Determinants of Staff Intent to Leave Health Care During the COVID-19 Pandemic

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Objectives. To identify potential drivers of health care worker attrition.

Methods. We conducted a survey of 1083 nonphysician health care workers in a large urban health system in New York City from September to October 2022.

Results. The results of a multivariable logistic regression analysis revealed that higher odds of intending to leave health care were significantly associated with male gender, registered nurse profession, burnout, self-perceived mental health service need, and verbal abuse from patients or visitors, whereas lower odds were seen among those reporting greater emotional well-being and a better workplace culture. A relative importance analysis indicated that burnout was the strongest correlate of intention to leave (22.5% relative variance explained [RVE]), followed by subjective emotional well-being (16.7% RVE), being a registered nurse (12.3% RVE), poorer perceived workplace culture (9.5% RVE), and male gender (5.9% RVE).

Conclusions. Overall, our findings suggest the need for well-coordinated interventions that address both individual- and system-level factors in an effort to improve retention.

Public Health Implications. Our results indicate a need for interventions targeting workplace culture, staff burnout, and mental health service provision. (*Am J Public Health*. 2024;114(S2):S200–S203. https://doi.org/10.2105/AJPH.2024.307574)

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Since the onset of the COVID-19 pandemic, hospitals have faced a crisis of retention, with health care workers either leaving their job for a similar position in a different health care institution or, more concerningly, leaving the field entirely for another profession.[1] This exodus has been attributed to rising rates of burnout and adverse mental health outcomes (work anxiety and stress); however, several studies have examined other contributing factors, including low levels of leadership support and workplace stressors such as rising rates of workplace violence directed at health care workers.[2–4] To maintain the health care workforce, it will be critical to characterize multiple types of factors that may be associated with consideration of leaving health care to better understand their relative contributions and inform investment of resources in interventions.

With a notable exception,[4] previous studies related to nonphysician health care worker attrition have largely focused on nursing roles.[5,6] To address this limitation, we conducted a cross-sectional survey-based study to examine factors associated with intention to leave health care in a wide range of occupations (e.g., nursing, administrative and research positions) to maximize the generalizability of our findings. In line with existing research,[2,4] we hypothesized that burnout, mental health symptoms, inadequate leadership and social support, and workplace violence exposure would be associated with participants' intention to leave health care.

METHODS

We surveyed nonphysician staff members in a major urban health system in New York City between September and October 2022. We obtained a random 30% sample (4998 of 16 665) of staff institutional e-mail addresses from health system leadership. We selected this random subset of participants to

reduce the overall survey burden on the health system workforce. Participants were e-mailed a survey invitation and periodic reminders and incentivized with the opportunity of entering a raffle to receive Apple watches, AirPods, and iPads via a separate unlinked survey on completion of the study survey.

The survey included standardized measures of depression and thoughts of death or self-harm (2-item Patient Health Questionnaire [PHQ-2] and PHQ-9 item 9]), anxiety (2-item Generalized Anxiety Disorder scale), burnout (2-item Maslach Burnout Inventory), emotional well-being (5-item World Health Organization Well-being Index), resilience (2-item Conner-Davidson Resilience Scale), and leadership behavior (items from the Mayo Clinic Leader Index). Investigator-designed measures were also used to assess workplace-related factors (e.g., workplace culture and violence) and need for support (e.g., self-reported need for behavioral health services in the past year; Table A, available as a supplement to the online version of this article at http://www.ajph.org).

Poststratification weights were applied to the sample on the basis of available data on the gender and professional role of the 4998 invitees. The primary outcome of interest was respondents' consideration of leaving the health care field altogether. Responses to the question "Do you think about leaving the field of health care altogether?" were dichotomized into "Yes, often" or "Yes, sometimes" and "No, never" or "Unsure." Weighted χ^2 or independent-sample *t* tests were used to compare demographic, mental health, and workplace variables between groups, and a weighted multivariable binary logistic regression analysis modeled factors associated with thinking about leaving health care using the R survey package (R Foundation for Statistical Computing, Vienna, Austria). Only variables that significantly differed between groups in the bivariate analyses ($P < .05$) were entered into the logistic regression. Finally, we conducted a relative importance analysis[7] to compute the relative proportion of variance in the outcome explained by each of the significant predictor variables.

RESULTS

Of the 4998 hospital system staff members who were sent the survey, 1398 (28.0%) responded. Of those respondents, 1083 had data available on the study variables of interest and were included in the final analysis sample. Within the final weighted sample, 37% of respondents reported consideration of leaving the field of health care. Table B (available as a supplement to the online version of this article at http://www.ajph.org) presents data on demographic, mental health, and workplace factors and results of the bivariate analyses showing group differences.

The logistic regression analysis revealed that intent to leave was significantly associated with male gender, registered nurse profession, screening positive for burnout, primarily working in the intensive care unit or emergency department, and exposure to verbal abuse from patients or visitors. In contrast, lower odds of endorsing intent to leave were significantly associated with greater emotional well-being and better perceived workplace culture (Table 1). The Nagelkerke R^2 value for the model was 0.24. the relative importance analysis indicated that the largest proportion of the variance in outcomes was explained by burnout (22.5%), emotional well-being (16.7%), being a registered nurse (12.3%), lower ratings of workplace culture (9.5%), and male gender (5.9%).

DISCUSSION

In this study of nonphysician hospital system staff members, we found that the demographic, mental health, and workplace factors most strongly associated with endorsing intent to leave health care (in descending order) were positive screening for burnout, low emotional well-being, registered nurse profession, lower ratings of workplace culture, and male gender. The results were generally consistent with our hypotheses in that they represent a combination of individual- and system-level factors, as has been seen in previous research.[4]

Our findings shed light on those subgroups at greatest risk for leaving health care and may inform interventions to mitigate such departures. Specifically, our results suggest a need for interventions focused on both supporting individual employees' mental health and deploying resources directly to leaders with the goal of improving workplace culture. One example of this in practice is the collaboration between the Office of Well-being and Resilience at the Mount Sinai Health System in New York City, focused on systems-level drivers of workplace well-being (e.g., workplace culture and efficiency), and the Center for Stress, Resilience and Personal Growth at Mount Sinai, which addresses individual resilience and behavioral health in the health care workforce.[8,9] Our findings further support the need for high-level coordination, as might be provided by an institutional chief wellness officer.[10]

This study has several important limitations. First, we asked participants to report on how often they thought about leaving health care, and, because of the cross-sectional nature of the study, we were unable to evaluate

TABLE 1— Results of Weighted Binary Logistic Regression Analysis of Factors Associated With Hospital System Staff Thinking of Leaving the Field of Health Care: New York City, 2022

	Weighted No. (%) or Mean ± SD	Odds Ratio (95% Confidence Interval)
Age ≥ 40 y	528 (48.7)	1.03 (0.75, 1.42)
Male gender (ref: female)	243 (22.5)	1.83 (1.26, 2.65)
Race (ref: White)	267 (24.7)	
Asian	246 (22.7)	0.89 (0.58, 1.36)
Latinx	222 (20.5)	0.83 (0.52, 1.33)
Black	244 (22.6)	0.85 (0.54, 1.33)
Other/multirace	103 (9.5)	1.12 (0.66, 1.90)
Role (ref: registered nurse)	372 (34.4)	
Administrative staff	339 (31.3)	0.69 (0.44, 1.08)
Research staff	87 (8.0)	0.65 (0.38, 1.13)
Medical assistant	42 (3.9)	0.26 (0.12, 0.53
Nurse practitioner/physician assistant	81 (7.5)	0.37 (0.20, 0.66)
Other	162 (14.9)	0.59 (0.37, 0.96)
Positive depression screen (PHQ-2)	174 (16.1)	0.92 (0.57, 1.49)
Suicidal ideation (PHQ item 9)	96 (8.8)	1.56 (0.91, 2.66)
Positive anxiety screen (GAD-2)	262 (24.2)	0.93 (0.62, 1.39)
Burnout (MBI-2)	441 (40.8)	2.30 (1.68, 3.16)
Well-being score (WHO-5)	15.3 ± 6.2	0.94 (0.91, 0.97)
Thought might benefit mental health services	595 (55.0)	1.29 (0.91, 1.83)
Primarily works in intensive care unit or emergency department (ref: other settings)	154 (14.3)	1.65 (1.06, 2.55)
Verbal abuse	497 (45.9)	1.58 (1.12, 2.22)
Physical violence	176 (16.3)	0.75 (0.47, 1.19)
Leadership index score	29.1 ± 8.5	0.99 (0.97, 1.02)
Workplace culture score	27.5 ± 6.1	0.97 (0.94, 1.00)

Note. GAD-2 = Generalized Anxiety Disorder scale (2 items); MBI-2 = Maslach Burnout Inventory (2 items); PHQ-2 = Patient Health Questionnaire (2 items); WHO-5 = World Health Organization Well-being Index (5 items). The sample size was 1083.

whether these thoughts prompted action. Future studies should test how our predictors relate to actual attrition from the field. Second, because our study recruitment depended on institutional e-mail addresses, it may not have adequately captured the experiences of workforce members, such as support staff (e.g., environmental services, security), who may not commonly use or access e-mail. Finally, response bias may have occurred, in that health care workers struggling with burnout or mental health issues may not have completed the survey or may have already left the system or industry. Follow-up studies should consider targeted recruitment and data collection efforts and focus on recruiting the full range of the health care workforce.

PUBLIC HEALTH IMPLICATIONS

The COVID pandemic has resulted in unprecedented numbers of health care workers leaving their jobs and health care in general. From January 2020 through November 2021, the United States saw a net loss of 460 000 health care workers, likely as a result of the pandemic. This mass resignation led to understaffing, especially of nurses, across the country. Understaffing has been shown to lead to poorer quality of care for patients, more medical errors, and increases in stress and burnout among those workers remaining in their jobs. Our study's findings may help other health care organizations identify those at highest risk for leaving and target particularly vulnerable subgroups such as registered nurses working in intensive care units or emergency departments. To redevelop and maintain a full

and healthy workforce, health care institutions must intervene and create a positive workplace culture, decrease workplace violence, and reduce staff burnout. AJPH

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J. M. DePierro and C. C. Chan prepared the original draft. J. M. DePierro, C. C. Chan, N. Mohamed, J. Ripp, and L. Peccoralo contributed to methodology and investigation. J. M. DePierro and C. C. Chan contributed to formal analysis and data curation. All of the authors contributed to the conceptualization of the article and reviewed and edited the article.

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CONFLICTS OF INTEREST

Jonathan M. DePierro receives book royalties from Cambridge University Press and compensation related to an editor-in-chief role with Springer Press and is named on a US patent application for a digital health intervention, an intellectual property that has yet to be licensed. He has received honoraria from New York University, the University of New Mexico, Ro Health Ventures Inc., the Canadian Institutes of Health Research, and the US Department of State. Jonathan M. DePierro, Sydney Starkweather, Jonathan Ripp, and Lauren Peccoralo were partially supported by Health Resources and Services Administration grant U3NHP45398 while completing this work, and Jonathan M. DePierro and Lauren Peccoralo were partially supported by NIH/NCATS grant UL1TR004419. Lauren Peccoralo received honoraria from Atrium Health Wake Forest Baptist, the American Society of Health-System Pharmacists, Stanford University, the University of Montana, and Baylor, Scott & White Health. Jonathan Ripp received honoraria for numerous speaking engagements at professional societies, academic medical centers, and health care institutions; serves as a course director for the Institute for Health Care Improvement; worked as a consultant for the well-being program at the NYU Long Island School of Medicine; served as a nonfiduciary board member of the Lorna Breen Foundation; served on a temporary advisory board established by PepsiCo to inform employee well-being efforts; and provides consultation to Marvin Behavioral Health Inc. The remaining authors have no conflicts of interest to disclose.

HUMAN PARTICIPANT PROTECTION

This study was conducted in accordance with the Declaration of Helsinki and was approved by the institutional review board of the Icahn School of Medicine at Mount Sinai. Informed consent was waived as a result of the deidentified nature of the data.

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