RESEARCH LETTER

Poverty, Food Insecurity, and Housing Instability Among US Health Care Workers

The US health workforce faces projected shortages of more than 180 000 physicians and 200 000 registered nurses in the next decade.[1,2] Burnout, poor working conditions, and inadequate wages have been cited as key drivers of these shortages.[2] However, the prevalence of financial hardship can affect worker retention and job performance.[3,4] This study evaluated rates of poverty, food insecurity, and housing instability among US health care workers.

Supplemental content

Methods | We examined data from the US Census Bureau's Survey of Income and Program Participation (SIPP), a nationally representative survey of the civilian noninstitutional population administered in person and by telephone. SIPP uses complex sampling with an overlapping panel design and includes base weights, which subsequently undergo nonresponse adjustment to improve survey estimates.[5] We used pooled data from SIPP Panels 2020 to 2023 and augmented strata identifiers with panel year to estimate variance.[5] The total number of interviewed households from 2020 to 2023 ranged from approximately 17 500 to 24 000, with weighted response rates ranging from 36.9% to 48.8%.

We examined survey questions related to poverty, use of public assistance programs, food insecurity, and housing instability. We restricted our sample to health care workers, which were categorized into 5 mutually exclusive groups using census-defined occupational codes and the Bureau of Labor Statistics' Standard Occupational Classification System (Supplement 1). We compared rates of financial hardship between occupational groups and examined differences using multivariable logistic regression to compute odds ratios (ORs), adjusting for sociodemographic factors associated with financial hardship including age, sex, race, ethnicity, and immigration status; self-reported race and ethnicity based on fixed survey categories were included given their association with financial hardship.

We performed all analyses in R version 4.5.0 (R Foundation). We reported data as survey weight–adjusted means and percentages with 95% CIs. All tests were 2-sided. CIs that did not cross 1 defined statistical significance. This study followed the American Association for Public Opinion Research guideline for analyzing and reporting survey results. The study, which used publicly available, deidentified data, was deemed exempt from review by Harvard Medical School's institutional review board.

Results | Survey respondents included 6905 health care workers, including 562 physicians/surgeons, 1704 nurses, 1123 other diagnosing/treating practitioners, 968 health technologists/technicians, and 2548 direct care/health care support workers. Occupational groups differed on most characteristics (**Table 1**). Direct care/support workers reported the lowest personal and family incomes and included the highest proportion of Hispanic and non-Hispanic Black individuals.

Rates of financial hardship varied by occupational group (**Table 2**). Direct care/support workers reported the highest rates of financial hardship across all measures, including poverty

Table 1. Sociodemographic Characteristics of US Health Care Workers

Characteristic	Physicians and surgeons (n = 562)	Nurses (n = 1704)	Other diagnosing or treating practitioners (n = 1123)	Health technologists and technicians (n = 968)	Direct care workers, health care support workers (n = 2548)
Age, mean (SD), y	48.58 (0.86)	43.92 (0.46)	43.48 (0.54)	39.64 (0.55)	43.93 (0.42)
Sex %					
Male	57.72	10.78	27.16	25.66	16.49
Female	42.28	89.22	72.84	74.34	83.51
Race and ethnicity, %					
Hispanic	6.22	9.99	8.49	11.73	22.41
Non-Hispanic Asian	20.20	7.88	12.67	7.14	7.83
Non-Hispanic Black	8.51	14.69	7.03	14.01	23.54
Non-Hispanic White	60.26	64.01	69.43	62.63	43.83
Other[a]	4.81	3.43	2.39	4.49	2.39
Born outside US, %	34.16	16.63	18.90	17.09	26.71
Personal monthly income, mean (SD), $	22 697.15 (1327.40)	6588.68 (163.48)	8596.35 (387.01)	4767.10 (176.57)	3256.77 (92.11)
Family monthly income, mean (SD), $	30 613.41 (1703.74)	12 201.87 (305.67)	15 760.27 (714.41)	10 093.60 (376.70)	7449.01 (209.44)

[a] Other included all other self-identified racial and ethnic groups including American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple race or ethnicity categories.

Table 2. Rates of Poverty, Public Assistance, Food Insecurity, and Housing Instability Among US Health Care Workers

	Physicians and surgeons (n = 562)	Nurses (n = 1704)	Other diagnosing or treating practitioners (n = 1123)	Health technologists and technicians (n = 968)	Direct care workers, health care support workers (n = 2548)
Family income-to-poverty ratio ≤1, % (95% CI)	0.92 (0.32-2.63)	1.83 (1.19-2.82)	2.58 (1.63-4.07)	3.58 (2.06-6.16)	9.63 (8.24-11.23)
Used any public assistance program in at least 1 mo, % (95% CI)	0.92 (0.42-1.97)	3.06 (2.28-4.09)	2.50 (1.58-3.94)	5.26 (3.56-7.71)	16.83 (14.88-18.97)
SNAP	0.43 (0.16-1.15)	2.08 (1.43-3.00)	1.88 (1.06-3.32)	3.54 (2.35-5.29)	13.81 (11.99-15.85)
WIC	0.19 (0.03-1.32)	0.82 (0.47-1.41)	0.30 (0.12-0.76)	1.67 (0.65-4.20)	2.46 (1.81-3.35)
GA	0.00 (0.00-0.00)	0.06 (0.02-0.26)	0.00 (0.00-0.00)	0.10 (0.01-0.71)	0.82 (0.42-1.60)
SSI	0.30 (0.07-1.27)	0.04 (<0.01-0.29)	0.26 (0.10-0.70)	0.55 (0.22-1.38)	1.41 (0.94-2.11)
TANF	0.00 (0.00-0.00)	0.35 (0.14-0.85)	0.18 (0.04-0.77)	0.07 (<0.01-0.50)	0.84 (0.45-1.56)
Reported any measure of food insecurity, % (95% CI)[a]	4.30 (2.64-6.92)	7.41 (6.00-9.13)	5.35 (3.92-7.27)	11.43 (9.18-14.16)	24.50 (22.09-27.07)
Food bought did not last	2.66 (1.52-4.60)	5.90 (4.61-7.52)	3.28 (2.23-4.81)	8.36 (6.40-10.85)	19.77 (17.57-22.17)
Could not afford balanced meals	2.31 (1.24-4.28)	4.97 (3.89-6.34)	3.76 (2.59-5.44)	8.54 (6.65-10.91)	18.68 (16.60-20.97)
Cut size or skip meals because not enough money for food	1.92 (0.87-4.19)	3.03 (2.12-4.30)	2.75 (1.79-4.20)	5.56 (3.97-7.73)	9.08 (7.61-10.81)
Reported any measure of housing instability, % (95% CI)[a]	3.13 (1.81-5.36)	5.31 (4.14-6.79)	3.33 (2.31-4.79)	7.11 (5.31-9.45)	13.64 (11.99-15.48)
Unable to pay rent or mortgage	2.25 (1.14-4.37)	2.63 (1.93-3.56)	1.81 (1.12-2.89)	4.19 (2.83-6.16)	7.86 (6.61-9.31)
Unable to pay utility bills	2.62 (1.45-4.70)	3.94 (2.90-5.34)	2.07 (1.31-3.26)	5.34 (3.80-7.46)	11.07 (9.53-12.83)

Abbreviations: GA, general assistance; SNAP, Supplemental Nutrition Assistance Program; SSI, Supplemental Security Income; TANF, Temporary Assistance for Needy Families; WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

[a] Participants replied *sometimes* or *often true* to these measures.

(9.63%), food insecurity (24.50%), and housing instability (13.64%). For nurses, other diagnosing/treating practitioners, and health technologists/technicians, poverty rates ranged from 1.83% to 3.58%, food insecurity rates ranged from 5.35% to 11.43%, and housing instability rates ranged from 3.33% to 7.11%. Physicians/surgeons reported the lowest rates.

In a multivariable regression analysis, direct care/support occupations (OR, 6.45 [95% CI, 2.18-9.09]) were associated with poverty. Health technologist/technician (OR, 2.17 [95% CI, 1.21-3.89]) and direct care/support occupations (OR, 5.04 [95% CI, 2.93-8.66]) were associated with food insecurity. Health technologist/technician (OR, 4.02 [95% CI, 1.65-9.81]) and direct care/support occupations (OR, 13.89 [95% CI, 6.15-31.38]) were also associated with housing instability. The odds of financial hardship were greatest among direct care/support workers.

Discussion | Significant rates of financial hardship exist among US health care workers. At least 1 measure of food insecurity was reported by 1 in 4 direct care/support workers and 1 in 10 health technologists/technicians; these rates exceed prior reports, perhaps reflecting worsening hardship.[6]

Certain health care workers' wages may not be sufficient to meet basic needs. Significant inequities in the health workforce composition were detected. Racial and ethnic minority groups were disproportionately represented in low-wage, direct care/support occupations, raising critical questions about the ethics and sustainability of current work arrangements.

Study limitations include a limited sample size for certain occupations and potentially inaccurate self-reporting. Financial hardship within occupational groups warrants further study, especially among the most vulnerable health care workers.

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