November 16, 2023

The Honorable Julie M. Rogers
The Honorable Karen Whitsett
The Honorable Curtis VanderWall
Michigan House Health Policy Committee

Via electronic submission

Dear Chair Rogers, Vice-Chair Whitsett, Vice-Chair VanderWall,
and distinguished committee members

My apologies that due to international travel, I was unable to provide written or verbal testimony during the November 9, 2023 hearing on HB 4550, HB 4551, and HB 4552. I respectfully submit this document for your consideration.

I am the Elizabeth Tone Hosmer Professor of Nursing, Health Management and Policy at the University of Michigan Ann Arbor. I've extensively studied the quality and safety of nursing care, with over 130 publications. I am an elected member of the National Academy of Medicine. I have 26 years of clinical nursing expertise. I serve as the Principal Investigator of the Michigan Nurses' Study, which has generated timely and rigorous evidence to inform nursing workforce policy in our state. Today I share my personal views and interpretations of research findings; they do not represent the views of my employer, research funders, or affiliated organizations.

My goal is to represent the 13,000+ nurses who shared their voices in the 2022 Michigan Nurses' Study. Their truth is important to hear, especially with the powerful groups who have contributed testimony.

You've read the headline: among over 10,000 Michigan registered nurses surveyed, 39%, said they plan to leave their job in the next year. I share three key points with you.

1. **Michigan's nursing workforce crisis is primarily a retention, not a recruitment problem**.

In absolute numbers, there are ample numbers of working-age nurses in our state. Instead, we have a crisis of vacancies – nurses who have left their employers or chose not to work in nursing. **Chronic understaffing** is the key driver of this vacancy crisis. Our team's peer-reviewed paper, published in *Medical Care*,[1] is attached to this letter. In corresponding sections below, I will contribute written comments provided by research participants in our 2022 survey (*in italics*).

Overall, 39% plan to leave their position in the next year. Over half of surveyed nurses under the age of 34 plan to do so.

Given these findings, the primary issue in Michigan is a retention crisis. And as consultant Craig Anderson stated, "you can't outrecruit a retention problem."[2]

2. **Solutions should focus on retaining nurses, and that means safer patient assignments.**

We asked polled practicing nurses and those who resigned during the pandemic what their top concerns were. The top concern was adequate staffing: 83% and 70% respectively. As one participant in our 2022 nurse survey told us:

"The #1 problem in nursing is staffing. Under staffing leads to poor care and even death. I wish the folks doing the budgeting and business would recognize this."

Chronic understaffing threatens patient safety and worsens nurse burnout. Hospitals use overtime, ask nurses to pick up more shifts, or accept more patients during their shift. These daily demands on Michigan's nurses threaten patient safety. From another study participant:

"All I wanted was to help people, but I wish I could pee more than one time in a 14 hour shift. It takes me days to recover from my job. That doesn't feel right? My hospital talks about setting our patients up for success but they set me up to fail them everyday."

3. **Safer staffing legislation is likely Michigan's best bet to rapidly stem the loss of experienced nurses.**

Hospitals have known about this robust research evidence for over 20 years, yet they have failed to implement this evidence-based approach on their own. The key findings are not in dispute: when nurses in general care settings care for more than four patients, mortality increases by 7%.[3] If we had a pill with the same clinical benefit as safer nurse staffing, every patient in the US would be taking that pill.

And we also know from three large experiments that when patient assignments are capped at levels determined to be safe for that clinical area, nurses are less likely to leave their jobs, and in many cases, patient outcomes are better.[4–6]

You have heard that following evidence-based nurse staffing plans is a one-size-fits-all strategy. I disagree. Patient assignment standards are built upon a strong evidence base. Take airlines, which specify the flight attendant to passenger ratios to safely evacuate the plane in 90 seconds. And if they are a flight attendant short, they don't fly. Airlines flex their staffing to meet customer needs, just like hospitals should. But staffing minimums assures the public, that every patient will receive sufficient care to keep them safe and well cared for.

You may have heard that safe staffing mininums are expensive. This narrow argument fails to account for the value improved staffing brings to hospitals. When fewer nurses leave, hospitals spend less on recruiting, training, agencies, or labor actions. Improved nurse staffing shortens length of stay, and reduces death after hospital-acquired complications, which improve hospitals' bottom lines.[7,8]

You may have heard that experienced nurses make staffing decisions every day and the status quo is acceptable. This is not accurate. Staffing decisions are routinely made across our state by executives, some of whom hold nursing licenses. But few if any of these individuals deliver patient care. These decisions do not address front line nurses' pervasive concerns. And interestingly, these unsafe decisions may also be driving some nurses to leave and incur more hospital costs:

"The hospital I am working at as a travel nurse has better staffing than the hospital I came from. Because the staffing at my old hospital was so bad, I decided to go travel nursing. My job satisfaction of not having mandatory overtime and having better staffing during my shifts worked helps my view toward work tremendously."

"The Nursing leadership failed to protect the front line floor nurse with adequate staff and supplies to safely do the job for patient[s] and staff. I was a street cop for [X years] before I became an RN. The abuse and disrespect I received as a cop did not compare to the assaults and abuse my colleagues and I received in this facility."

And it is not just staff nurses. Leaders also admit that the status quo is unacceptable:

"I am currently a nurse manager & am forced to implement mandatory [overtime] as a staffing tool. Contractual staff are making [money] & are pushing out seasoned nurses. Nurses are considered just a

body. Staff are quitting at an alarming rate as well as quitting the profession [due to] mistreatment. The workloads are unrealistic."

While some leaders may express comfort in maintaining current staffing levels, citing a high level of current vacancies, the facts (based on many high-quality published studies) do not support this. The facts demand that we must take remedial action and soon.

There are other policy strategies to consider, which we outline in our *New England Journal of Medicine*[9] article (attached). Indeed, our research team will have no research findings on other policy proposals soon and we will share these with you as soon as they are published. **But the urgent need is to focus on retention**. And to do so, we need to listen to Michigan's nurses, who are very clear in the urgent request: **assure safer patient assignments that are evidence based and establish a minimum floor for safety**.

The status quo is not acceptable. After many years of deliberation and discussion, the American Nurses' Association has issued support for safer nurse staffing legislation, much of which is modeled after language in HB 4550. In their press release (also attached): "ANA supports enforceable minimum nurse-to-patient ratios that reflect key factors such as patient acuity, intensity of the unit practice setting, and nurses' competency among other variables."[10]

I will close with quotes from a key health care leader:

> No piece of legislation is a perfect solution for staffing and burnout challenges: but the evidence supporting minimum nurse-to-patient ratios is clear and compelling…if we do not solve difficulties related to recruiting and retaining nurses, we will prolong a dangerous situation, imperiling nurses' well-being, and the long-term financial health of medical organizations.

These quotes are from an July 9 2023 op-ed co-authored by Kevin Mahoney, Chief Executive Officer of the University of Pennsylvania Health system, currently ranked #6 in the nation by *US News and World Report*, which is attached to this letter.[11]

Thank you for your kind consideration.

Respectfully submitted,

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Registered Nurse
Elizabeth Tone Hosmer Professor of Nursing
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Attachments:

1. *Medical Care* study

2. *New England Journal of Medicine* article

3. American Nurses Association 2023 statement on nurse staffing

4. Aiken & Mahoney Op-Ed in *PennLive*

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Patterns and Correlates of Nurse Departures From the Health Care Workforce

Results From a Statewide Survey

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Background: Health care executives and policymakers have raised concerns about the adequacy of the US nursing workforce to meet service demands. Workforce concerns have risen given the SARS-CoV-2 pandemic and chronically poor working conditions. There are few recent studies that directly survey nurses on their work plans to inform possible remedies.

Methods: In March 2022, 9150 nurses with a Michigan license completed a survey on their plans to leave their current nursing position, reduce their hours, or pursue travel nursing. Another 1224 nurses who left their nursing position within the past 2 years also reported their reasons for departure. Logistic regression models with backward selection procedures estimated the effects of age, workplace concerns, and workplace factors on the intent to leave, hour reduction, pursuit of travel nursing (all within the next year), or departure from practice within the past 2 years.

Results: Among practicing nurses surveyed, 39% intended to leave their position in the next year, 28% planned to reduce their clinical hours, and 18% planned to pursue travel nursing. Top-ranked workplace concerns among nurses were adequate staffing, patient safety, and staff safety. The majority of practicing nurses (84%) met the threshold for emotional exhaustion. Consistent factors associated with adverse job outcomes include inadequate staffing and resource adequacy, exhaustion, unfavorable practice environments, and workplace violence events. Frequent use of mandatory overtime was associated with a higher likelihood of departure from the practice in the past 2 years (Odds Ratio 1.72, 95% CI 1.40–2.11).

Conclusions: The factors associated with adverse job outcomes among nurses—intent to leave, reduced clinical hours, travel nursing, or recent departure—consistently align with issues that predated the pandemic. Few nurses cite COVID as the primary cause for their planned or actual departure. To maintain an adequate nursing workforce in the United States, health systems should enact urgent efforts to reduce overtime use, strengthen work environments, implement anti-violence protocols, and ensure adequate staffing to meet patient care needs.

Key Words: Workplace violence, working conditions, registered nurses, COVID-19

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The United States registered nurse population has experienced substantial strain over the past 2 years, which places patients at risk for harm. Nurses have delivered extraordinary care to individuals infected with the SARS-CoV-2 virus (COVID), individuals whose underlying disease course has been complicated by the pandemic, and to important communities. Nurses have delivered both acute and community-based care in rapidly changing and potentially dangerous contexts.

Media reports, policymakers, and health system leaders have cited growing concerns for the adequacy of the nursing workforce, yet few studies have quantified these concerns and examined contributing factors to nursing workforce departures. It is unclear from currently available data, for example, whether nurses are leaving their positions due to the clinical burdens of caring for COVID patients or whether already strained workplaces became intolerable. Nurses cite an adequate nursing workforce as a key determinant to high-quality care.[1] Further, as a large proportion of the US

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nursing workforce reaches retirement age (the median age of the US nurses is 52 y), it is important to examine nurses' workforce decisions by age to understand how these decisions vary by years potentially available to remain in the workforce. Such an analysis provides the opportunity for health system leaders and policymakers to target recruitment and retention strategies. The National Academy of Medicine draft plan for health workforce well-being cited a dearth of recent, multisite data to inform interventions and policy strategies.[2]

Given the absence of recent available data, we launched the Michigan Nurses Survey on February 22, 2022, with the goal of generating timely and actionable data to inform nursing workforce strategies. At the time of publication, Michigan ranked ninth among the US states in both COVID cumulative cases and deaths.[3] Through a statewide survey of current and recently employed registered nurses in one of the hardest-hit states in the nation, the survey results provide timely insights into the challenges that nurses have faced in their workplaces and identify opportunities to stem the losses of nurses from the US health care workforce.

Our 4 research questions were as follows:

1. Among practicing nurses, what proportion plan to make the following changes over the next year: leave their position, reduce their clinical hours, and/or pursue travel nursing?
2. What are the workplace conditions of practicing nurses in terms of burnout, staffing adequacy, overtime use, and abusive events?
3. Among nurses who left clinical practice in the past 2 years, what factors were associated with their departures?
4. What workplace features were associated with the intent to change clinical positions or leave the field entirely?

STUDY DATA AND METHODS

Study Population

Individuals who held a valid, unrestricted license as a registered nurse in the State of Michigan as of February 2022 and provided email addresses were eligible to participate. Nurses with restricted licenses or those who were identified in the database as in a disciplinary process were excluded. Ninety-nine percent of registered nurses in the state provide email addresses upon licensure application or renewal.

Up to 3 email message invitations were sent to the sampling frame 8 days apart, following established procedures.[4] No monetary incentives were offered, but individuals could request to receive a copy of the study results at the conclusion of the analysis.

To protect participant identities, the anonymous feature in Qualtrics (Provo, UT) was used to blind the study team from the email addresses of respondents; our team delivered reminders to those who had not yet responded, but identifiers were not linked to individual study data.

Nurses with multiple roles or positions were asked to report on their primary nursing position. Given the diversity of roles and employment arrangements, nurses were asked to answer survey questions that were pertinent to their role and skip any questions that were not. Hence, some outcomes analyzed have different sample sizes. The study protocol was reviewed by the University of Michigan Institutional Review Board IRB-HSBS and determined to be exempt from review. The survey included a larger set of research questions; this manuscript focuses on nurses' job outcomes and potential factors associated with those outcomes, as guided by the 4 aforementioned research questions. The measures included in the survey and included in these analyses were chosen given their hypothesized relationships in extant models of clinician job outcomes.[5–7]

Job Outcomes

Among currently practicing registered nurses, we examined 3 unique outcomes of intentions in the next year: to leave their current job, reduce their clinical hours from their current baseline, and/or pursue travel nursing.

Among all surveyed nurses, we asked whether they were currently practicing nursing or not. For those who stated they were not currently practicing, we asked whether they had stopped working within the past 2 years (ie, recently resigned). These questions allowed us to identify a cohort of nurses who had left their clinical position during the pandemic (ie, between March 2020 to March 2022).

Top Workplace Concerns

Among practicing and recently-resigned nurses, we asked them to rank their top 3 concerns in their current or most recent workplace (staffing, training, patient safety, staff safety, being recognized, promotion, getting breaks, and a write-in option).

Workplace Factors

Our team hypothesized that several workplace factors would be associated with adverse nurse job outcomes. Among them, clinician burnout was measured using the 16-item Oldenburg Burnout Inventory,[8] which reports a total score on a 5-point scale. Given prior work, we focused on the instrument's emotional exhaustion subscale. Higher scores reflect greater levels of burnout, with emotional exhaustion scores above 2.25 considered clinically meaningful.[9] We asked whether nurses had experienced workplace bullying or physical, emotional, or sexual abuse in the past year.[10] Using measures from prior surveys,[11] we asked nurses to rate the overall quality of care delivered in their workplace (excellent, good, fair, or poor), whether their practice environments are favorable, mixed, or unfavorable to deliver high-quality care, and staffing and resource adequacy[12] (5-point Likert scale). We also asked respondents if their workplace never used, rarely used, or frequently used mandatory overtime policies.

Demographic variables included age category and whether the nurse held an advanced practice role (midwife, anesthetist, nurse practitioner, or clinical nurse specialist).

Analyses

Analyses were performed with SAS 9.4 (Cary, NC). After descriptive statistics were calculated for outcomes and independent variables, we used logistic regression models to examine the association of variables with the population odds of each outcome. To identify variables that were independently associated with each outcome and to eliminate the effect of collinearity when interpreting the coefficients, we employed

model reduction techniques that included backward, stepwise, and best subset selection with inclusion criteria of alpha of 5%. When different reduction techniques yielded different models, we compared nested models using the likelihood ratio test and un-nested models using the Bayesian Information criterion. Model diagnostics included an examination of variance inflation factors and a Hosmer-Lemeshow test for goodness of fit.

Stratification and Sensitivity Analyses

In the accompanying appendix, Supplemental Digital Content 1, http://links.lww.com/MLR/C614, we show full models with all variables examined, including those removed during selection procedures. We also show results separately for registered nurses with and without advanced practice degrees. We also show bivariate models unadjusted for important covariates like age and role (RN vs. APRN.) (Appendix Table 4, Supplemental Digital Content 1, http://links.lww.com/MLR/C614).

STUDY RESULTS

We received 167,534 email addresses of nurses with a Michigan license directly from the State's Board of Nursing. We excluded 246 individuals whose licenses were under suspension or disciplinary review. We identified 2103 email addresses in the database as invalid before survey deployment. Of 165,185 emails sent, 4366 email messages were undeliverable, and 2565 opted out of the survey without explanation. In all, 17,936 recipients (11% of the entire sample) opened the email survey invitation, and among these, 13,687 (76%) completed the survey. For the analyses reported herein, 9150 reported that they currently practiced as a nurse, and 1224 reported that they had stopped practicing within the past 2 years. Table 1 shows participant characteristics.

Two variables—age and advanced practice status—were available on all registered nurses in the state. Age was categorized to enable comparable results with available state data on all nurses. When comparing our sample with the Michigan registered nurse census, the survey sample is similar to the distribution of advanced practice nurses. The age distribution differs slightly from the statewide data, and 3985 surveyed nurses did not answer the question. Details are provided in the Appendix, Table 1, Supplemental Digital Content 1, http://links.lww.com/MLR/C614.

Top Workplace Concerns

The most frequently-cited workplace concerns were shared between currently practicing nurses and nurses who had recently left practice: adequate staffing (83 and 70 percent, respectively), patient safety (60 and 57 percent), and staff safety (50 and 51 percent) (Appendix, Table 2, Supplemental Digital Content 1, http://links.lww.com/MLR/C614). Promotion and compensation were the least frequently reported concerns of surveyed nurses (range of 3–6 percent).

In the analyses summarized below, we focus on registered nurses without advanced practice degrees, given the pressing concerns for the registered nurse workforce across multiple settings. Findings for nurses with advanced practice roles are in the Appendix, Supplemental Digital Content 1, http://links.lww.com/MLR/C614.

Burnout, Staffing Adequacy, Overtime, and Abusive Events

Selected nurse reports of explanatory variables are in Table 2. Among practicing nurses, the number with clinically-meaningful emotional exhaustion, reflected by a score of 2.25 or above, was 7719 (84%). Among currently practicing nurses who answered the question, 1709 (19%) reported their employer used mandatory overtime frequently, 1978 (22%) reported mandatory overtime occurred occasionally, and 3439 (38%) reported that their employer did not use mandatory overtime. The nurse survey offered nurses the opportunity to report 4 distinct workplace abusive events in the past year. Among respondents to this question, 3921(43%) reported emotional abuse, 2397 (26%) reported workplace bullying, 2031(22%) reported physical abuse, and 903(10%) reported sexual abuse in the past 12 months. Only 3692(40%) of nurses reported that staffing and resources were adequate to deliver patient care (at or above the theoretical midpoint of the scale).

Practicing Nurses' Intentions to Leave Their Current Position

Among the 9150 practicing nurses in the sample, 3576 (39%) planned to leave their current position within the next year: 1554 within the next 6 months and 2022 between 6 months and 1 year. The remaining 344 (58%) reported no plans to leave their position, and 230 (2.51%) did not answer the question. Intention to leave was highest in the youngest age categories (59% among nurses under 25 y old and 53% among nurses 25–34 y), followed by nurses at or above the age of 65 (45%) (Fig. 1).

In multivariable logistic regression models, restricted to registered nurses without advanced practice degrees (Table 3), the following factors were associated with an increased likelihood of leaving in the next year: reported any type of abuse (physical, emotional, bullying, or sexual) event in the past year (Odds Ratio 1.27, 95% CI 1.11–1.44), and higher subscale exhaustion scores on the Oldenburg Burnout Inventory (OR 1.72, 95% CI 1.48-2.01). Nurses were less likely to plan to leave their position when they rated their practice environment as favorable (OR 0.27, 95% CI 0.21–0.35) (vs. unfavorable), reported higher staffing and resource adequacy (OR 0.87, 95% CI 0.82–0.92), and good (OR 0.34, 0.24–0.48) or excellent (OR 0.26, 95% CI 0.18–0.39) (vs. poor) quality of care. Similar factors associated with employment plans were observed in the subset of nurses with advanced practice roles (Appendix, Table 3, Supplemental Digital Content 1, http://links.lww.com/MLR/C614).

Practicing Nurses' Intentions to Reduce their Clinical Hours

Of nurses currently practicing, both those with and without advanced practice roles, 2549 (28%) reported plans to reduce their clinical hours within the next 12 months, and 6601 (72%) did not plan to do so. Higher exhaustion subscale scores from the Burnout Inventory were associated with an increased likelihood of reducing clinical hours (OR 1.36, 95%

TABLE 1. Nurse Participant Characteristics, 2022

Characteristics	Participants,* n (%) Full sample N = 13,687	Currently practicing in nursing (n = 9150)	Left nursing practice in the past 2 years (n = 1,224)
Age			
Under 25	216 (1.6)	213 (2.3)	< 1
25–34	1,295 (9.5)	1172 (12.8)	79 (6.5)
35–44	1,785 (13.0)	1611 (17.6)	86 (7.0)
45–54	2,036 (14.9)	1838 (20.1)	92 (7.5)
55–64	2,584 (18.9)	1914 (20.9)	348 (28.4)
65 and older	1,787 (13.1)	568 (6.2)	462 (37.8)
Self-described gender			
Female	8,687 (63.5)	6,495 (71.0)	969 (79.2)
Male	894 (6.5)	736 (8.0)	85 (6.9)
Transgender	< 1	< 1	< 1
Nonbinary	< 1	< 1	< 1
Gender non-conforming	< 1	< 1	< 1
Another choice	< 1	< 1	< 1
Race and ethnicity†			
Asian	204 (1.5)	173 (1.9)	< 1
Black or African American	398 (2.9)	313 (3.4)	42 (3.4)
Hispanic/Latino	201 (1.5)	176 (1.9)	13 (1.1)
Native American or Alaska Native	< 1	< 1	15 (1.2)
Native Hawaiian or Pacific Islander	< 1	< 1	< 1
White	8587 (62.7)	6454 (70.5)	955 (78.0)
Another answer	279 (2.0)	203 (2.2)	32 (2.6)
Unknown	< 1	< 1	< 1
Nursing role			
Registered nurse	8361 (61.1)	6289 (68.7)	918 (75.0)
Advanced practice	1328 (9.7)	1021 (11.2)	149 (12.2)
Primary nursing setting			
Inpatient/acute care	3887 (28.4)	3887 (42.5)	424 (34.6)
Long-term care	331 (2.4)	331 (3.6)	80 (6.5)
Community/ public health	746 (5.5)	746 (8.2)	169 (13.8)
School nursing	< 1	112 (1.2)	21 (1.7)
Nursing education	184 (1.3)	184 (2.0)	38 (3.1)
Other setting	2074 (15.2)	2074 (22.7)	338 (27.6)

*Data are expressed as No. (%) of participants. Cells with <1% had too few observations to report precise numbers within each cell to protect privacy.
†Participants could choose multiple categories.

TABLE 2. Nurse-Reported Burnout, Overtime, Abuse Events in the Workplace, and Staffing and Resource Adequacy, 2022 (N = 9150)

Variable	n (%)
Emotional exhaustion above the threshold	7719 (84.4)
Mandatory overtime	
Never used	3439 (37.5)
Used occasionally	1978 (21.6)
Used frequently	1709 (18.7)
Workplace abusive events in the past 12 mo	
Physical	2031 (22.2)
Emotional	3921 (42.8)
Workplace bullying	2397 (26.2)
Sexual	903 (9.9)
Staffing and resource adequacy	
Adequate (at or above scale midpoint)	3692 (40.3)
Inadequate (below scale midpoint)	3893 (42.6)

Note. Numbers and percentages might not add up to 100% due to missing data.

CI 1.16–1.60) among registered nurses without advanced practice roles (Table 3).

Practicing Nurses' Intentions to Pursue Travel Nursing

Among practicing nurses, 1652 (18%) planned to pursue travel nursing within the next 12 months, and 7,498 (82%) did not plan to do so. Nurses below the age of 25 (OR 5.83, 95% CI 3.43–9.90) and 25–34 (OR 4.87, 95% CI 3.08–7.71) were more likely to report travel nursing plans (Table 3), as were nurses who experienced workplace abuse (OR 1.62, 95% CI 1.38–1.90). Nurses were less likely to pursue travel nursing with higher reported staffing and resource adequacy (OR 0.89, 95% CI 0.83–0.95), good (OR 0.48, 95% CI 0.35–0.65), or excellent (OR 0.46, 95% CI 0.31–0.66) quality of care, and a favorable practice environment (OR 0.55, 95% CI 0.41–0.73).

Factors associated with recent departure from the clinical nursing workforce

For this analysis, we excluded survey respondents who left nursing more than 2 years ago. In all, 1224 (12%) nurses reported leaving the clinical nursing workforce in the past 2 years. The most frequent reasons cited for departure in the past 2 years were retirement (56%), the stress of the position (38%), and inadequate staffing (32%). In multivariable analyses, factors associated with increased likelihood of recent workforce departure included frequent use of mandatory overtime (OR 1.72, 95% CI 1.40–2.11) (Table 3). Factors associated with a lower likelihood of recent departure included higher staffing and resource adequacy (OR 0.87, 95% CI 0.80–0.94), younger age, and favorable practice environment (OR 0.45, 95% CI 0.34–0.60). Associations with job outcomes were similar for advanced practice nurses.

DISCUSSION

This study examined the views of practicing registered nurses and those who had recently left the nursing workforce to quantify factors associated with intent to leave, reduce their clinical hours, pursue travel nursing, and recent departure from the RN workforce, thereby providing leaders and policymakers with actionable targets for interventions. This study found an alarmingly high rate of planned (39%) and recent departures (9%), as well as a high proportion of nurses who plan to make other changes, including reducing clinical hours (28%) and pursuing travel nursing (18%). Collectively, these actions are likely to disrupt the stability of the nursing workforce in the US health care system. Survey respondents reported high rates of emotional exhaustion and abusive events—physical, emotional, bullying, and sexual—in their workplace. Nurses also reported that staffing and resources

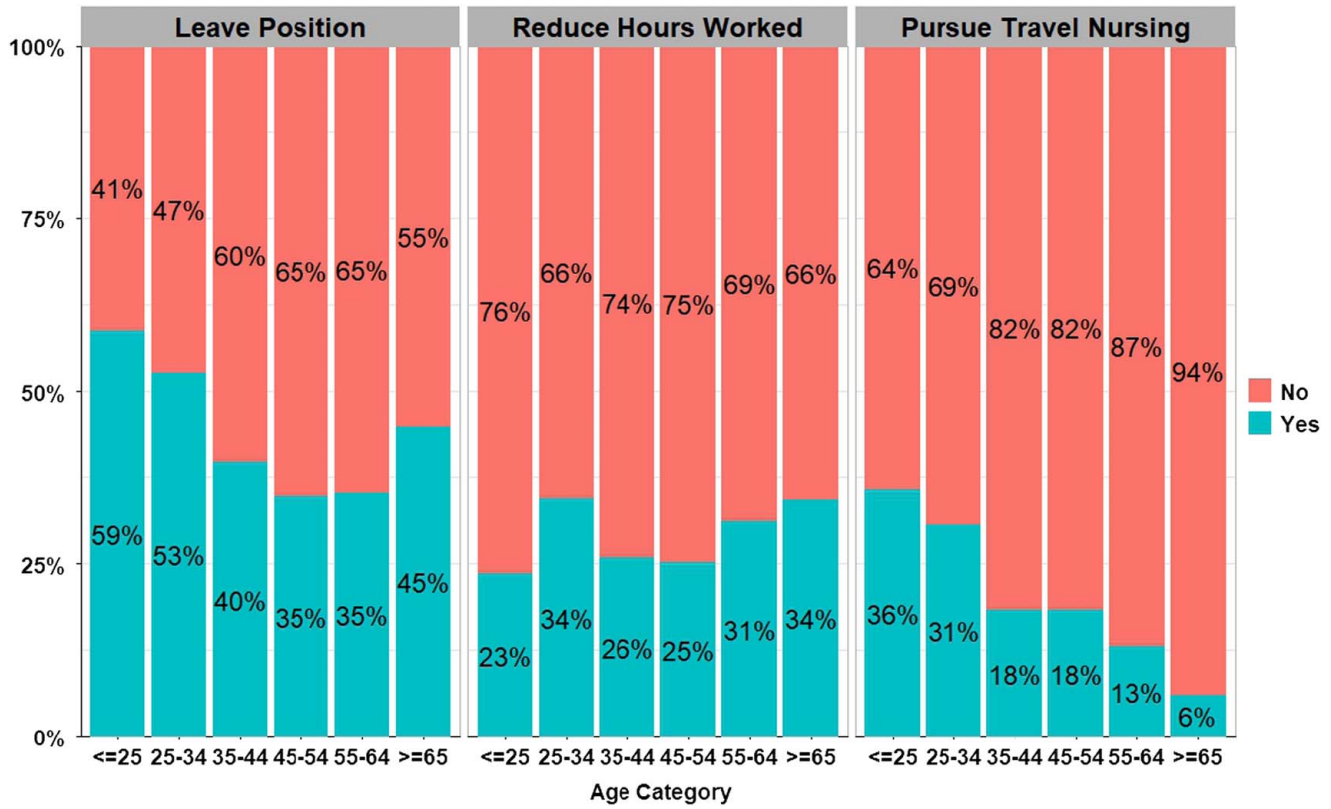

FIGURE 1. Currently practicing nurse job plans within the next 12 months by age. Note: N of each age category. (1) <=25 years old =213, (2) 25–34 years old =1172, (3) 35–44 years old =1,611, (4) 45–54 years old =1838, (5) 55–64 years old =1914, (6) >=65 years old =568. full color online

were inadequate to deliver high-quality patient care. Importantly, these concerns correlated highly and significantly with adverse job outcomes.

Nurses who reported notable exhaustion were less likely to pursue travel nursing, perhaps reflecting that their personal and working conditions did not align with the potential stressors of relocation and orientation to new and challenging clinical assignments.

Our findings align with the recent literature. Namely, nurses' concerns for adequate staffing and concerns for patient safety predate the pandemic.[13] Nurses reported worsening rates of physical and mental health during the pandemic, which correlated with suboptimal working environments.[14] Importantly, nurses reported helplessness and traumatic feelings with these increasingly challenging situations and sought institutional leadership for assistance[15,16]; their calls for help went largely unanswered.[17]

The findings underscore the urgent need to correct factors leading to poor job outcomes, such as the identification and correction of factors associated with burnout, coupled with policy strategies and facility-level changes to prevent workplace violence. While a relatively small group in the survey and the overall profession, special attention should be paid to younger nurses who report plans for workplace departures in relatively high proportions. Currently, it is unclear whether these plans reflect a broader societal trend of hastened job departures—termed the "Great Resignation"—among younger individuals or whether this phenomenon is unique to nursing. Nurses of younger age were more likely to report anxiety and depression during the pandemic.[18] Focused studies to identify their specific concerns and test targeted interventions for this age cohort are urgently needed to stem the potentially preventable losses of nursing personnel.

Study Limitations

Our sampling frame excluded a very small number of nurses who declined to provide valid email addresses for the public use file (less than one percent). Nurses self-submitted email addresses, many of which were personal accounts and may be outdated, not routinely checked, or protected by anti-spam software. Due to the size of the sample, cash incentives were not possible to be distributed equitably across the sample, which may have affected the overall response rate across the state's registered nurse population. Potential participants may not have perceived the survey as relevant to them and opted not to engage. It is also possible that nonrespondents have different perceptions of their workplaces and planned changes to their employment that are not captured in our analysis. To protect nurses' identities, we did not ask for residence or employer details, which would have enabled us to compare geographic differences. We also do not know whether nurse respondents or their dependents had been diagnosed with COVID, which may have influenced their

TABLE 3. Associations Between Job Outcomes and Age and Workplace Factors Among Registered Nurses, 2022

	Leave within one year N = 5907*,†		Reduce clinical hours N = 5923*,‡		Pursue travel nursing N = 5923*,§		Left practice in past two years N = 6821*,‖	
	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*
Age (ref. 65 and older)								
Under 25	0.74 (0.51, 1.09)	0.13	0.33 (0.22, 0.50)	< 0.001	5.83 (3.43, 9.90)	< 0.001	0.009 (0.002, 0.04)	< 0.001
25–34	0.66 (0.51, 0.86)	0.002	0.66 (0.51, 0.86)	0.002	4.87 (3.08, 7.71)	< 0.001	0.06 (0.05, 0.09)	< 0.001
35–44	0.41 (0.32, 0.53)	< 0.001	0.47 (0.37, 0.61)	< 0.001	2.58 (1.63, 4.09)	< 0.001	0.06 (0.04, 0.07)	< 0.001
45–54	0.36 (0.28, 0.47)	< 0.001	0.48 (0.37, 0.62)	< 0.001	2.98 (1.85, 4.62)	< 0.001	0.05 (0.04, 0.07)	< 0.001
55–64	0.41 (0.32, 0.53)	< 0.001	0.72 (0.56, 0.92)	0.01	2.13 (1.34, 3.37)	0.001	0.19 (0.16, 0.24)	< 0.001
Reported any abusive event (ref. No)	1.27 (1.11, 1.44)	< 0.001	1.26 (1.70, 1.44)	< 0.001	1.62 (1.38, 1.90)	< 0.001	N/A¶	N/A¶
Emotional Exhaustion	1.72 (1.48, 2.01)	< 0.001	1.36 (1.46, 1.97)	< 0.001	N/A	N/A	N/A¶	N/A¶
Practice environment (ref. Unfavorable)								
Mixed	0.53 (0.44, 0.63)	< 0.001	0.88 (0.74, 1.03)	0.11	0.83 (0.69, 1.00)	0.05	0.62 (0.51, 0.77)	< 0.001
Favorable	0.27 (0.21, 0.35)	< 0.001	0.62 (0.49, 0.78)	< 0.001	0.55 (0.41, 0.73)	< 0.001	0.45 (0.34, 0.60)	< 0.001
Staffing and Resource Adequacy	0.87 (0.82, 0.92)	< 0.001	N/A	N/A	0.89 (0.83, 0.95)	< 0.001	0.87 (0.80, 0.94)	< 0.001
Quality of care (ref. Poor)								
Fair	0.53 (0.38, 0.74)	< 0.001	0.83 (0.63, 1.09)	0.19	0.67 (0.51, 0.89)	0.006	N/A	N/A
Good	0.34 (0.24, 0.48)	< 0.001	0.64 (0.48, 0.85)	0.002	0.48 (0.35, 0.65)	< 0.001	N/A	N/A
Excellent	0.26 (0.18, 0.39)	< 0.001	0.63 (0.45, 0.88)	0.006	0.46 (0.31, 0.66)	< 0.001	N/A	N/A
Overtime (ref. Not used)								
Used frequently	N/A	N/A	1.23 (1.07, 1.42)	0.005	N/A	N/A	1.72 (1.40, 2.11)	< 0.001
Used occasionally	N/A	N/A	1.03 (0.90, 1.18)	0.66	N/A	N/A	1.31 (1.07, 1.59)	0.008
Staff Safety is a top concern	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Patient Safety is a top concern	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Adequate Staffing is a top concern	N/A	N/A	N/A	N/A	N/A	N/A	0.55 (0.45, 0.69)	< 0.001

*N reflects the denominator for each model. Observations dropped if there were missing data for any model covariates.
N/A: Variable excluded from the reduced model.
†N of nurses who plan to leave within one year = 2,449, N of nurses who do not have plans to leave within one year = 3,458.
‡N of nurses who plan to reduce clinical hours = 1757, N of nurses who do not plan to reduce clinical hours = 4,166.
§N of nurses who plan to pursue travel nursing = 1192, N of nurses who do not plan to pursue travel nursing = 2,331.
‖N of nurses in model who left practice in past two years = 810, N of nurses in model who did not leave practice in past two years = 6011.
¶"Reported any abusive event" and "Exhaustion" not included in model for nurses who left practice in past two years.

reports. Our sampling frame excludes other health care professionals at risk for poor job outcomes, including physicians, pharmacists, respiratory therapists, medical/nursing assistants, and other essential members of the health care workforce.

The limitations above are presented among important strengths, including a large, statewide sample, which included those who had recently departed the workforce, reliance on previously used and validated measures, and timely data collection and analyses that are pertinent to pressing workforce policy questions. The completion rate of 76% of those who opened the survey compares favorably with other recently-published literature.[19,20] Moreover, the distribution of age and advanced practice degrees correlates highly with the complete census of Michigan nurses,[21] suggesting that our sample is representative of the population.

CONCLUSIONS

The findings from the large, rapid-scale survey of registered nurses have immediate implications for health care executives and policymakers. Solutions are available for many of the items cited by survey respondents.[22] These include the implementation of safer staffing models to support higher-quality nursing care; evidence for safer staffing models and potential legislation has existed for decades.[23] Nurses who recently departed the workplace were more likely to report high use of mandatory overtime policies, suggesting that the elimination of this management practice would promote retention efforts. Hospital executives do not need to wait for legislation; they can make these changes within their own institutions. Leaders can also restore trust with nurses through active listening, advocacy, and commitment to change work environments in ways that improve staff and patient outcomes.[24]

Policymakers can acknowledge the potential for substantial disruptions to the health care workforce and advance legislation that promotes safer, more supportive workplaces for nurses. Options include safer staffing legislation, policies to curtail mandatory overtime, and strengthened penalties, reporting, and corrective plans to reduce violence against health care workers. Legislators can advance appropriations for research funding opportunities that develop new models of nursing care delivery that urgently address patient and nurse outcomes.

The findings also suggest there is no time to waste. Without concerted efforts, it is likely that disruptions to the health care workforce will worsen, which will induce a spiral of additional resignations and threaten the delivery of essential care. Leaders need the moral courage to enact evidence-based strategies to stanch the hemorrhage of registered nurses and enable the US health care system to deliver the care that patients expect and deserve.

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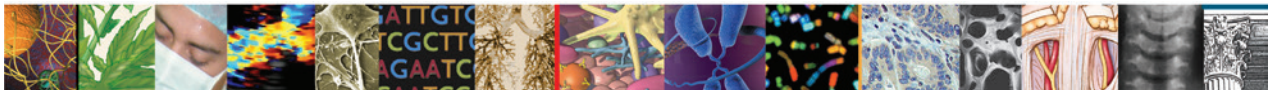

The NEW ENGLAND JOURNAL of MEDICINE

Perspective

Policy Strategies for Addressing Current Threats to the U.S. Nursing Workforce

Deena Kelly Costa, Ph.D., R.N., and Christopher R. Friese, Ph.D., R.N.

The Covid-19 pandemic has made it clear that without enough registered nurses, physicians, respiratory therapists, pharmacists, and other clinicians, the U.S. health care system cannot function. Weaknesses in health care staffing are of particular concern when it comes to the workforce of registered nurses, which could well see a mass exodus as the Covid-19 pandemic eases in the United States and the economy recovers. In a 2021 national survey conducted by the American Association of Critical-Care Nurses, 66% of respondents reported having considered leaving the profession, a percentage that is much higher than previously reported rates. Unsafe work environments — which predated the pandemic — are a key contributor to intentions to leave. Clinicians, health system executives, and policymakers have issued calls to address this crisis, but there has been little in the way of tangible federal or state policy action to prevent workforce losses or to build capacity.

Although it may comfort hospital executives to imagine a post-Covid future in which nurses are again willing to accept positions at local pay scales, such a scenario is unlikely to come about anytime soon. Historically, nurses have reduced their working hours or left the workforce during economic growth periods and returned during recessions, when family incomes fall.[1] Nurses may again choose reduced employment as Covid-19 pressures ease and economic conditions improve. Moreover, nurses reported pervasive unsafe working conditions before the pandemic, and during Covid, they have cited a range of stressors and traumatic experiences, including furloughs, a lack of adequate protective equipment, increased violence, excessive workloads, and reduced support services. Pressures on the nursing workforce may therefore only worsen as Covid-19 subsides.

State and federal policy solutions could prevent workforce losses and increase the supply of nurses (see table). Although there are challenges and opportunities for the nursing workforce throughout health care settings, hospitals are a particularly important area of focus.

Preventing the loss of current nurses is an essential component of shoring up the hospital nursing workforce. We contend that there isn't a shortage of nurses, but a shortage of hospitals that provide nurses with safe work environments and adequate pay and benefits. At the federal level, the Centers for Medicare and Medicaid Services (CMS) could

Federal and State Policy Approaches to Supporting Nurse Staffing in the United States.*

Type of Support	Policies
Preventing losses	
Federal	CMS rules to establish safe staffing ratios for hospitals Financial penalties for exceeding safe workloads Funding for AHRQ to test innovations in health care delivery systems Funding for NIOSH to test interventions that improve safety for health care workers Rulemaking to reduce or eliminate onerous regulatory standards and expectations from accrediting bodies
State	Implementation of mandatory maximum patient-to-nurse ratios Prohibition of mandatory overtime Loan-repayment programs Incentives for hospitals to provide child care, on-site graduate school, and other programs to retain experienced nurses Innovation grants for hospitals to develop programs establishing safer, more supportive work environments
Increasing supply	
Federal	Appropriation of funds for the National Health Care Workforce Commission Investment in nursing education and nurse educators by means of loan-forgiveness programs, a nurse faculty corps program, or expansion of the CMS Graduate Nurse Education demonstration project
State	Legislation to eliminate restrictive scope-of-practice regulations and increase access to care Investment in schools to increase the supply of nurses and nurse educators (e.g., by implementing targeted scholarships or tuition support for nursing students or nurse educators)

* AHRQ denotes Agency for Healthcare Research and Quality, CMS Centers for Medicare and Medicaid Services, and NIOSH National Institute for Occupational Safety and Health.

publish regulations, similar to recently announced policies governing skilled nursing facilities, that specify standards (including maximum patient-to-nurse ratios) for ensuring safe nursing care — and could establish financial penalties for hospitals that violate these regulations. Data supporting increased nurse staffing have been available for decades.[2]

Another federal strategy centers on investing in reimagined, safer health care systems. Congress could appropriate funds to the Agency for Healthcare Research and Quality to support investigator-initiated grants focused on developing new, scalable care-delivery models that are designed to improve outcomes for patients and clinicians. The National Institute for Occupational Safety and Health could expand testing of protective equipment and strategies for improving health care workers' well-being. Data are needed on care-delivery models that keep patients safe and on approaches for promoting joy and safety in clinical work.

Regulatory bodies, including CMS and CMS-approved accreditors, such as the Joint Commission, could scale back regulations and standards that add to nursing workloads. Although some regulations were temporarily eased during the pandemic, new rulemaking could eliminate especially burdensome provisions that aren't essential to patient safety. For example, clinical-documentation burden is a frequently cited source of job dissatisfaction and burnout. Documentation requirements, which are interpreted in various ways by different hospitals, could be minimized to reduce burnout and attrition.

States have more flexibility than the federal government when it comes to enacting legislative and regulatory changes to improve work environments and prevent losses in the nursing workforce. In the absence of federal action in this area, state legislation promoting safer nurse-staffing practices — such as laws establishing mandatory patient-to-nurse ratios — is an evidence-based intervention to support patient safety and reduce the likelihood of nurse departures. Studies have reported improved nurse staffing, improved job satisfaction among nurses, and improved patient outcomes in California after the state enacted legislation prohibiting mandatory overtime for nurses and establishing maximum patient-to-nurse ratios.[3] Many U.S. hospitals continue to require nurses to work overtime hours, however, and few have mandated staffing ratios. Legislatures in some states have introduced bipartisan bills similar to California's law that would restrict mandated overtime and implement maximum staffing ratios. When considered at a national scale, mandated staffing ratios face implementation hurdles, since coordination would be required to distribute the nursing workforce equitably throughout the country. But such policies would most likely prevent workforce losses and boost the number of entrants into the profession.

Policies could also support career development among nurses. Studies have documented the negative effects of Covid-19 on the careers of women in particular. Approximately 90% of U.S.

nurses are women, and many of them have faced pressures related to family care during the pandemic, amid school and child-care facility closures. To ease nurses' household burdens, states could offer loan-repayment programs and offset nursing school tuition debt. They could also provide grants or tax benefits to hospitals offering on-site child care, after-school care, or comprehensive dependent-care programs. Finally, states could offer innovation grants to hospitals to develop safer, more supportive workplaces or fund new initiatives to support on-site graduate-school and professional-development programs designed to retain experienced nurses.

Preventing workforce losses is important, but so is increasing the supply of nurses. The United States lacks access to real-time workforce data and expert guidance for evaluating those data and for advising policymakers on workforce shortages. The National Health Care Workforce Commission was authorized as part of the Affordable Care Act, but Congress never funded it. Appropriating funds for this commission would strengthen the country's ability to respond to the current threat to nurse staffing and prepare for future ones.

A key factor constraining the supply of nurses derives from structural barriers within nursing education. Being hired as a nursing school faculty member requires having an advanced degree, but expert nurses rarely accept faculty positions because salaries are higher for practice roles. Faculty shortages, among other factors, limit nursing school enrollments; over the past decade, schools turned away between 47,000 and 68,000 qualified applicants annually.[4] Federal policies could loosen the nursing bottleneck. For example, policymakers could increase financial incentives to recruit nurse educators, expand nursing school loan-forgiveness programs, fund grants for hospitals and nursing schools to share expert nurses as clinician-educators, and develop a nurse faculty corps program to raise salaries in regions with shortages of nurses. Creative financial incentives, such as tuition-remission programs or programs that provide loans at low interest rates, could encourage prospective students to choose nursing careers. Pipeline programs and partnerships among high schools, technical schools, and universities could permit emergency medical technicians, certified nursing assistants, and armed forces corpsmen or medics to apply clinical work hours toward nursing degrees and qualify for targeted scholarships supported by state or federal funds. Expansion of the CMS Graduate Nurse Education demonstration project could substantially increase the number of qualified nurse practitioners, who could also serve as clinical nursing faculty.

State legislation that eliminates onerous scope-of-practice regulations for advanced practice providers would enable nurse practitioners, including midwives, to practice independently and could increase access to health care. In Michigan, Senate Bill 680 would implement these reforms, thereby allowing nurse practitioners to prescribe tests, medications, and services. This bill could increase the state's supply of clinicians and potentially attract nurses planning to pursue advanced degrees.

Threats to the nursing workforce aren't new, and neither are proposals to address them.[5] Although policies aimed at individual components of this problem could be helpful, a comprehensive package of federal, state, and local efforts would probably be the most effective approach for averting health care system dysfunction and adverse outcomes. We believe federal and state policies should both prevent the loss of current nurses and increase the supply of nurses. Without timely investments in the nursing workforce, the United States may have enough hospital beds for seriously ill patients, but not enough nurses to deliver essential, safe care.

Disclosure forms provided by the authors are available at NEJM.org.

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American Nurses Association Underscores Urgency for Safe Staffing Solutions, Including Minimum Nurse-to-Patient Ratios

Jul 13th 2023

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SILVER SPRING, MD – Today, the American Nurses Association (ANA) underscores the urgency for Congressional leaders, the Centers for Medicare & Medicaid Services (CMS) and other key stakeholders to advance efforts in the implementation of safe staffing standards, including minimum nurse-to-patient ratios.

The nurse staffing crisis continues to demand a national dialogue with nurse-led approaches to help ease longstanding work environment challenges that nurses are facing across numerous specialties and health care settings. ANA supports enforceable minimum nurse-to-patient ratios that reflect key factors such as patient acuity, intensity of the unit practice setting, and nurses' competency among other variables.

"ANA's goal is to empower nurses and position them for success. Embracing setting specific ratios for nurses should be viewed as only one piece of a much larger solution. We're still working to address other longstanding workforce challenges that have dramatically worsened the nurses staffing crisis such as burnout, workplace violence, mandatory overtime and barriers to full practice authority, said ANA President Jennifer Mensik Kennedy, PhD, MBA, RN, NEA-BC, FAAN.

"Studies have shown unsafe staffing negatively affects patient care outcomes and the well-being of nurses. According to the American Nurses Foundation's national workplace survey of nurses, 31% of nurses are required on a weekly basis to work beyond their scheduled shift to provide adequate care to patients. And the National Council of State Boards of Nursing says a quarter to half of nurses reported feeling emotionally drained (50.8%), used up (56.4%), fatigued (49.7%), burned out (45.1%), or at the end of the rope (29.4%) "a few times a week" or "every day."

"We urge health care leaders and policymakers at all levels to effect the necessary change, but we must not underestimate the power of nurse advocacy. Direct care nurses have special relationships with their patients imparting unique insights on patient care and the dynamics of the practice setting. That is knowledge that can't be matched. Nurses are the most trusted professionals in the U.S., especially among health care consumers, so we should both trust and empower them to be the decision makers on how to improve their work environment and deliver the best patient care," said ANA Enterprise CEO, Loressa Cole, DNP, MBA, RN, NEA-BC, FAAN.

ANA's call for staffing solutions that include ratios was voted on and approved at its 2022 Membership Assembly, the official voting and governing body of the association, which led to nearly 400 members of ANA convening on the U.S. Capitol to petition Congress to address the national nurse staffing crisis last month. ANA is not only advocating, but seeking solutions, launching the Nurse Staffing Think Tank in 2022 in partnership with other leading organizations which produced a series of actionable strategies that health care organizations could implement within 12 – 18 months. In May 2023, the Nurse Staffing Task Force identified another 65 proposed

long term recommendations designed to spur innovation, policy and regulatory action, encourage new care models, and effectively support direct care nurses and nurse leaders.

ANA continues to advocate on behalf of nurses, remain a collaborative partner, and to call on Congress to enact meaningful legislation and policies that improve nurse staffing and their work environments. ANA provides nurses at all levels key resources to help inform advocacy as well as approaches to address the nurse staffing crisis.

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About the American Nurses Association

The American Nurses Association (ANA) is the premier organization representing the interests of the nation's more than 4 million registered nurses. ANA advances the profession by fostering high standards of nursing practice, promoting a safe and ethical work environment, bolstering the health and wellness of nurses, and advocating on health care issues that affect nurses and the public. ANA is at the forefront of improving the quality of health care for all. For more information, visit www.nursingworld.org

OPINION

Nurses are screaming for help; lawmakers should listen | Opinion

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The Pennsylvania Association of Staff Nurses and Allied Professionals held a rally on June 6 at the state Capitol in support of the Patient Safety Act. June 6, 2023. Dan Gleiter | dgleiter@pennlive.com

By Guest Editorial

Nurses are burned out and asking for help. It is time for health systems—and legislators—to listen.

Last week, the Pennsylvania House passed the Patient Safety Act, which for the first time would apply minimum staffing standards for nurses in hospitals. HB 106, approved by an impressive 119-84 margin, garnered bipartisan support after years of advocacy by bedside nurses. Now the bill moves to the state senate, where passage remains uncertain, at least in part from hospital industry opposition, but mounting evidence and changing circumstances demand this new approach.

As CEO of Pennsylvania's leading health system and as a leading nurse staffing researcher, we believe safe staffing standards will help to relieve nurse burnout, improve care for patients and create better work environments to attract and retain dedicated frontline caregivers.

Pennsylvania should implement evidence-based safe staffing standards.

Many are familiar with the concept of evidence-based medicine, which uses the best available data to inform decision-making. No piece of legislation is a perfect solution for staffing and burnout challenges, but the evidence supporting minimum nurse-to-patient ratios is clear and compelling.

Over two decades of research at the University of Pennsylvania's Center for Health Outcomes and Policy Research has shown that each additional patient added to a hospital nurse's workload is associated with a 7% or higher risk of a patient death. Hundreds of studies have shown a host of benefits when nurse staffing ratios are improved: Patients recover more quickly, stay in the hospital for a shorter length of time, and are readmitted less frequently because they receive more attentive care and avoid preventable hospital-acquired conditions.

In addition to the academic evidence—which is substantial—we must also take seriously the firsthand experiences of bedside nurses.

The majority of nurses support minimum nurse-to-patient ratios as established under the Patient Safety Act. Most major organizations representing nurses across the Commonwealth agree. Nurses consistently point to safe staffing as the most important factor in their job satisfaction. A 2022 study, undertaken by Penn Nursing colleagues, found that hospitals with better nurse staffing ratios and more favorable work environments experienced significantly less burnout and turnover even under pandemic-era conditions.

From the patient perspective, a recent Harris Poll shows that 90% of the public favor establishing safe nurse staffing standards for hospitals.

Opposition to the Patient Safety Act has frequently hinged on whether hospitals could comply, especially as the entire industry is under significant financial strain. These concerns are valid and well-meaning, and efforts to apply safe staffing standards statewide should be coupled with initiatives to strengthen Pennsylvania's nursing workforce and ensure the long-term sustainability of hospital care in our communities. We should not be afraid to follow the evidence toward new approaches when the status quo is broken.

An outdated, inadequate reimbursement structure and regulatory framework has left hospitals struggling even as medicine has made unprecedented strides in preventing, diagnosing, and treating diseases. Health care leaders, policymakers, payers, and community partners must work collaboratively to address these issues. Driving change is difficult, but it is imperative that we address the current challenges facing health care in a thoughtful, comprehensive manner.

As Shannan Giambrone, R.N., recently told The Inquirer: "If you don't fix the root cause of staffing in the hospital, you are never going to fix the problems that hospitals are facing right now."

She is right. Hospitals face multiple challenges emerging from the COVID-19 pandemic. If we do not solve difficulties related to recruiting and retaining nurses, we will prolong a dangerous situation, imperiling patients' well-being, and the long-term financial health of medical organizations.

Nurses kept hospitals afloat during the pandemic, and we rightly called their contributions heroic. Now, we have an opportunity to honor their service by protecting patients, creating better working conditions, and protecting their future.

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