HQIC Office Hours

December 14, 2023

Logistics – Zoom Meeting

To ask questions, click on the **Chat** icon. At the end of the presentation, you will also be able to unmute to ask a question verbally.

You may adjust your audio by clicking the caret next to the **Mute** icon.

Resources from today's session will be shared after the call.

Health Quality Innovation Network

Today's Presenter

K. Jane Muir, Ph.D., FNP-BC

Postdoctoral Research Fellow
National Clinician Scholars Program
Center for Health Outcomes and Policy Research
University of Pennsylvania

Should I stay or should I go?
Pandemic Evidence and Promising Solutions to Address Clinician Burnout

Learning Objectives

1   Identify one to three strategies to address clinician well-being and burnout

2   Describe key drivers of nurses' burnout and intent to leave the job

3   Review existing evidence on the nursing shortage in the U.S.

About Me
Jane Muir

o **Nurse researcher**

o **Emergency nurse for 6 years**

o **Family Nurse Practitioner in Philadelphia**

o **Postdoctoral Research Fellow, Penn Nursing**

o **Center for Health Outcomes and Policy Research**

o **National Clinician Scholars Program**

Acknowledgements & Funding

I wish to acknowledge co-authors and mentors on the research work discussed in this presentation:

Linda Aiken, PhD, RN
Matthew McHugh, PhD, RN
Karen B. Lasater, PhD, RN
Margo Brooks Carthon, PhD, RN
Christin Iroegbu, PhD, RN
U.S. Clinician Well-Being Consortium

Overview

o **Physician and Nurse Job Outcomes**

o **Covid-19 Pandemic Evidence**

o **Nurses Leaving Healthcare**

o **Clinician-Endorsed Well-Being Interventions**

o **An Evidence-Based Clinician Solution**

Clinician Workforce in Disarray

The New York Times
GUEST ESSAY

Nurses Deserve Better. So Do Their Patients.

Aug. 12, 2021

St. Joseph Hospital
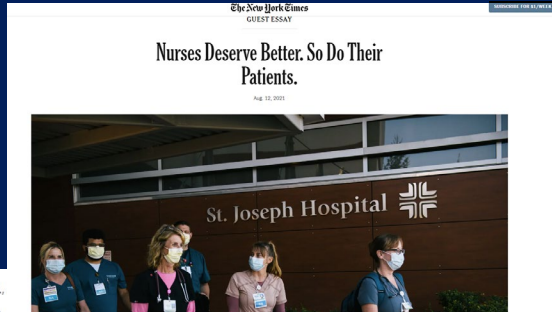
HEALTH, NATIONAL,

Concerned Nurses Ask: Are We Heroes or Expendable?

12/19/2020 by MICHELLE LYNN WRIGHT, BRENNA MORSE, CAROLYN PHILLIPS, K. JANE MUIR, KIRSTIN MANGES, ADAM WHITE and SAMANTHA BERNSTEIN

People decide to become nurses for a variety of reasons. However, none of us did so to be exploited during a global pandemic.

The Moral Crisis of America's Doctors

The corporatization of health care has changed the practice of medicine, causing many physicians to feel alienated from their work.

CALLING IT QUITS

Nurses Are Burned Out. Can Hospitals Change in Time to Keep Them?

The pandemic has pushed already stressed nurses away from a demanding field. Does the job need to be rethought?

Nurse and Physician Burnout is High in U.S. Hospitals

- Cross-sectional study of 21,050 physicians and nurses from

  60 Magnet U.S. hospitals in 2021

- Clinicians reported on their work environment and job

  outcomes (e.g., burnout, job dissatisfaction, turnover intent)

- Hospitals reported clinician turnover rates

JAMA Health Forum.

Original Investigation
Physician and Nurse Well-Being and Preferred Interventions to Address Burnout in Hospital Practice
Factors Associated With Turnover, Outcomes, and Patient Safety

Linda H. Aiken, PhD, RN; Karen B. Lasater, PhD, RN; Douglas M. Sloane, PhD; Colleen A. Pogue, PhD, RN; Kathleen E. Fitzpatrick Rosenbaum, PhD, RN; K. Jane Muir, PhD, FNP-BC; Matthew D. McHugh, PhD, RN, JD; for the US Clinician Wellbeing Study Consortium

Table 1. Clinician Well-Being and Reports of Patient Safety and Quality of Care Across Hospitals

Measure	Mean (range) across hospitals, %[a]	
	Physicians in 53 hospitals	Nurses in 60 hospitals
Survey respondents, No.	5312	15 738
Clinician well-being		
High burnout	32 (9-51)	47 (28-66)
Job dissatisfaction	15 (0-33)	22 (2-48)
Intends to leave next year if possible	23 (6-43)	40 (21-69)
Turnover rate	6 (0-49)	17 (1-50)
Mental health		
(i) High anxiety	13 (0-25)	25 (10-37)
(ii) Likely depressed	9 (0-29)	17 (7-26)
(iii) Exhibits PTSD related to COVID-19	4 (0-15)	14 (3-27)
Morbidity includes i, ii, and/or iii	18 (0-33)	33 (18-48)
Great deal job-related stress	43 (11-62)	53 (35-74)
Work does not allow for personal/family life	32 (0-67)	18 (6-44)
Self-rated health is poor/fair	29 (6-75)	46 (29-62)
Self-rated quality of sleep is poor/fair	51 (25-83)	69 (50-88)

Aiken et al., 2023

Table 2. Resources and Management Reported by Physicians and Nurses

Measure	Mean (range) across hospitals, %[a]	
	Physicians in 53 hospitals	Nurses in 60 hospitals
Survey respondents, No.	5312	15 738
Staffing		
Not enough nurses to care for patients	28 (0-57)	54 (22-93)
My control over my workload is poor or marginal	33 (13-51)	36 (19-63)
Overall quality of work environment		
Work environment is poor or fair	20 (0-44)	34 (8-64)
Work atmosphere is chaotic or tends to be chaotic	39 (19-63)	63 (36-86)
No clear philosophy of patient-centered care/nursing that pervades the clinical environment	15 (0-33)	20 (3-40)
Would not recommend hospital as a place to work	13 (0-42)	17 (1-57)
Would not recommend hospital to friends or family needing care	7 (0-22)	11 (0-35)
Joyful workplace	9 (0-30)	7 (0-20)
Management/clinician relations		
Not confident management will act to resolve problems in patient care that clinicians identify	42 (18-69)	47 (14-74)
Administration does not listen or respond to clinician concerns	29 (9-59)	47 (6-77)
Do not agree my values are well aligned with management	29 (0-48)	33 (9-57)
Clinicians are not involved in internal governance of hospital	23 (6-48)	22 (6-55)
Lack freedom to make important patient care and work decisions	14 (3-30)	24 (9-45)
Professional relations		
Physicians and nurses have good working relationship	94 (80-100)	89 (79-100)
Degree to which my care team works efficiently together is good/optimal	74 (53-93)	66 (54-87)
Electronic health records (EHRs)		
Time spent on EHRs is moderately high to excessive	74 (57-94)	57 (37-72)
EHRs adds frustration to daily work	62 (36-90)	44 (20-71)

[a] Percentages are calculated at the hospital level, ie, the percentage of physicians who report that the work environment is "poor" or "fair" ranges from 0% in the hospital with the lowest percentage to 44% in the hospital with the highest percentage, and averages 20% across all hospitals.

Aiken et al., 2023

Table 3. Coefficients From Multilevel Models Estimating the Differences in the Percentages of Clinicians With Various Outcomes (Burnout, Job Satisfaction, Intent to Leave) in Hospitals at the 75th vs 25th Percentiles of Resources, Management, and Patient Safety

| Measure	Clinician outcomes					
	Physician coefficients, % (95% CIs)			Nurse coefficients, % (95% CIs)		
	Burnout	Job dissatisfaction	Intent to leave	Burnout	Job dissatisfaction	Intent to leave
Not enough nurses to care for patients (physician IQR, 16.8%-36.8%; nurse IQR, 40.6%-67.9%)	3.5 (0.2 to 7.1)[a]	4.8 (2.0 to 8.0)[b]	6.9 (4.1 to 9.9)[b]	11.5 (9.0 to 14.0)[b]	12.7 (10.3 to 15.3)[b]	16.2 (13.2 to 19.1)[b]
Control over workload is poor/marginal (physician IQR, 23.5%-40.6%; nurse IQR, 29.7%-42.2%)	10.1 (6.7 to 13.6)[b]	7.1 (3.2 to 11.5)[b]	8.9 (4.9 to 13.3)[b]	9.4 (7.3 to 11.6)[b]	10.8 (8.9 to 12.7)[b]	13.7 (11.3 to 16.2)[b]
Not confident that management will resolve problems (physician IQR, 33.3%-51.7%; nurse IQR, 40.2%-53.9%)	6.5 (3.3 to 9.8)[b]	6.6 (3.6 to 10.0)[b]	6.1 (2.8 to 9.6)[b]	9.3 (7.2 to 11.2)[b]	10.5 (8.6 to 12.3)[b]	11.7 (9.0 to 14.3)[b]
Work environment is poor/fair (physician IQR, 13.5%-26.4%; nurse IQR, 24.8%-40.8%)	6.7 (3.5 to 10.0)[b]	9.7 (7.6 to 12.2)[b]	10.7 (8.1 to 13.3)[b]	11.2 (9.3 to 13.1)[b]	12.2 (10.7 to 13.6)[b]	14.7 (12.3 to 17.2)[b]
Culture of patient safety average of 6 items[c] (physician IQR, 18.6%-23.6%; nurse IQR, 19.5%-25.8%)	2.4 (−0.5 to 5.5)[d]	5.9 (3.3 to 8.9)[b]	5.4 (2.5 to 8.5)[b]	9.8 (6.9 to 12.7)[b]	11.5 (8.5 to 14.8)[b]	12.8 (9.1 to 16.6)[b]

[a] *P* = .04

[b] *P* < .001.

[c] The 6 items in the summated *culture of patient safety* measure include (1) disagree patient safety is a priority, (2) agree that mistakes are held against staff, (3) agree that important information is lost during shift changes, (4) disagree that they feel free to question authority, (5) disagree that feedback about changes are put into place based on event reports, and (6) disagree that they discuss ways to prevent errors from happening again.

[d] *P* = .11

Aiken et al., 2023

But it's because of the pandemic, right?

Not an RN Pipeline Issue

Source: BLS.gov; Matthew McHugh PhD, JD, MPH, RN
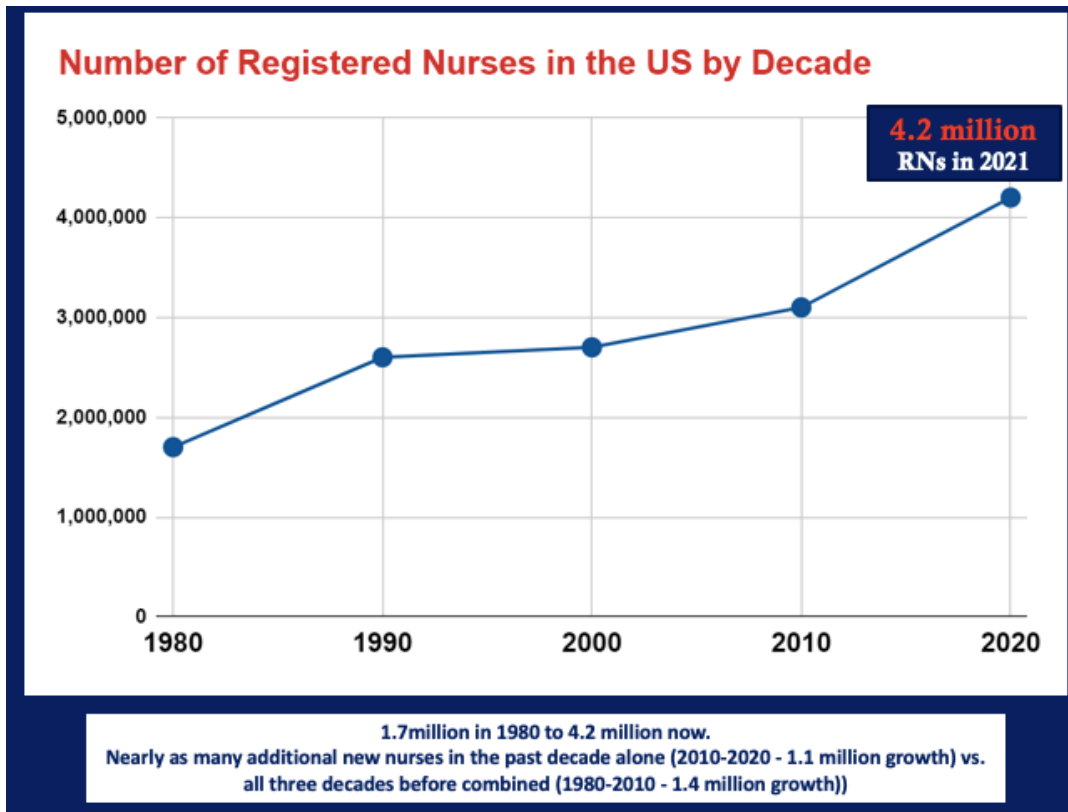
Chronic hospital nurse understaffing meets COVID-19: an observational study

Karen B Lasater [1,2] Linda H Aiken,[1,2] Douglas M Sloane,[1] Rachel French,[1,2] Brendan Martin,[3] Kyrani Reneau,[3] Maryann Alexander,[3] Matthew D McHugh[1,2]

Table 1 Number of hospitals with medical-surgical units and with intensive care units, numbers of nurses on them, and staffing and other hospital characteristics, by hospital location

Characteristics of hospital sample	Medical-surgical						Intensive care					
	NY	IL		NYC	Non-NYC		Total	NY	IL		NYC	Non-NYC		Total
Counts												
Hospitals	135	119		47	207		254	99	80		37	142		179
Nurses	2820	1478		877	3421		4298	1345	837		439	1743		2182
Nurses per hospital	20.9	12.4		18.7	16.5		16.9	13.5	10.3		11.9	12.1		12.2
Staffing—patients per nurse												
Mean	5.9	5.2	***	6.5	5.4	***		2.3	2.2	NS	2.4	2.2	**	
Minimum	3.4	3.3		4.0	3.3			1.5	1.6		1.6	1.5		
Maximum	8.8	9.7		8.8	9.7			4.0	3.6		4.0	3.6		

Poor nurse work environments predated the Covid-19 Pandemic

Table 1 – Hospital Staff Nurses Evaluations of Hospital Management and Patient Care Quality, Prepandemic and During the Pandemic

Patient Care and Evaluation of Management	Prepandemic	During Pandemic	Change[†]
Not confident in management resolving clinical care problems	69.4%	77.5%	8.1%***
Administration doesn't listen or respond to nurses' concerns	46.8%	52.9%	6.1%***
Actions of management show patient safety is not a top priority	47.7%	53.3%	5.8%***
Feel mistakes are held against them	49.6%	47.1%	-2.5%***
Do not feel free to question decisions or actions of authority	56.2%	52.1%	-4.1%***
Poor/fair quality of care	19.9%	25.7%	5.8%***
Unfavorable infection prevention grade (C, D, or F)	33.2%	35.6%	2.4%***
Unfavorable patient safety grade (C, D, or F)	44.5%	47.1%	2.6%***

Notes. Survey data collected by the Center for Health Outcomes and Policy Research at the University of Pennsylvania School of Nursing.

*** $p < .001$

† Prepandemic data were collected between December 15, 2019 and February 24, 2020. Data during the pandemic were collected between April 13, 2021 and June 22, 2021.

Aiken et al., 2023

Table 2 – Hospital Staff Nurse Reports of High Burnout, Job Dissatisfaction, Intent to Leave, Staffing, and Work Environments, Prepandemic and During the Pandemic

	Nurse Reports*	Prepandemic	During Pandemic	Change[†]
All staff nurses (N = 40,674)	High burnout	48.0%	51.0%	3.0%***
	Job dissatisfaction	27.2%	30.6%	3.4%***
	Intent to leave employer	21.8%	24.7%	2.9%***
	Not enough staff	56.9%	67.4%	10.5%***
	Poor/fair work environment	46.6%	42.2%	-4.4%***
	Not a lot of nurse–physician teamwork	18.9%	15.1%	-3.8***
Medical–surgical nurses (N = 10,743)	High burnout	54.0%	58.9%	4.8%***
	Job dissatisfaction	29.9%	36.3%	6.4%***
	Intent to leave employer	23.5%	28.0%	4.5%***
	Not enough staff	64.9%	75.0%	10.1%***
	Poor/fair work environment	46.4%	46.4%	0.0%
	Not a lot of nurse–physician teamwork	21.4%	15.8%	-5.6%***
Adult intensive care nurses (N = 5,429)	High burnout	50.3%	57.6%	7.3%***
	Job dissatisfaction	29.7%	33.9%	4.2%**
	Intent to leave employer	25.5%	29.2%	3.7%**
	Not enough staff	57.4%	73.1%	15.7%***
	Poor/fair work environment	49.0%	46.5%	-2.5%
	Not a lot of nurse–physician teamwork	17.6%	15.2%	-2.4%*
Emergency department nurses (N = 4,515)	High burnout	55.9%	58.1%	2.2%
	Job dissatisfaction	31.4%	37.4%	6.0%***
	Intent to leave employer	24.7%	28.3%	3.6%*
	Not enough staff	63.6%	75.3%	11.7%***
	Poor/fair work environment	51.8%	51.9%	0.1%
	Not a lot of nurse–physician teamwork	13.9%	12.3%	-1.6%
Other nurses (N = 19,987)	High burnout	41.7%	43.9%	2.2%**
	Job dissatisfaction	23.8%	25.6%	1.8%**
	Intent to leave employer	19.0%	21.1%	2.1%***
	Not enough staff	50.3%	60.4%	10.1%***
	Poor/fair work environment	44.7%	37.0%	-7.7%***
	Not a lot of nurse–physician teamwork	19.0%	15.3%	-3.7%***

Notes. Survey data collected by the Center for Health Outcomes and Policy Research at the University of Pennsylvania School of Nursing.

*$p < .05$; **$p < .01$; ***$p < .001$

† Prepandemic data were collected between December 15, 2019 and February 24, 2020. Data during the pandemic were col-

Aiken et al., 2023

Evidence from nurses who ended healthcare employment from 2019-2021

Nurses are leaving healthcare due to systemic features of their employer

- Cross-sectional study of nurses working in NY and IL who left healthcare

  between 2019 and 2021

- Nurses rated top contributing factors to ending healthcare employment

- **7,887 responses from nurses either:**

  - Employed but not in healthcare

  - Not currently employed

  - Retired

Contributing Factors to Ending Employment

	Current Employment Status			
Factor	All nurses	Employed but not in healthcare	Not currently employed	Retired
	N=7,887	N=694	N=2,287	N=4,906
Planned retirement	39%	7%	5%	59%
Burnout / emotional exhaustion	26%	41%	29%	22%
Insufficient staffing	21%	32%	25%	18%
Better benefits, wages, work flexibility in other industries	18%	28%	8%	3%
Family obligations	17%	18%	32%	12%
Unsafe working conditions	13%	20%	19%	10%
Not enough opportunity for professional growth and advancement	11%	22%	12%	3%
Workplace bullying/violence from colleagues	10%	14%	13%	7%
Other reasons	8%	18%	13%	4%
Concerns related to COVID	7%	12%	25%	15%
Disability/health status	7%	7%	15%	10%
Workplace bullying/violence from patients/families	5%	6%	5%	3%
Laid off/terminated by employer	4%	5%	13%	5%
Relocation/move	1%	2%	3%	0.4%

Muir et al., (under review)

"I would have worked another year or two if we had **safe staffing ratios.**"

[Former hospital RN, 60-70 years-old]

"I did not want to leave my team, peers, and patients, but

the unsupported weight created by the hospital system was

too much to [bear] any longer. **In trying to help others**

become the best version of themselves, I was

becoming the worst of mine."

[Former hospital RN, < 30 years old]

"I love working as a nurse. As I got older I found out that the 12 hour shifts were too much on my body. I would still be working if I had the option to work an 8 hour day."

Quote 8, [Former hospital RN, 60-70 years-old]

"The only reason I am there is the money, which is at the cost of my happiness and **it is becoming more and more apparent that I would rather be happy with $1,750 paychecks than unhappy with $3,400 paychecks** [RN #59, NY]

"**The hospital system does not place value on retaining nurses.** There is very little incentive for working there year after year. Raises are a pittance and are insulting to years of service. New grads are coming in making more pay than nurses with 8+ Years of experience" [RN #4, IL]

Top Clinician-Endorsed Interventions to Reduce Burnout

Top-Rated Interventions

Aiken et al., 2023
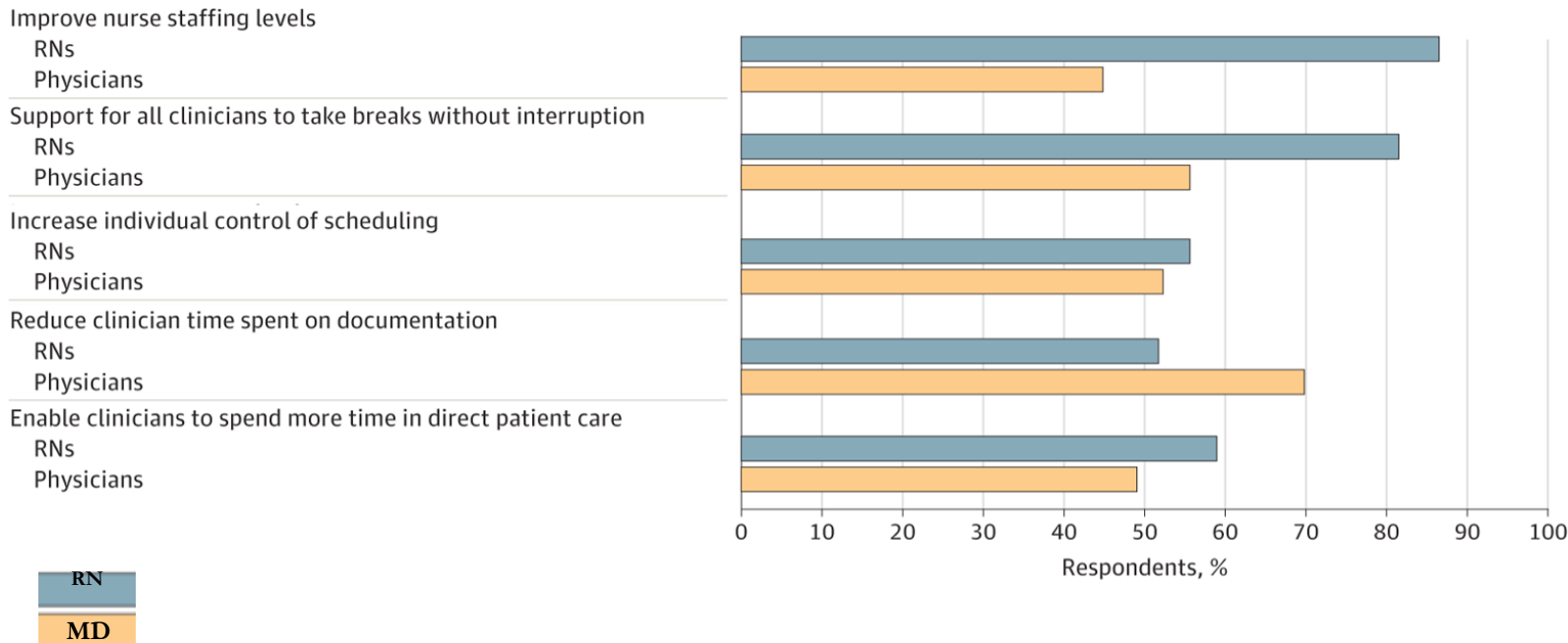
Lowest-Rated Interventions

Aiken et al., 2023
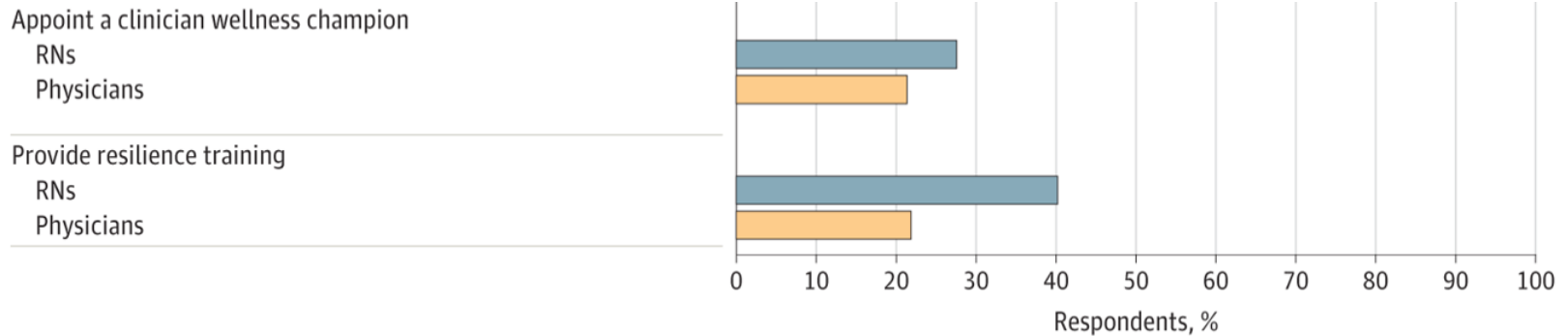
Interventions for Future Research

- Team nursing (e.g., lower RN skill mix teams)

  - Associated with poor outcomes for patients and hospitals

  - Unknown impacts to nurses (e.g., burnout)

- Transparent reporting of nurse staffing levels (e.g., nursing homes)

- Virtual nursing models

An Evidence-Based Solution to Improve Clinician Outcomes

Health executive backs evidence-based solution: nurse staffing legislation

Leadership & Management

The CEO in favor of nurse staffing legislation

Erica Carbajal - Monday, July 10th, 2023

- 20 years of evidence demonstrates that safer hospital nurse staffing is associated with better patient and nurse outcomes

- Staffing legislation enacted in CA in 2004

- Recent legislation passed in OR and WA

Nurses are screaming for help; lawmaker should listen | Opinion

Updated: Jul. 09, 2023, 9:08 a.m. | Published: Jul. 09, 2023, 8:56 a.m.

Key Take-Aways

Take-Aways

1. Both nurses and physicians report high burnout, job dissatisfaction, and turnover intention

2. Hospital nurse burnout and insufficient nurse staffing were high *before* the pandemic

3. Contributing factors to clinicians' burnout and turnover intentions are *systems*-related

4. Interventions targeting clinician retention should focus on *systems* interventions and be evidence-based

5. Nurses and physicians align on top strategies to reduce burnout and improve their well-being

Questions? Thank you!

K. Jane Muir, PhD, FNP-BC

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References

Aiken LH, Lasater KB, Sloane DM, Pogue CA, Rosenbaum KE, Muir KJ, McHugh MD, Cleary M, Ley C, Borchardt CJ, Brant JM. Physician and nurse well-being and preferred interventions to address burnout in hospital practice: factors associated with turnover, outcomes, and patient safety. InJAMA Health Forum 2023 Jul 7 (Vol. 4, No. 7, pp. e231809-e231809). American Medical Association.

Aiken LH, Sloane DM, McHugh MD, Pogue CA, Lasater KB. A repeated cross-sectional study of nurses immediately before and during the Covid-19 pandemic: Implications for action. Nursing Outlook. 2023 Jan 1;71(1):101903.

Lasater KB, Aiken LH, Sloane DM, French R, Martin B, Reneau K, Alexander M, McHugh MD. Chronic hospital nurse understaffing meets COVID-19: an observational study. BMJ Quality & Safety. 2021 Aug 1;30(8):639-47.

Opportunity to Re-Attract Nurses

Density Plot of RN age by Employment Status

Muir et al., (under review)
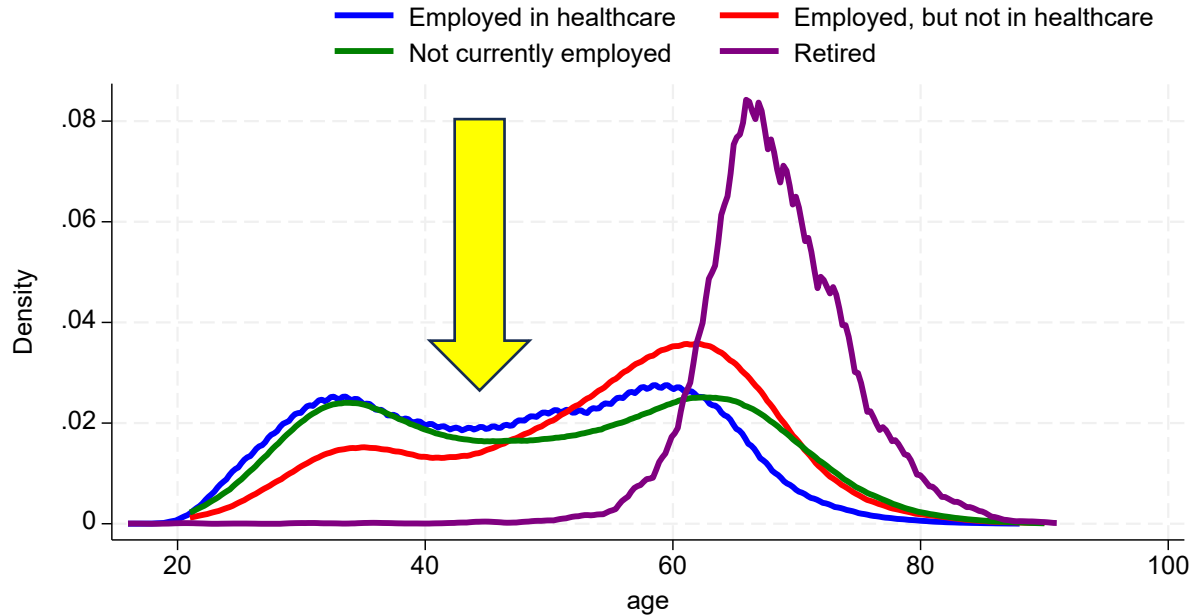
Investments in high-quality nurse work environments

Nurses are seeking workplaces that foster

- Nurse integration in unit decision-making (being heard)

- Transparency around nurse staffing levels

- Supportive leadership

- Flexibility in work schedules when life transitions happen

January Office Hours

NHSN Annual Survey Overview &
Best Practices for IP Risk Assessment

January 11, 2024
12:00 PM EST