Nurse Staffing Estimates in US Nursing Homes, May 2024

KEY POINTS

- In April 2024, CMS issued the *Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting* final rule, which established new minimum nurse staffing requirements for nursing homes by nurse type.

- As of May 2024, 50 percent of nursing homes already staffed at or above the rule's 0.55 registered nurse (RN) hours per resident day (HPRD) minimum staffing requirement; 59 percent of nursing homes staffed at or above the rule's 3.48 HPRD total nurse staffing minimum requirement; and 78 percent of nursing homes provided at least 24 hours of total RN staffing per day, before accounting for facilities that might be eligible for an exemption. The data do not allow us to assess whether facilities provided 24/7 "around the clock" RN coverage consistent with the requirement in the final rule.

- The largest observed gaps in staffing relative to the final rule's requirements were for nurse aides (NAs): 30 percent of nursing homes staffed at or above the rule's minimum requirement of 2.45 HPRD for NAs. NAs are usually required to complete official training and certifications, though the duration of required training is typically only 2 to 3 weeks.

- Staffing levels varied by nursing home characteristics, particularly size and non-profit/for-profit status. In May 2024, smaller nursing homes (i.e., fewer than 100 beds) and non-profit nursing homes were more likely to staff at or above the minimum RN, NA, and total nurse HPRD requirements than larger or for-profit nursing homes.

- Among average-sized (i.e., 100-bed) facilities with staffing below the final rule's minimum HPRD requirements, average staffing levels were still relatively close to the minimum requirements: among these facilities, we estimate that between 0.7 and 2 nurse staff, depending on the type, would need to be added per 8-hour shift to staff at the level of the minimum HPRD requirements.

INTRODUCTION

On April 22, 2024, the Centers for Medicare & Medicaid Services (CMS) issued the *Minimum Staffing Standards for Long-Term Care Facilities and Medicaid Institutional Payment Transparency Reporting* final rule (hereafter referred to as "the final rule") establishing new minimum requirements for nurse staffing levels in nursing homes.[1] The final rule requires a total nurse minimum staffing standard of 3.48 hours per resident day (HPRD), which must include at least 0.55 HPRD of direct registered nurse (RN) care and 2.45 HPRD of direct nurse aide (NA) care. Facilities may use any combination of nurse staff (RN, NA, licensed practical nurse [LPN] or licensed vocational nurse [LVN]) to account for the additional 0.48

HPRD needed to comply with the total nurse minimum staffing standard. In addition, the rule also requires nursing homes to have an RN onsite 24 hours a day, 7 days a week, to provide skilled nursing care. In addition to the existing statutory waiver of the requirement to provide licensed nurses on a 24-hour basis, the final rule also allows for temporary hardship exemptions to the HPRD and 24/7 onsite RN requirements, depending on a facility's location and local supply of nurse staff, the facility's good faith efforts to add and retain staff, and demonstrated financial commitment to staffing. Within two years of the final rule publication (i.e., May 2026), non-rural facilities must meet the 3.48 HPRD total nurse minimum staffing requirement and the 24/7 RN requirement, and within three years of the final rule publication (i.e., May 2027), non-rural facilities must meet the 0.55 RN and 2.45 NA HPRD requirements. CMS allowed more time for rural facilities, requiring compliance within three years to meet the 3.48 HPRD total nurse staffing requirement and the 24/7 RN requirement (i.e., May 2027), and five to meet the 0.55 RN and 2.45 NA HPRD requirements (i.e., May 2029).

This brief uses Nursing Home Care Compare Data from May 2024 to examine current staffing levels in US nursing homes, relative to specific minimum staffing requirements in the final rule. In addition to understanding how many facilities are currently staffing at levels at or above the HPRD requirements in the final rule, among facilities who are currently staffing at levels *below* the minimum HPRD requirements, we use an illustrative example of a 100-bed facility to examine how many staff would need to be added per 8-hour shift in order to achieve the minimum HPRD requirements and provide at least 24 hours of RN staffing in a day, using recent data not previously available.

DATA and METHODS
Data

To estimate staffing levels, we used publicly available data from the CMS Care Compare Nursing Home Provider May 2024 Information file.[a] The Care Compare provider information file contains data on nurse staffing submitted by nursing homes on a quarterly basis from the Payroll Based Journal (PBJ) Daily Nurse Staffing System[b], facility daily census calculated using the Minimum Data Set (MDS)[c], ownership type (for-profit, non-profit, and government), and number of certified beds for each facility (i.e., facility size). Using the Care Compare provider information files, we obtained information on reported NA HPRD, reported RN HPRD, reported total nursing HPRD, average resident daily census, ownership type, and number of certified beds.

We supplemented CMS' Care Compare provider information files with metropolitan and micropolitan statistical area Rural-Urban Continuum Codes (RUCC) from U.S. Department of Agriculture – Economic Research Service. RUCC codes are delineated by the U.S. Office of Management and Budget (OMB) and are used to designate rural and urban areas by population. The RUCC codes identify U.S. metropolitan and nonmetropolitan counties by their degree of urbanization. We used the 2013 Rural-Urban Continuum Codes file which was last updated in December 2020. Urban facilities were defined as facilities located in counties in metro areas of 1 million population or more (1), counties in metro areas of 250,000 to 1 million population (2), and counties in metro areas of fewer than 250,000 population (3). Rural Facilities were defined as facilities with urban population of 20,000 or more, adjacent to a metro area (4), urban population of 20,000 or more, not adjacent to a metro area (5), urban population of 5,000 to 20,000, adjacent to a metro area (6), urban population of 5,000 to 20,000, not adjacent to a metro area (7), urban population of fewer than 5,000, adjacent to a metro area (8), and urban population of fewer than 5,000, not adjacent to a metro area (9). We obtained Rural-Urban designations by merging RUCC data with Care Compare files using the (SSA-to-FIPS) crosswalk file from National Bureau of Economic Research (NBER).[d]

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[a] https://data.cms.gov/provider-data/archived-data/nursing-homes
[b] https://data.cms.gov/quality-of-care/payroll-based-journal-daily-nurse-staffing
[c] https://www.cms.gov/medicare/quality/nursing-home-improvement/minimum-data-sets-swing-bed-providers
[d] https://www.nber.org/research/data/ssa-federal-information-processing-series-fips-state-and-county-crosswalk

Methods

First, we estimated the proportion of all US nursing homes that staff at or above the final rule's minimum HPRD requirements, and the proportion that provide at least 24 RN hours daily. Specifically, we separately identified facilities with an NA HPRD level greater than or equal to 2.45; an RN HPRD level greater than or equal to 0.55; or a total nurse (i.e., RN, NA, LPN, and LVN combined) HPRD greater than or equal to 3.48. We calculated total RN hours per facility day by multiplying RN HPRD by the average resident daily census. We examined whether or not a facility provided at least 24 total RN hours per day as an approximation of whether the facility might currently meet the final rule's 24/7 RN requirement, assuming the facility could distribute the 24 total RN hours to cover the entire 24-hr period. Our analyses were also stratified by ownership type (for-profit, non-profit, or government-owned), urban-rural location of the facility, and facility size. Facility size was obtained by categorizing the number of certified beds for each facility. Facility sizes were split into 7 categories: 0-49 beds (1), 50-99 beds (2), 100-149 beds (3), 150-199 beds (4), 200-249 beds (5), 250-299 beds (6), and >300 beds (7). Observations that had missing values were dropped from all our analyses.

Second, we estimated the mean staffing levels for different size facilities. We calculated mean staffing levels expressed in HPRD for NAs, RNs, and total nurse staff; and calculated average total RN hours per day.

Third, as an illustrative example, we calculated how many staff an average-sized (i.e., 100-bed) facility that staffs *below* the minimum levels required by the final rule would need to add per 8-hour shift to achieve the final rule's minimum requirements. We used a 100-bed facility example because it closely approximates the average size nursing home in the US (106.6 beds in 2023).[e] To do this, we first estimated the proportion of 100-bed facilities with current staffing levels that meet or exceed each of the final rule's minimum HPRD requirements (NA HPRD, RN HPRD, total nurse HPRD), and the proportion providing a total of at least 24 RN hours per day. Among facilities with staffing levels below each of these minimum thresholds, we then estimated the mean staffing levels and calculated the number of nursing staff a facility would need to add, on average, per 8-hr shift to staff at or above each of the final rule's minimum HPRD requirements, or to achieve a minimum of 24 RN hours per day. The formulas we used assume a 100-bed facility, and that nurse staff work 8-hour shifts (see *Appendix A and B*).

For example, a facility whose NA staffing level is 1.45 HPRD would need to add 1.00 HPRD (2.45-1.45 = 1.00) to staff at or above the final rule's minimum NA requirement of 2.45 HPRD. With 100 residents, this amounts to a need for 100 additional hours of NA care per day (1.00 HPRD x 100 residents = 100 hours/day), or 33.3 additional hours of care per 8-hour shift, given there are 3 such shifts in a day (100 hours/day ÷ 3 shifts/day = 33.3 hours per shift). Since each shift is 8 hours long, each NA can provide a maximum of 8 hours of care per shift – therefore, providing an additional 33.3 hours of care per shift would require the addition of between 4 and 5 NAs per shift (33.3 hours ÷ 8 hours/shift).

LIMITATIONS

There are a few limitations in our analysis. First, neither Care Compare data nor the Payroll Based Journal (PBJ) Daily Nurse Staffing Data show specific times during the day when a facility staffed RNs, so we cannot determine whether a facility had 24/7 "around the clock" RN coverage consistent with the requirement in the final rule. For example, if a facility has 24 hours of RN presence in a day, we cannot distinguish whether the facility had 1 RN present during each of three separate, 8-hour non-overlapping shifts (i.e., 24/7 RN coverage), or whether the facility is staffed with 3 RNs simultaneously during a single 8-hour shift. As an approximation for 24/7 coverage, we instead report whether a facility's total RN hours/day exceeded 24 hours, at which point it is possible for the facility to distribute these hours over the course of the day to achieve 24/7 coverage. As a consequence of this approximation, we note that larger facilities will be more likely to offer a minimum of 24 hours of RN care per day as a result of having more beds/residents. Second, this brief only estimates levels of staffing relative the final rule's minimum HPRD requirements, and total RN hours – we are

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[e] https://www.kff.org/other/state-indicator/average-number-of-certified-nursing-facility-beds/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

unable to estimate what level of staffing would be required based on resident acuity and to comply with the final rule's enhanced facility assessment. Third, our estimates also do not account for facilities that may be eligible for exemptions. Fourth, in our 100-bed illustrative example, in estimating the number of nurse staff that would need to be added to each shift in order to staff at our above minimum HPRD requirements, we note that these calculations may differ from the number of nurse staff full-time equivalents (FTEs) who would need to be hired by a facility to achieve this coverage – this is due to the need to account for time off, that nurse staff may work multiple or partial shifts in a day, etc. This brief therefore does not estimate the number of nurse staff FTEs who would need to be hired. Finally, certain variables such as average resident census, number of beds or HPRD measures had missing values. For example, Care Compare May 2024 data (N = 14,858) had 74 (0.50%) missing observations on average resident census and 424 (2.85%) missing observations on reported HPRD. Some additional observations were dropped when merging datasets: for example, 28 (0.19%) observations were dropped when merging RUCC files using SSA county codes with May 2024 Care Compare data. Cumulatively, however, this resulted in only 452 observations (i.e. 3%) being dropped from our calculations.

RESULTS
Overall Staffing Levels of US Nursing Homes

Figure 1 shows the percent of US nursing homes in May 2024 with staffing levels that meet or exceed the final rule's HPRD minimums, and the percent of nursing homes providing a minimum of 24 RN hours per day, overall and by facility characteristics. In May 2024 (N=14,413 facilities total), 30 percent of facilities staffed at or above the NA minimum (2.45 HPRD), 50 percent staffed at or above the RN minimum (0.55 HPRD), and 59 percent staffed at or above the total nurse minimum (3.48 HPRD). Additionally, 78 percent of nursing homes provided at least 24 RN hours per day. There is marked variation in the percent of facilities staffing at or above the final rule's HPRD minimums by size, as well as by profit status. Starting with variations by size, smaller facilities under 100 beds were most likely to staff at or above the NA, RN, and total nurse HPRD minimums. Facilities under 50 beds were the group where the largest percentage of facilities staffed at or above these HPRD minimums: 55 percent staffed at or above the NA minimum, 82 percent staffed at or above the RN minimum, and 79 percent staffed at or above the total nurse minimum. In contrast, the percent of facilities providing a minimum of 24 RN hours per day increased with facility size.

For-profit facilities were markedly less likely than non-profit facilities to staff at or above the final rule's minimum HPRD requirements: 22 percent of for-profit facilities staffed at or above the NA HPRD minimum compared to 51 percent of non-profit facilities; 42 percent of for-profit facilities staffed at or above the RN HPRD minimum compared to 74 percent of non-profit facilities; and 52 percent of for-profit facilities staffed at or above the total nurse HPRD minimum compared to 80 percent of non-profit facilities. Differences by urban versus rural status were more variable. A greater percentage of rural facilities staffed at or above the final rule's minimum NA or RN HPRD requirements than urban facilities, whereas a greater percentage of urban facilities staffed at or above the total nurse minimum HPRD requirement, and a greater percentage of urban facilities provided at least 24 RN hours per day.

Figure 1. Percent of Nursing Homes Staffing at or Above Specified Levels in May 2024 (N=14,413) by Facility Characteristics

		At least 2.45 NA HPRD		At least 0.55 RN HPRD		At least 3.48 Total Nursing HPRD		Average of 24 RN Hrs/day or Greater	
Overall	ALL	30%	70%	50%	50%	59%	41%	78%	22%
Ownership type	For Profit	22%	78%	42%	58%	52%	48%	77%	23%
	Government	52%	48%	58%	42%	72%	28%	74%	26%
	Non-profit	51%	49%	74%	26%	80%	20%	84%	16%
Rural Urban	Rural	32%	68%	52%	48%	56%	44%	68%	32%
	Urban	29%	71%	49%	51%	60%	40%	82%	18%
Bed Size	0-49 Beds	55%	45%	82%	18%	79%	21%	58%	42%
	50-99 Beds	34%	66%	54%	46%	62%	38%	72%	28%
	100-149 Beds	22%	78%	40%	60%	52%	48%	83%	17%
	150-199 Beds	20%	80%	38%	62%	53%	47%	91%	9%
	200-249 Beds	20%	80%	42%	58%	48%	52%	96%	4%
	250-300 Beds	28%	72%	45%	55%	57%	43%	99%	1%
	>300 Beds	28%	72%	57%	43%	53%	47%	100%	0%

▪ Do not staff at the specified level
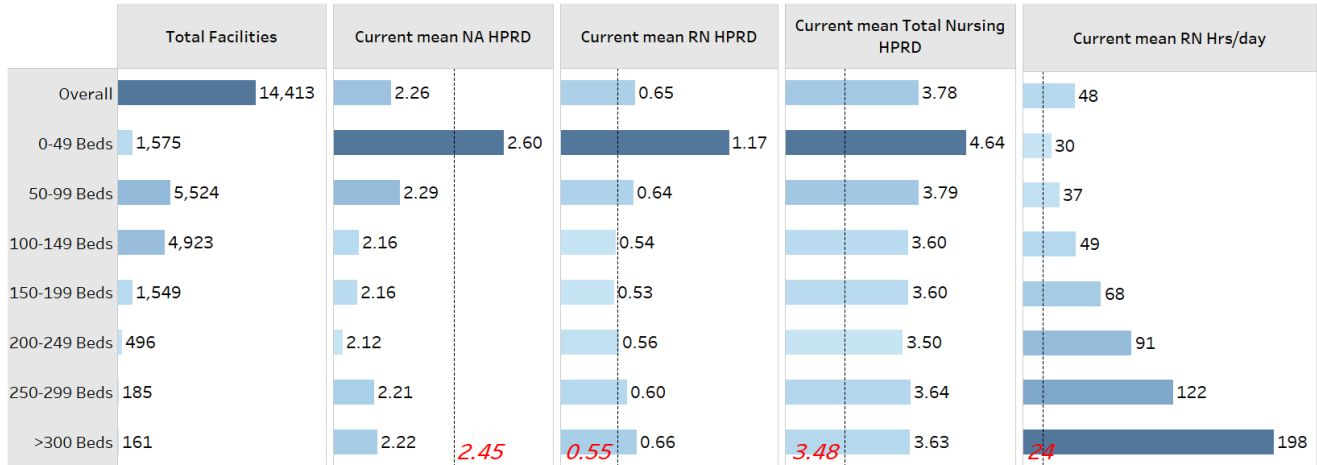▪ Staff at or above the specified level

Sources: May 2024 Care Compare. Accessed 6/14/2024. 452 observations were dropped in this analysis due to merge or missing HPRD values. Urban and Rural Classification from USDA delineated by the U.S. Office of Management and Budget (OMB)). "RN Hrs./day" column shows the percent of facilities with at least 24 total RN hours per day.

Current Mean Nursing Home Staffing Levels

Figure 2 displays mean staffing levels by facility size for facilities in May 2024 (N=14,413). The mean value for RN HPRD (0.65) exceeds the minimum RN HPRD requirement in the final rule (0.55); the mean total nursing HPRD (3.78) exceeds the minimum total nursing HPRD requirement (3.48), and the mean RN hours per facility day is 48, exceeding the minimum of 24 hours. For nearly all facility size categories, the mean RN and total nurse HPRD exceed the minimum HPRD requirements in the final rule; and the mean total RN hours per day exceeds 24. In contrast, mean NA HPRD (2.26) is the only category that does not exceed the minimum requirement in the final rule (i.e., 2.45), and with the exception of facilities with fewer than 50 beds, all other facility size categories have a mean NA HPRD that is below the final rule's minimum requirement. Facilities with fewer than 50 beds have the highest mean levels of NA, RN, and total nurse HPRD.

Mean HPRD levels by different nurse staff types generally exceeded the minimum HPRD levels required in the final rule. This finding suggests that even among facilities that staff *below* the final rule's minimum requirements, on average it is still likely that their staffing levels are relatively close to the minimum requirements. We examine this question next through an illustrative example.

Figure 2. Mean Staffing Levels for Different Size Facilities in May 2024 (N=14,413)
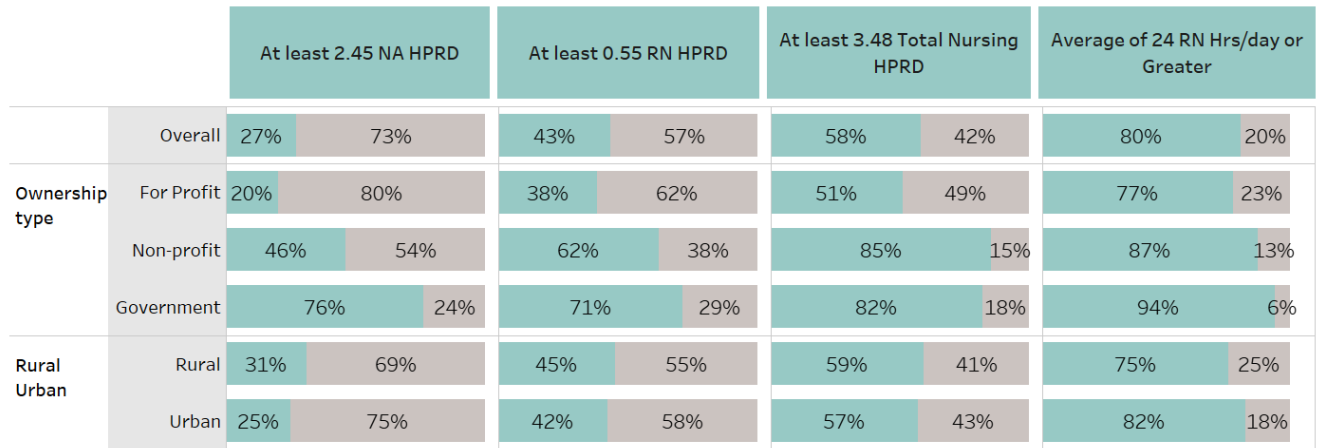
	Total Facilities	Current mean NA HPRD	Current mean RN HPRD	Current mean Total Nursing HPRD	Current mean RN Hrs/day
Overall	14,413	2.26	0.65	3.78	48
0-49 Beds	1,575	2.60	1.17	4.64	30
50-99 Beds	5,524	2.29	0.64	3.79	37
100-149 Beds	4,923	2.16	0.54	3.60	49
150-199 Beds	1,549	2.16	0.53	3.60	68
200-249 Beds	496	2.12	0.56	3.50	91
250-299 Beds	185	2.21	0.60	3.64	122
>300 Beds	161	2.22 *(2.45)*	0.66 *(0.55)*	3.63 *(3.48)*	198 *(24)*

Sources: May 2024 Care Compare. Accessed 6/14/2024. 452 observations were dropped in this analysis dure to missing HPRD or Resident Census.

An Illustrative Example: 100-bed Facilities and Staffing Levels

Figure 3 displays the proportion of 100-bed nursing facilities that staff at or above specific minimum HPRD requirements, or provide at least 24 RN hours per day, by facility characteristics. The patterns observed are similar to those in the full sample of facilities.

Figure 3. 100-Bed Nursing Homes Staffing at or Above Specified Minimum Levels in May 2024 (N=371) Data

		At least 2.45 NA HPRD		At least 0.55 RN HPRD		At least 3.48 Total Nursing HPRD		Average of 24 RN Hrs/day or Greater	
	Overall	27%	73%	43%	57%	58%	42%	80%	20%
Ownership type	For Profit	20%	80%	38%	62%	51%	49%	77%	23%
	Non-profit	46%	54%	62%	38%	85%	15%	87%	13%
	Government	76%	24%	71%	29%	82%	18%	94%	6%
Rural Urban	Rural	31%	69%	45%	55%	59%	41%	75%	25%
	Urban	25%	75%	42%	58%	57%	43%	82%	18%

■ Do not staff at the specified level
■ Staff at or above the specified level

Sources: May 2024 Care Compare. Accessed 6/14/2024. 452 observations were dropped in this analysis due to merge or missing HPRD values. Urban and Rural Classification from USDA delineated by the U.S. Office of Management and Budget (OMB)).

Additional Nurse Staff Needed per Shift Among 100-bed Facilities Staffing Below the Minimum Requirements

Table 1 displays mean staffing levels for four subsets of 100-bed facilities: those staffing below the final rule's NA HPRD minimum (n=271), RN HPRD minimum (n=211), or total nursing HPRD minimum (n=157); and those providing fewer than 24 RN hours per day (n=75). For facilities in each of these categories, it also shows the estimated number and types of nurse staff who would need to be added per shift in order to staff at or above the final rule's minimum requirements.

Mean NA HPRD among 100-bed facilities that staff below the minimum NA HPRD (2.45 HPRD) is 1.97. On average, a 100-bed facility that staffs below the final rule's NA HPRD minimum would need to add 2 NAs per 8-hour shift to staff at the level of the minimum requirement.

Mean RN HPRD among 100-bed facilities that staff below the minimum RN HPRD standard (0.55 HPRD) is 0.38. On average, a 100-bed facility that staffs below the final rule's RN HPRD minimum would need to add 0.7 RNs per 8-hour shift in order to staff at the level of the minimum requirement.

Mean total nurse HPRD among 100-bed facilities that staff below the minimum total nurse HPRD standard (3.48 HPRD) is 3.07. On average, a 100-bed facility that staffs below the total nurse HPRD minimum would need to add 1.7 nurse staff (either RNs, NAs, LPNs or LVNs) per 8-hour shift in order to staff at the level of the minimum requirement.

Mean RN hours per facility day among 100-bed facilities that staff below 24 RN hours per day is 16.86. On average, a 100-bed facility that does not provide 24 RN hours per day would need to add 7.1 more RN hours per facility day in order to achieve this level.

An alternative way to understand the final rule's HPRD minimum requirements is by considering the number of residents each nurse staff member would, on average, be responsible for at different levels of HPRD. In the case of NAs, we know that 100-bed facilities that staff below the minimum NA HPRD in the final rule currently staff at a mean of 1.97 NA HPRD. This implies that the facility provides 65.2 hours of NA care per 8-hour shift (1.97 HPRD × 100 residents ÷ 3 shifts/day); since each NA can provide a maximum of 8 hours of care per shift, between 8 and 9 NAs would be needed per shift (65.2 hours ÷ 8 hours/NA), and with 100 residents, each NA would on average be responsible for between 12 and 13 residents. In contrast, if these facilities add NAs in order to staff at the level of the final rule's 2.45 NA HPRD minimum requirement, they would have between 10 and 11 NAs per shift, and each would on average be responsible for 9 or 10 residents.

The number of nurse staff that a facility would need to add per shift in order to staff at the level of the final rule's minimum requirements also differs by facility size. For example, among 50-bed facilities that are staffing *below* the final rule's NA HPRD minimum, mean NA HPRD is 1.97, meaning that such facilities would need to add 1 NA per 8-hour shift to achieve the final rule's 2.45 HPRD minimum requirement. Among 50-bed facilities that are staffing below the final rule's RN HPRD requirements (i.e., 0.55 HPRD), the mean RN HPRD is 0.41, meaning that on average, a 50-bed facility that staffs below the RN HPRD minimum requirement would need to add 0.3 RNs per 8-hour shift in order to achieve the final rule's minimum RN HPRD requirement. Among 50-bed facilities that are staffing below the final rule's total nurse HPRD requirements (i.e., 3.48 HPRD), the mean total nurse staffing level is 3.07 HPRD, meaning that on average, a 50-bed facility that staffs below the total nurse HPRD minimum would need to add 0.9 nurse staff (either RNs, NAs, LPNs or LVNs) per 8-hour shift in order to staff at or above the final rule's minimum total nurse HPRD requirement. Among 50-bed facilities that staff below 24 RN hours per day, mean RN hours per facility day is 18.10. On average, a 50-bed facility that does not provide 24 RN hours per day would need to add 5.9 more RN hours per facility day.

Table 1. Current Mean Staffing Levels and Number of Additional Nurse Staff Needed for 100-Bed Facilities that Currently Staff Below the Final Rule's Minimum Requirements

Current mean HPRD		Current mean NA HPRD	Current mean RN HPRD	Current mean Total Nursing HPRD	Current mean RN Hrs/day
Overall		1.97 (n=271)	0.38 (n=211)	3.07 (n=157)	16.86 (n=75)
Ownership type	For Profit	1.95 (n=234)	0.38 (n=183)	3.07 (n=145)	16.83 (n=66)
	Non-profit	2.10 (n=33)	0.36 (n=23)	3.02 (n=9)	17.70 (n=8)
	Government	2.06 (n=4)	0.41 (n=5)	3.27 (n=3)	11.89 (n=1)
Rural-Urban	Rural	1.95 (n=82)	0.38 (n=65)	3.08 (n=48)	16.46 (n=29)
	Urban	1.97 (n=189)	0.38 (n=146)	3.07 (n=109)	17.10 (n=46)

Minimum # of nursing staff and total RN hours to achieve specified staffing levels		NAs/8-hr shift to achieve 2.45 HPRD	RNs/8-hr shift to achieve 0.55 HPRD	Nurse staff /8-hr shift to achieve 3.48 HPRD	Total RN hrs/day to achieve at least 24 hrs on average
Overall		2.0	0.7	1.7	7.1
Ownership type	For Profit	2.1	0.7	1.7	7.2
	Non-profit	1.5	0.8	1.9	6.3
	Government	1.6	0.6	0.9	12.1
Rural-Urban	Rural	2.1	0.7	1.7	7.5
	Urban	2.0	0.7	1.7	6.9

Sources: May 2024 Care Compare. Accessed 6/14/2024. 452 observations were dropped in this analysis due to merge or missing HPRD values. Urban and Rural Classification from USDA delineated by the U.S. Office of Management and Budget (OMB)).

DISCUSSION AND CONCLUSIONS

Our results show that a majority of US nursing facilities currently staff at or above the level of two of the three minimum HPRD requirements of the final rule: RN HPRD, and total nurse staff HPRD. While data limitations preclude us from determining if facilities currently provide 24/7 "around the clock" RN coverage, we do find that 78 percent of nursing homes provide at least 24 hours of RN care per day.

In contrast, the most significant gaps in nursing home staffing are for NAs. Thirty percent of facilities provide 2.45 or greater HPRD of NA care, leaving 70 percent of facilities who staff below this minimum. In 2023, 458,590 NAs provided care in nursing homes [2], where they are typically responsible for assisting residents with activities of daily living including but not limited to feeding, bathing, and dressing. NAs are required to complete training and a competency evaluation, though typically training is of only short duration: federal requirements for certified nursing assistants are at least 75 hours (i.e., the equivalent of two weeks) of training, including at least 16 hours of supervised practical training; [f] only 11 states require more than 120 hours (i.e., the equivalent of three weeks) of training.[3] Although NA jobs require considerable technical and interpersonal skills, they receive low pay, rarely receive benefits, and experience high rates of occupational injuries. [4,5] A recent study conducted by the U.S. Department of Health and Human Services Office of the Assistant Secretary for Planning and Evaluation (ASPE) found that in 2019, median wages of nursing assistants were lower

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[f] 42 CFR 483.152

than the wages of other entry-level jobs in 40 states and DC.[6] These findings together with other research highlight opportunities for nursing homes to increase NA staff through improving the quality and pay of these jobs.

Even among facilities that staff *below* the final rule's minimum HPRD requirements, mean staffing levels are generally close to these minimum requirements. Our analysis finds that for an average-sized (i.e. 100-bed) nursing home that staffed below at least one of the minimum HPRD requirements, relatively few staff would need to be added to each shift (between 0.7 and 2 additional staff per shift, depending on the role) in order to staff at or above the minimum HPRD requirements. The final rule allows between 3 and 5 years for facilities to recruit these additional staff, and also allows for temporary hardship exemptions to the HPRD and 24/7 onsite RN requirements depending on a facility's location and local supply of nurse staff, the facility's good faith efforts to add and retain staff, and demonstrated financial commitment to staffing.

Our analysis found that similar percentages of rural and urban facilities currently staff at or above the final rule's NA and total nurse HPRD minimum requirements; urban facilities are more likely to provide at least 24 RN hours (82 percent versus 68 percent of rural facilities), but rural facilities are more likely to staff at or above the 0.55 RN HPRD minimum (52 percent versus 49 percent of urban facilities). We found marked differences, however, in the percent of facilities staffing at or above each of the minimum HPRD requirements, or providing at least 24 RN hours, by facility size and profit status. The smallest facilities (particularly under 50 beds) were the most likely to staff at or above the final rule's minimum HPRD requirements, whereas larger facilities were more likely to provide 24 RN hours per day. Non-profit facilities were more likely than for-profit facilities to staff at or above each of the HPRD minimum requirements and were more likely to provide 24 RN hours per day. For the HPRD minimum requirements, there was a difference of nearly 30 percentage points in the percent of non-profit facilities versus for-profit facilities who staffed at or above these levels. This observation aligns with prior research, which has found that for-profit facilities on average have lower staffing and worse quality of care.[g] Recent evidence has shown how certain types of for-profit nursing home ownership arrangements – particularly private equity (PE) and real estate investment trust (REIT) ownership – can divert resources from staffing and direct resident care resulting in worse quality. A recent ASPE analysis, for example, studied PE and REIT investment in nursing homes between 2013 and 2022 and found that PE investment resulted in a 12 percent relative decline in RN HPRD compared to other for-profit facilities and a 14 percent relative increase (i.e., worsening) in their deficiency score index; similarly, REIT investment resulted in a 7 percent relative decline in RN HPRD and a 14 percent relative increase in deficiency score index. Together, these studies and our analysis highlight opportunities for for-profit nursing homes to enhance safety and quality of care through greater investments in staffing. [7]

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APPENDIX

Appendix A. Minimum Nurse staff per shift needed to staff at or above HPRD minimums (100-Bed and 50-Bed* Facilities)

Minimum number of NAs to add	$X = \dfrac{\big((2.45 - mean\ NA\ HPRD) \times 100\big)}{(8 \div 3)}$	X= NA/8-hour shift
Minimum number of RNs to add	$Y = \dfrac{\big((0.55 - mean\ RN\ HPRD) \times 100\big)}{8 \div 3}$	Y= RNs/8-hour shift
Minimum number of NAs, RNs or LPNs/LVNs to add	$Z = \dfrac{\big((3.48 - mean\ Total\ Nurse\ HPRD) \times 100\big)}{8 \div 3}$	Z= Total Nurse Staff/8-hour shift

The same equations were used to calculate 50-Bed Facility (using 50 instead of 100 as multiplier).

Appendix B. Overall Nurse staff per shift needed to staff at or above HPRD minimums (100-Bed Facilities)

Overall number of NAs to staff at or above 2.45 NA HPRD.	$X = \dfrac{\big((2.45\ NA\ HPRD) \times 100\big)}{8 \div 3}$	10-11 NA/8-hour shift
Overall number of RNs to staff at or above 0.55 RN HPRD.	$Y = \dfrac{\big((0.55\ RN\ HPRD) \times 100\big)}{8 \div 3}$	2-3 RNs/8-hour shift
Overall number of NAs, RNs or LPNs/LVNs to staff at or above 3.48 total nurse HPRD.	$Z = \dfrac{\big((3.48\ Total\ Nurse\ HPRD) \times 100\big)}{8 \div 3}$	14-15 Total Nurse Staff/8-hour shift

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ABOUT THE AUTHORS

Martin Blanco is a Social Science Analyst in the Office of Behavioral Health, Disability, and Aging Policy (BHDAP) in ASPE.

Iara Oliveira is a Senior Policy Analyst in the Office of Behavioral Health, Disability, and Aging Policy (BHDAP) in ASPE.

Marie Squillace is a Senior Policy Analyst in the Office of Behavioral Health, Disability, and Aging Policy (BHDAP) in ASPE.

Damian Da Costa is a Social Science Analyst in the Office of Behavioral Health, Disability, and Aging Policy (BHDAP) in ASPE.

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