increased between 2019 and 2023, for all levels of nursing (Table 5). In 2019, nursing staff working in nursing homes earned less than nurses working for contracting agencies, but those differences were modest, with nursing home employees earning between 94% (RNs) and 99% (LPNs) of what their contracting agency staff peers earned. In 2023, those differences increased, with nursing home-permanently employed RNs earning 79% of what contract agency-employed RNs earned and nursing home-employed LPNs earning 86% of contract agency-employed wages.

Table 5: Wages of Nursing Home Employees Relative to Contractors, 2019-2023

	Registered Nurses		Licensed Practical Nurses		Nursing Assistants	
	2019	2023	2019	2023	2019	2023
Nursing homes	\$38.31	\$38.37	\$28.03	\$29.80	\$16.57	\$18.16
Contract agencies	\$40.33	\$48.30	\$28.35	\$34.47	\$17.19	\$21.72
Wage differential (Nursing home wage – contract agency wage)	-\$2.02	-\$9.93	-\$0.32	-\$4.67	-\$0.62	-\$3.56
Wage (Nursing home wage/contract agency wage)	0.94	0.79	0.99	0.86	0.96	0.83

Source: 2019 and 2023 Bureau of Labor Statistics (BLS) Occupation and Bureau of Labor Statistics Employment and Wage Survey (OEWS). **Notes:** We report median wages in the Standard Occupational Classification (SOC) for RNs (291140), LPNs (292061), and nursing assistants (311131) by industry, as defined by North American Industry Classification System (NAICS). The NAICS industries are Nursing facilities (nursing homes; 623110) and Employment Services (contract agencies; 561300). Employment services employees can be employed as contractors of the nursing home or in other health care settings, like hospitals and home health agencies.

DISCUSSION

We observed a sharp increase in the HPRD staffed by contract nurses (RNs, LPNS, and NAs) during the pandemic, with 0.12 HPRD in 2019 jumping to a peak of 0.37 in 2022. By 2023, this had declined to 0.33 HPRD, but the rate of use of contracted staff remains almost three times higher than the pre-pandemic average HPRD. The cost of contract nurses was 60% higher than for permanent employees in 2019, but this gap grew to 72% in 2020 and 75% in 2021. The higher costs of contract labor after 2020 may have contributed to the 2023 reduction in contract labor use.

From a national labor market perspective, the number of RNs, LPNs, and NAs employed as contractors grew faster between 2019 and 2023 than the number of RNs, LPNs and NAs employed directly by nursing homes. The real wage differential grew as well. RNs working as employees of nursing homes made \$2.02 per hour (or 6%) less in 2019 than RNs working for contract agencies, and the gap increased to \$9.93 (21%) in 2023. The contractor-nursing home wage gap for LPNs increased from \$0.32 (1%) to \$4.67 (14%), and the gap for NAs increased from \$0.62 (4%) to \$3.56 (17%). The rapid growth in the number of contract workers and their substantially higher relative wage costs after the COVID-19 pandemic suggests that national trends in contract staffing are dynamic and necessitate ongoing monitoring.

The continued use of contract labor in nursing homes will depend on a number of factors. Low wages remain a long-standing concern in the hiring and retention of nursing home labor, as does competition for nursing home labor from higher paying industries.⁵ Some states have implemented wage pass-through policies that allow for Medicaid funds to be used to increase pay,¹⁵ but these have had limited success and only affected NA staffing levels.^{16,17}

The additional loss of employment driven by the COVID-19 pandemic changed the employee-contracting balance. Workers lacked sufficient access to PPE and COVID-19 testing, resulting in increased staff turnover.¹⁸ This study found that contract workers were called upon to fill staffing shortages in 2021 and 2022 in far greater numbers and with far greater costs than was historically the case.

Several pieces of legislation during the COVID-19 pandemic offered temporary relief to employers seeking to recruit and retain nursing home staff. States were able to use the Coronavirus Aid, Relief, and Economic Security (CARES) Act, combined with the Families First Coronavirus Relief Act (FFCRA) and the 2021 American Rescue Plan Act, to allocate funds for recruitment, retention, and training initiatives to help mitigate turnover.

Although contract workers were used to address shortages during the COVID-19 pandemic, this study finds the costs associated with hiring contract staff were substantial. Recent research has also shown that a heavier reliance on contract staff is negatively associated with nursing home's operating margins.¹⁹

Limitations

We acknowledge several limitations of our analysis. BLS OEWS data do not allow us to identify wage and employment changes annually. The BLS constructs each OEWS estimate from surveys over the previous 3 years. Therefore, the 2023 estimates that we present include data from years that are part of the pandemic. Medicare Cost Reports are self-reported by the facility by fiscal year. Additionally, a complete set of Medicare Cost Reports were available through 2021 and do not include the 2023 fiscal year, a period when nursing homes were scaling back on contract labor.

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