National **Nurse Work Environments** - October 2021: A Status Report

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BACKGROUND The health of nurse work environments has been shown to affect both patient and nurse outcomes. In 2005, the American Association of Critical-Care Nurses published the *AACN Standards for Establishing and Sustaining Healthy Work Environments: A Journey to Excellence,* and a second edition was published in 2016. The American Association of Critical-Care Nurses conducted critical care nurse work environment studies in 2006, 2008, 2013, 2018, and, most recently, October 2021, which was expanded to include registered nurses in all areas of practice.
OBJECTIVE To report the results of the October 2021 study with comparisons to previous studies and recommendations for continued improvement and to evaluate the current state of nurse work environments.
METHODS An online survey was used. A total of 9862 registered nurses responded to the survey; 9335 met the study criteria of currently practicing as a registered nurse.
RESULTS The health of nurse work environments has declined dramatically since the 2018 study. However, as in 2018, evidence of a positive relationship exists between implementation of the American Association of Critical-Care Nurses Healthy Work Environment Standards and the health of nurse work environments, between the health of nurse work environments and job satisfaction, and between job satisfaction and the intent of nurses to leave their current positions or to stay.
CONCLUSION It is time for bold, intentional, and relentless efforts to create and sustain healthy work environments that foster excellence in patient care and optimal outcomes for patients, nurses, and other members of the health care team. (*Critical Care Nurse*. 2022;42[5]:58-70)

The American Association of Critical-Care Nurses (AACN) has long recognized that healthy work environments (HWEs) are essential for nurses to provide their optimal contribution to patient care and has made a long-standing commitment to make HWEs one of the organization's top advocacy priorities. In 2005, AACN released the *AACN Standards for Establishing and Sustaining Healthy Work Environments: A Journey to Excellence*.[1] This landmark document outlined 6 essential standards that serve as a foundation in which HWEs can evolve: Skilled Communication, True Collaboration, Effective Decision-making, Appropriate Staffing, Meaningful Recognition, and Authentic Leadership. Since their release, evidence continues to substantiate the 6 HWE standards, which were reaffirmed in 2016.[2]

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The American Association of Critical-Care Nurses conducted 4 large-scale surveys of the nurse work environment between 2006 and 2018.[3-6] Although results showed some progress in the health of the work environment, overall improvement was not consistent or sustained. The COVID-19 pandemic has grossly exacerbated longstanding, systemic flaws inherent in health care work environments, further unveiling the fragility of hospitals and health care systems. In an effort to assess the current state of the nurse work environment, AACN conducted its fifth survey earlier than scheduled—in October 2021—because of concerns about the implications of the public health crisis on nurses and their work environments. The study was expanded to include registered nurses (RNs) in all areas of practice. The purpose of this article is to share the preliminary results, highlight data from before and during the pandemic, and discuss strategies for improvement.

Impact of HWEs

Evidence supporting the association between HWEs and optimal patient and nurse outcomes has spanned decades. It is clear that HWEs play a critical role in better patient care in hospitals. A meta-analysis conducted by Lake and colleagues[7] shows that healthier work environments are associated with lower odds of poor patient outcomes such as mortality, adverse hospital-acquired events, and poor safety outcomes. Patients cared for in better nurse work environments also reported greater satisfaction and gave higher ratings for quality of care. These results are consistent with the systematic review by Wei et al,[8] which showed that HWEs have a positive association with patient survival and other patient quality outcomes. In fact, HWEs have been identified as a key factor in patient safety and less missed patient care.[9-11]

Nurse psychological health and well-being is also strongly associated with the health of the work environment. Nurses who work in healthier work environments report less burnout, less job dissatisfaction, and a lower intent to leave their organizations.[7,8,10] The ongoing stressors of the COVID-19 pandemic have been associated with reports of nurses and other health care staff planning to leave their organizations at escalating and unparalleled rates. The overall work environment and specifically staffing are among the most influential factors in the decision to stay or leave a current position.[12,13] Healthy work environments are also associated with better hospital and health system viability. Patients cared for in hospitals with better work environments report higher levels of satisfaction, and patients are more likely to recommend the hospital to family and friends.

AACN Nurse Work Environment Studies

The first AACN Critical Care Nurse Work Environment Survey was conducted in 2006, followed by studies in 2008, 2013, 2018, and the most recent study in October 2021. There were 4034 currently practicing RNs who participated in the 2006 study, 5562 in the 2008 study, 8444 in the 2013 study, 8080 in the 2018 study, and 9335 in the 2021 study.[3-6] In this article, we present the results of the October 2021 study with comparisons to previous studies and implications for the future.

Context

The context in which surveys occur is important in interpreting the results, especially when comparing outcomes of surveys conducted at different points in time. As we have reported previously,[6] the context has been different for each of the AACN work environment surveys. In 2006, when the first study was conducted, the United States was in the midst of a major nursing shortage, resulting in aggressive recruitment and retention of RNs. A national recession was occurring at the time of the second study in 2008, resulting in low RN vacancy rates and a decreased demand or need for new-graduate RNs.[14] When the 2013 study was conducted, the economy had improved, the Patient Protection and Affordable Care Act had been passed, and nursing school enrollments had increased. In 2018, at the time of the fourth study, major shifts in health care policies had

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Table 1 Demographic characteristics of survey respondents

Characteristic	2006	2008	2013	2018	2021
Age, mean, y	44.6	45.8	46.5	45.1	46.5
RN experience, mean, y	17.5	18.9	19.5	17.5	17.8
Work in acute care hospitals, %	92.0	92.5	95.8	94.1	91.6
Work in direct patient care position, %	62.4	60.1	72.2	79.3	78.3
Work in a Beacon unit, %	NA	NA	14.9	18.7	19.4

Abbreviations: NA, not asked; RN, registered nurse.

occurred, with projections of a shift away from acute care hospitals to community health. The October 2021 study took place at a time when the country had been battling the COVID-19 pandemic for 20 months.

Methods

Survey Instrument

The development of the AACN Critical Care Nurse Work Environment Survey instrument and its modifications in subsequent studies have been described previously.[3-6] The 2021 survey was modified to both decrease the number of survey items, given the current pandemic climate, and to add several questions based on areas of interest as a result of the pandemic.

The Critical Elements of a Healthy Work Environment (CEHWE) scale, based on the AACN HWE standards, was originally a 32-item survey with 16 individual items rated for both the participants' work units and organizations.[6] The scale measures the health of the work environment using Likert-type statements with 4-point response options: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). The Cronbach α for the scale was .97 in both 2013 and 2018. For the 2021 survey, we used a shorter version of the CEHWE scale, which contained 12 items (10 individual items rated for the participant's work unit, with 2 of the items also rated for the participant's organization). The Cronbach α for the shorter version was .91.

Data Collection

As with the previous 4 studies, a convenience sample was used that included RN members and constituents obtained from AACN's database. However, in the October 2021 study, the sample was expanded to include RNs from other specialties and practice areas. Invitations to participants were extended via email, website promotion, and publications.

Analysis

Descriptive statistics (including frequencies, percentages, SDs, and means) were determined for all scalar variables. Frequencies, percentages, and modal values were calculated for categorical variables. Responses were cross-tabulated against demographic variables to identify which variables were significantly correlated ($P < .05$). In cross-tabulation procedures, cases were eliminated in a pairwise fashion so that only respondents with complete information for all target variables were included. The Spearman rank correlation was used to measure the degree of association between ordinal-level variables. The values of the correlation coefficient (r) may range from +1 to –1, indicating strength and direction.

Results

A total of 9862 RNs responded to the survey, with 9335 RNs meeting the participation criteria of currently practicing as an RN. These participants represented 50 states and the District of Columbia and included 112 RNs from outside the United States. Demographic comparisons between 2021 and 2018 survey results showed a small increase in the mean age of participants (from 45.1 to 46.5 years) and a slight increase in years of experience (from 17.5 to 17.8 years; Table 1). The percentage of participants working in acute care hospitals decreased from 94% to 92%, and the percentage working in direct care positions decreased from 79% to 78%, perhaps because of expanding the survey to include a broader sample of RNs beyond critical care. The percentage of respondents who worked in Beacon units increased slightly to 19%. We also inquired about how often since the start of the COVID-19 pandemic participants had cared for patients who had or were suspected of having COVID-19. Half the participants reported caring for these patients 50% or less of the time, whereas the other half reported more than 50% of the time (Table 2).

Overall Perception of Work Environment

There was a decline from 2018 to 2021 in the ratings of all items in the CEHWE scale (Table 3 and Supplemental Figure 1, available online only at ccnonline.org). The largest decline was the item on staffing: "RN staffing

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ensures the effective match between patient needs and nurse competencies" (the mean declined from 2.66 in 2018 to 2.33 in 2021).

Skilled Communication and True Collaboration

Both communication and collaboration declined in the CEHWE ratings from 2018 to 2021. Communication and collaboration were rated highest between RNs and other RNs, followed by RNs and physicians, RNs and frontline nurse managers (FNMs), and RNs and administration (Supplemental Figure 2, available online only at ccnonline.org). Strong positive correlations existed between RN and RN communication and collaboration ($r = .71$, $P < .01$) and between RN and physician communication and collaboration ($r = .77$, $P < .01$) (Supplemental Table 1, available online only at ccnonline.org).

Meaningful Recognition

Consistent with previous surveys, nurses continue to report that recognition is most meaningful when it comes from patients and families (39%), from other RNs (25%), and from FNMs (12%). A positive correlation existed between the item "RNs are recognized for the value each brings to the work of the organization" and job satisfaction ($r = .52$, $P < .01$) (Supplemental Table 1, available online only at ccnonline.org). In addition, 53% of participants who strongly agreed with that statement said they had no intent to leave their current position.

Table 2 Time spent by nurses caring for patients who tested positive for COVID-19 or were suspected of having COVID-19 (N = 6912)

Frequency of care	No. (%) of respondents
Never	230 (3.3)
Rarely, <10% of the time	1099 (15.9)
Occasionally, about 30% of the time	1162 (16.8)
Sometimes, about 50% of the time	967 (14.0)
Frequently, about 70% of the time	1261 (18.2)
Usually, about 90% of the time	1076 (15.6)
The whole time	1167 (16.2)

Effective Decision-making

Effective decision-making declined in all measures from 2018 to 2021, with lower ratings than in all 4

Table 3 Mean ratings of the assessments of work unit environments by healthy work environment standard[a]

	Work unit				
Standard/statement	2006	2008	2013	2018	2021
Skilled Communication					
RNs are as proficient in communication skills as they are in clinical skills.	2.77	2.84	2.87	3.04	2.84
True Collaboration					
RNs are relentless in pursuing and fostering true collaboration.	2.75	2.80	2.75	2.98	2.80
Effective Decision-making					
RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations.	2.85	2.89	2.69	2.85	2.41
RNs are engaged in the selection, adaptation, and evaluation of technologies that increase the effectiveness of nursing care delivery.	2.72	2.74	2.58	2.67	2.36
RNs have opportunities to influence decisions that affect the quality of patient care.	2.95	2.95	2.78	2.91	2.56
Appropriate Staffing					
RN staffing ensures the effective match between patient needs and nurse competencies.	2.75	2.77	2.61	2.66	2.33
Meaningful Recognition					
RNs are recognized for the value each brings to the organization.	2.73	2.77	2.62	2.78	2.70
RNs recognize others for the value they bring to the work of the organization.	2.85	2.90	2.89	3.02	2.93
Authentic Leadership					
Nurse leaders (formal and informal) fully embrace the concept of an HWE.	2.78	2.80	2.63	2.79	2.50
Nurse leaders (formal and informal) engage others in achieving an HWE.	2.70	2.73	2.58	2.74	2.47

Abbreviations: HWE, healthy work environment; RN, registered nurse.

[a] Numbers reflect the average level of agreement with the statement with a range from 1 (strongly disagree) to 4 (strongly agree); a higher score indicates a higher level of agreement with the statement.

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Table 4 Amount of time nurses have the right number of staff, with the right knowledge and skills, in their units

Amount of time	No (%) of respondents 2018 (N = 6170)	2021 (N = 7375)
All of the time	308 (5.0)	260 (3.5)
>75% of the time	2094 (33.9)	1521 (20.6)
50%-75% of the time	1769 (28.7)	1830 (24.8)
25%-49% of the time	1315 (21.3)	1963 (26.6)
<25% of the time	684 (11.1)	1801 (24.4)

previous studies (Supplemental Figure 1, available online only at ccnonline.org). Significant positive correlations existed between effective decision-making and authentic leadership (Supplemental Table 1, available online only at ccnonline.org). In addition, 56% of the participants who strongly agreed with the statement "RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations" said they had no plans to leave their current position in the next 3 years.

Appropriate Staffing

Appropriate staffing (the right number of RN staff with the right knowledge and skills) continues to be a major concern with only 24% of RNs responding that they have the right number of nurses with the right knowledge and skills more than 75% of the time or all of the time (compared with 39% in 2018; Table 4). Twenty-five percent reported having appropriate staffing 50% to 75% of the time, 27% reported having appropriate staffing 25% to 49% of the time, and 24% reported having appropriate staffing less than 25% of the time. The mean rating of the CEHWE criteria on "RN staffing ensures the effective match between patient needs and nurse competencies" declined significantly from 2018 to 2021 (2.66 to 2.33) to the lowest level recorded in any of the previous 4 studies (Table 3). However, 58% of the participants who strongly agreed with the statement "RN staffing ensures the effective match between patient needs and nurse competencies" and 49% of the participants who reported that their unit had appropriate staffing more than 75% of the time said that they had no plans to leave their current position in the next 3 years.

Appropriate staffing also varied on the basis of the degree of implementation of any of the AACN HWE standards. Forty-four percent of participants working in units in which implementation of any HWE standard was "well on the way" or "fully implemented" reported having appropriate staffing more than 75% of the time, compared with only 16% working in units in which HWE implementation was "just beginning" or "not at all" (Figure 1).

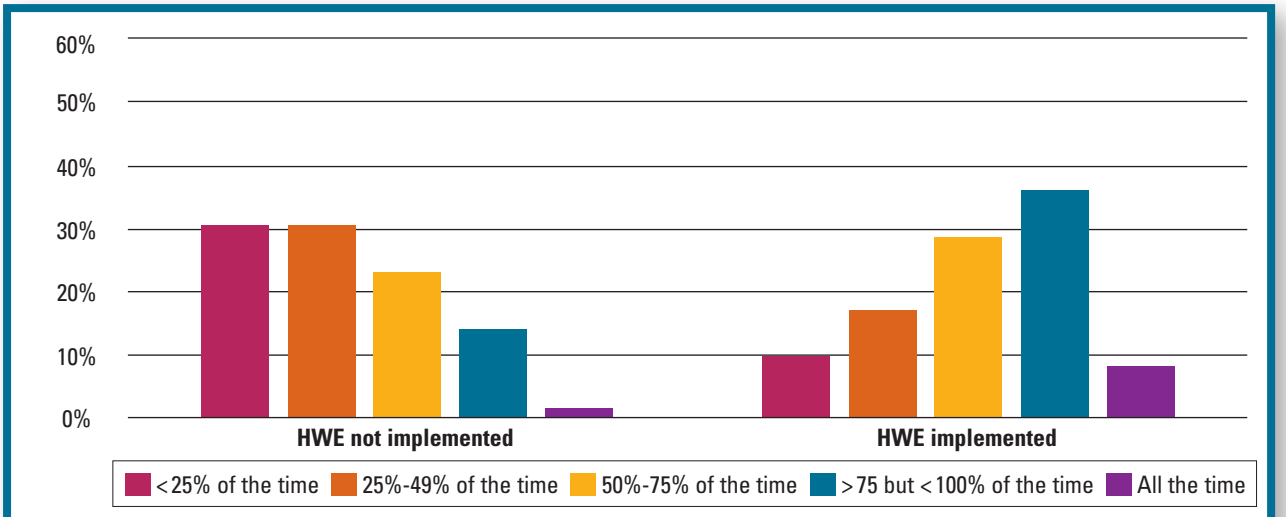

Figure 1 Healthy work environment (HWE) implementation and appropriate staffing. HWE not implemented means HWE implementation was "just beginning" or "not at all"; HWE implemented means implementation of any HWE standard was "well on the way" or "fully implemented." Graph shows results in response to the question, How often does your unit have the right number of registered nurse staff with the right knowledge and experience?

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Table 5 Abuse incidents reported by type and by perpetrator for the 12 months before the survey for the 7399 participants who reported at least 1 incident

Perpetrator	Verbal abuse	Physical abuse	Discrimination	Sexual harassment	Total
Patient	62 208	14 893	6445	5140	88 686
Patient's family member or SO	46 935	1341	6855	2147	57 278
Nurse	12 854	267	6830	1197	21 148
Physician	11 898	272	4701	902	17 773
Nurse manager	6256	346	5130	183	11 915
Administrator	4074	241	4118	260	8693
Other health care personnel	6503	186	3523	1062	11 274
Total	150 728	17 546	37 602	10 891	216 767

Abbreviation: SO, significant other.

Authentic Leadership

The ratings of both CEHWE items on authentic leadership declined significantly from 2018 to 2021. Similar to previous studies, the perceived overall effectiveness of FNMs was positively associated with recognition ($r = .60$, $P < .01$), RNs having opportunities to influence decisions that affect the quality of patient care ($r = .51$, $P < .01$), RNs being valued and committed partners ($r = .50$, $P < .01$), job satisfaction ($r = .49$, $P < .01$), and the perception that the organization values the RN's health and safety ($r = .48$, $P < .01$).

Physical and Psychological Safety

Less than 50% of the participants agreed with the statement "My organization values my health and safety" compared with 68% in the 2018 study. Verbal abuse, physical abuse, sexual harassment, and discrimination were reported as occurring frequently (Table 5). Participants were asked, "In the past year, in your work, have you experienced any of the following (verbal abuse, physical abuse, sexual harassment, discrimination) by (patients, patients' families, colleagues, etc)?" Of the 7399 RNs who answered this question, 5334 (72%) experienced at least 1 negative incident: 65% reported experiencing verbal abuse at least once, 28% physical abuse at least once, 23% discrimination at least once, and 13% sexual harassment at least once. A total of 216 767 incidents of abuse were reported to have occurred in the past year.

Emotional wellness and the incidence of moral distress are important indicators of clinician well-being. We asked participants to rate their current emotional health. Overall, 60% reported that they were emotionally healthy or very emotionally healthy. The degree of emotional health increased with the years of nursing experience. Being emotionally healthy or very emotionally healthy was reported by 49% of participants with 0 to 10 years of experience, 59% of participants with 11 to 20 years of experience, and 72% of participants with more than 20 years of experience. Participants who had cared more often for patients who tested positive for or were suspected of having COVID-19 rated their emotional health lower. Sixty-four percent of participants who cared for these patients rarely, occasionally, or sometimes reported being emotionally healthy or very emotionally healthy, whereas only 54% of participants who cared for these patients frequently, usually, or the whole time reported being emotionally healthy or very emotionally healthy.

With regard to moral distress, participants were asked, "To what extent, in your work as a nurse, do you experience moral distress?" The percentage of participants who reported that they experience moral distress very frequently doubled from 11% in 2018 to 22% in 2021. The frequency of moral distress also differed by years of nursing experience and how often the participants cared for patients with COVID-19. Eighteen percent of participants with more than 20 years of experience said they felt moral distress very frequently, compared with participants with less experience (0-5 years, 24%; 6-10 years, 25%; 11-20 years, 23%). Seventeen percent of participants who cared for these patients rarely, occasionally, or sometimes reported very frequently experiencing moral distress, compared with 27% of participants who cared for these patients frequently, usually, or the whole time.

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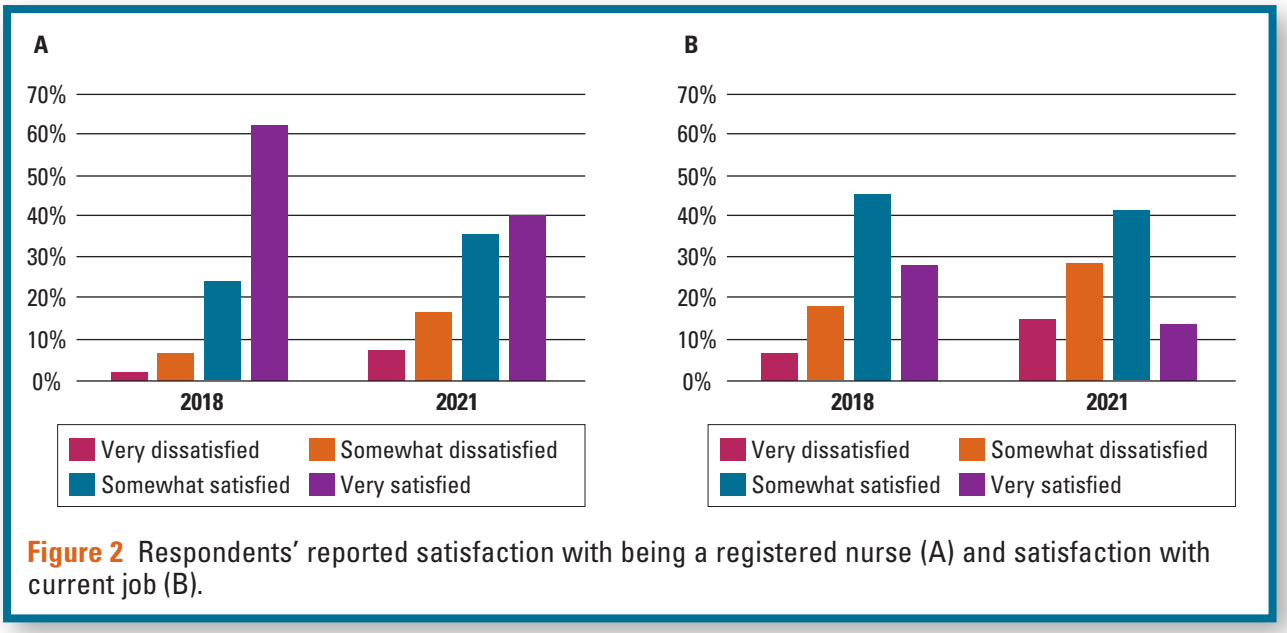

Figure 2 Respondents' reported satisfaction with being a registered nurse (A) and satisfaction with current job (B).

Beacon Units

The data from the 2021 study indicate that nurses who work in Beacon units (AACN's program of unit excellence) and from units that are in the process of obtaining Beacon recognition reported healthier work environments and higher quality of patient care than nurses not working in Beacon units. Although 16% of participants in Beacon units strongly agreed with the statement "RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations," only 11% of participants not working in Beacon units strongly agreed with that statement. When asked about the quality of care in their work units, 39% of participants in Beacon units rated it as excellent, compared with 31% of participants not working in Beacon units.

Quality of Care

A dramatic decline occurred from the 2018 study in how nurses rated the quality of care in their organizations and work units. Sixteen percent of participants rated the quality of care in their organizations as excellent (compared with 24% in 2018), and 30% rated the quality of care in their work units as excellent (compared with 44% in 2018; Supplemental Table 2, available online only at ccnonline.org). Of note, there was a difference in the ratings by role, with 41% of FNMs reporting the quality of care in their unit as excellent, compared with only 28% of direct care RNs reporting it as excellent.

Implementation of HWE Standards

When asked if their unit had implemented any of the AACN HWE standards, 29% of the respondents said "well on the way" or "fully implemented," and 71% said their implementation was "just beginning" or "not at all." For all items on the CEHWE scale, a significant difference existed in results from nurses working in units that had implemented the HWE standards compared with those that had not (Supplemental Tables 1 and 3, available online only at ccnonline.org). Other significant correlations ($P < .01$) were found between these groups in job satisfaction, the organization valuing RN health and safety, and other areas. Fifty-five percent of RNs working in units that had implemented the HWE standards reported being very satisfied with being an RN, compared with 34% of those working in units that had not implemented the HWE standards. With regard to satisfaction with their current position, 33% of RNs working in units that had implemented the HWE standards reported being very satisfied, compared with 6% of those working in units that had not implemented the HWE standards; 26% of the participants working in units that had implemented the HWE standards said they intend to leave their position in the next 12 months, compared with 52% of those working in units that had not implemented the HWE standards.

Job and Career Satisfaction and Career Plans

Job Satisfaction.

Participants reported far lower levels of satisfaction with being an RN and with their current

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Figure 3 Factors and correlations related to job satisfaction and correlations between respondents' job satisfaction and intent to leave.[a]

Abbreviations: HWE, healthy work environment; RN, registered nurse.

[a] Values are Spearman correlation coefficients; all correlations are significant ($P < .01$).

position compared with the 2018 study (Figure 2). Regarding being an RN, 40% were very satisfied (compared with 62% in 2018) and 36% were somewhat satisfied; 14% were very satisfied in their current position (compared with 29% in 2018) and 42% somewhat satisfied. When asked how likely they would be to advise a qualified individual to pursue a career in nursing, 29% said they definitely would, and 39% said they probably would. Only 20% would definitely recommend employment in their organization to a valued nursing colleague, and 30% would definitely recommend employment in their unit. The factors significantly associated with job satisfaction are shown in Figure 3.

Intent to Leave. Overall, 67% of the participants said they plan to leave their current position within the next 3 years (Table 6). Of those who plan to leave, 38% plan to take a different position in clinical nursing, 19% plan to take a different position in nonclinical nursing, 15% plan to retire, 11% plan to return to school, 8% plan to leave the profession, 4% plan to take time out for family or other personal reasons, and 5% have other reasons for planning to leave. The top responses that participants said could influence them to reconsider include higher salary and benefits (63%, up from 46% in 2018), better staffing (57%, up from 50% in 2018), and more respect from administration (50%, up from 42% in 2018).

Table 6 Nurses' intent to leave their current nursing position

	No. (%) of respondents[a]				
Intent to leave	2006 (N = 3565)	2008 (N = 4715)	2013 (N = 6437)	2018 (N = 5995)	2021 (N = 7211)
Yes, within the next 12 mo	698 (19.6)	777 (16.5)	1369 (21.3)	1308 (32.6)	2582 (35.8)[b]
Yes, within the next 3 y	1018 (28.6)	1289 (27.3)	1878 (29.2)	1957 (21.8)	2219 (30.8)
No plans to leave within the next 3 y	1849 (51.9)	2649 (56.2)	3190 (49.6)	2730 (45.5)	2410 (33.4)

[a] Because of rounding, percentages may not total 100%.
[b] Yes, within the next 6 months, 20.2%; yes, within the next 7 to 12 months, 15.6%.

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The intent to leave as well as the readiness to leave (planning to leave within the next 6 months [20%], within the next 7-12 months [16%], within the next 3 years [31%]) were influenced by individual characteristics (eg, satisfaction with being an RN, frequency of experiencing moral distress, quality of care) and by specific aspects of the work environment (eg, appropriate staffing, quality of care, whether the organization values RN health and safety, meaningful recognition, whether RNs are treated as valued and committed partners, FNM overall effectiveness). For example, as the frequency of experiencing moral distress increased, so did the intent to leave. As the percentage of time with appropriate staffing decreased, the intent to leave increased; 32% of participants who reported that they have appropriate staffing less than 25% of the time said they plan to leave their current position in 6 months, with another 17% planning to leave in 7 to 12 months.

Discussion

The results of the October 2021 AACN Critical Care Nurse Work Environment Survey indicate that the health of nurse work environments has declined dramatically since 2018.

Communication and Collaboration

Communication and collaboration are critical elements in patient safety and in patient and nurse outcomes. Compared with the 2018 study, the quality of communication between RNs and other RNs remained stable, declined slightly between RNs and physicians, and declined more between RNs and FNMs and between RNs and administration. The quality of collaboration declined in all areas, though more between RNs and FNMs and RNs and administration than between RNs and other RNs and RNs and physicians. The results of this study support the strong positive correlation between communication and collaboration for RNs and other RNs and for RNs and physicians; therefore, strategies that facilitate communication are indicated.

Meaningful Recognition

Participants reported that the most meaningful recognition comes from patients and families. This finding is consistent across all 5 of the AACN nurse work environment surveys since 2006. Communication between RNs and patients and families has been particularly challenging during the pandemic. Patients with COVID-19 have been isolated and family visitation has been restricted. It is important to implement strategies within units and organizations that facilitate this communication and provide patients and families with accessible and easy mechanisms to offer this important feedback to nurses on the value of their work. Although the pandemic—especially in its initial phases—brought an increase in public recognition of nurses (eg, heightened media attention, applause rituals, offers of free and discounted meals), this recognition was not always seen as meaningful.

Meaningful recognition is about more than accolades; it involves nurses being sought out and valued for their knowledge and experience when decisions are needed on clinical and organizational issues and nurses having influence in improving the quality of patient care. The results of this study showing a major decline in nurses being involved in decision-making indicate the need for organizational and work unit strategies to actively engage nurses in decisions that affect their environment and the care they provide.

Effective Decision-making

Improvements that occurred in effective decision-making between the 2013 and 2018 studies were erased in 2021. The decline in all measures related to decision-making is concerning because nurses are powerful advocates for patient care and safety who are in attendance in acute and critical care 24-7. Specifically, there needs to be improvement in RNs being valued and committed partners in making policy, directing and evaluating clinical care, and leading organizations; in engaging RNs in decisions; and in RNs having opportunities to influence decisions that affect the quality of patient care. Decision-making that does not include direct care RNs threatens the relevance and appropriateness of choices made for patient care.

Appropriate Staffing

Appropriate staffing is the most concerning element of the findings in this study of the health of nurse work environments. The rating on the CEHWE scale item on staffing—"RN staffing ensures the effective match between patient needs and nurse competencies"—was the lowest rated of all items on the scale and the lowest rating for any item in any of the 5 AACN nurse work environment surveys over time, including the study in 2006 that was conducted in the midst of the last major nursing shortage.

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Furthermore, only 24% of participants reported having the right number of RNs with the right knowledge and skills more than 75% of the time or all of the time.

The low ratings for appropriate staffing on this survey align with results from other surveys conducted during the pandemic.[12,15] The increased workload because of surges in hospital admissions of patients with COVID-19, replacement of experienced staff with less experienced staff, and increased reliance on travel nurses are all factors that contribute to the reports of inappropriate staffing.[13] The finding that staffing is a significant factor in nurses' intent to leave is also similar to other survey results[13,15] and indicates a self-perpetuating problem: poor staffing may drive attrition that further reduces staffing.

The correlations between inadequate staffing and patient mortality within 30 days of hospitalization, longer length of stay, and increased risk for readmission are evident in large cross-sectional studies conducted in the United States and other countries[16] and in a prospective quasi-experimental study of medical-surgical patients.[17] This prospective study also showed that the cost of additional staff was less than half the cost savings from reduced length of stay. Inappropriate staffing is also associated with nurse outcomes including job dissatisfaction, burnout, and perceived quality of care.[18] In another study, Jansson and colleagues[19] showed that nurse staffing is correlated with the risk of multiorgan system failure in critically ill patients.

Our study was conducted in the midst of a prolonged national public health crisis; however, inappropriate staffing was already present in many organizations before the pandemic. The impact of this further decline in appropriate staffing is likely to have long-standing effects on nurse well-being and patient safety if not corrected expeditiously.

Authentic Leadership

Authentic leadership affects all aspects of the work environment. The results of this study indicate many areas of positive correlations between the overall effectiveness of FNMs, most notably with recognition ($r = .60$, $P < .01$), RNs having opportunities to influence decisions that affect the quality of patient care ($r = .51$, $P < .01$), RNs being valued and committed partners ($r = .50$, $P < .01$), job satisfaction ($r = .49$, $P < .01$), and the perception that the organization values the RN's health and safety ($r = .48$, $P < .01$). Of note, as in previous studies, there are areas in which the views of direct care RNs and FMNs differ, such as perceptions of the quality of care.

Physical and Psychological Safety

Less than 50% of the participants believed that their organizations valued their health and safety, a decline from 68% in the 2018 study. We found a strong positive correlation between participants' perceptions that their organization valued their health and safety and their job satisfaction ($r = .66$, $P < .01$). This finding indicates that ensuring that RNs and other health care workers know that the organization values their health and safety can improve job satisfaction and, ultimately, retention of satisfied staff.

In total, 216 767 incidences of verbal abuse, physical abuse, discrimination, and sexual harassment within the previous 12 months were reported in this study by 7399 participants. Verbal and physical abuse most frequently come from patients and families, but discrimination comes from all sources.

The results of this study on nurses' perceptions of their emotional health support the results of the mental health and wellness study conducted by the American Nurses Foundation (ANF)[20] in September 2021. In our study, 40% of the participants reported that they were not at all emotionally healthy or not emotionally healthy, compared with 34% in the ANF study. The difference is possibly due to the mix of participants, with our study having a slightly higher percentage of participants working in acute care hospitals.

Since the last study in 2018, the percent of participants reporting that they very frequently experience moral distress has doubled from 11% to 22%. Nurses with more than 20 years of experience and nurses who cared for patients positive for or suspected of having COVID-19 less often reported lower frequencies of moral distress. These results are similar to those in other studies that have found an increased frequency and severity of moral distress during the pandemic.[21,22] Moral resiliency, defined by Rushton as the "capacity of an individual to sustain or restore his or her integrity in response to moral adversity,"[23(p127)] has been found to moderate exposure to morally distressing events.

Working in health care was dangerous even before the pandemic. The US Bureau of Labor Statistics reports the incidence of nonfatal occupational injuries and

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illnesses in health care to be far higher than that of mining, manufacturing, and construction.[24] Inadequate staffing and long work hours create a mentally and physically hazardous environment. Exposure to hazards and infections occurs daily in many health care environments. In 2020, the National Steering Committee on Patient Safety published a plan to improve safety for patients and the people who provide care for them, noting that "ensuring the safety and resiliency of the organization and the workforce is a necessary precondition to advancing patient safety"[25(p4)] and calling for proactive strategies that anticipated risks—and developed system-wide safety processes across the entire health care continuum.

The COVID-19 pandemic intensified the already-existing stressors that nurses face. As noted in *The Future of Nursing* report, "Caring for highly infectious patients with dire needs had sweeping adverse impacts on the physical and mental health of scores of thousands of the nation's nurses."[26(pxiv)] In addition, these stressors negatively affect patient outcomes. In an extensive study of 463 hospitals in 4 states, Carthon and colleagues[27] found that 50% of the hospitals where nurse burnout was high had poor work environments, which were strongly related to lower patient satisfaction. Schlak et al,[28] in a study including more than 20 000 nurses in 523 hospitals, found that hospitals with higher nurse burnout had higher odds of patient mortality, failure to rescue, and longer lengths of stay, but HWEs attenuated these relationships. Of note, these studies were conducted before the pandemic.

Beacon Units

The results of this study indicate that Beacon units and units in the process of becoming Beacon units have healthier work environments than units that are not Beacon units. Currently, 589 Beacon units are established in the United States, and these numbers stayed consistently strong throughout the challenges of the pandemic. This finding is encouraging because these units tend to report better work environments for nurses.

Quality of Care

Participants' ratings of the quality of care in their organizations and work units declined in the current study. Only 16% of the participants rated the quality of care in their organization as excellent, and 30% rated the quality of care in their work unit as excellent.

Implementation of HWE Standards

The evidence is clear that implementing the AACN HWE standards makes a difference. In this study, we changed the question slightly to ask if nurses worked in units that had implemented *any* of the HWE standards and found that a positive response to that question was associated with many positive outcomes. This relationship is not surprising given the interrelatedness of the 6 HWE standards. These results further confirm relationships between implementation of the HWE standards and important outcomes such as job satisfaction, quality of care on the unit, appropriate staffing, communication and collaboration, opportunities to influence decisions, and intent to leave.

Job and Career Satisfaction and Career Plans

The results regarding nurses being more satisfied with choosing nursing as a career than with their satisfaction with their current position remained consistent; however, satisfaction with both declined in 2021. In both areas, the level of satisfaction is lower than in any of our previous studies. The results of this study identify clearly where improvements are needed.

It is concerning that 20% of the participants intend to leave their current positions in the next 6 months, another 16% in 7 to 12 months, and an additional 31% in the next 3 years. The percentage of participants in this study who intend to leave in the next 6 months (20%) is the same as the data reported by ANF.[15] Nurses who say they will leave in the next 6 months or the next 7 to 12 months have likely given considerable thought to the decision and begun planning their departure.

For nurses in this study who expressed an intent to leave, the top 3 things that would very likely influence them to stay are higher salaries and benefits (63%), better staffing (57%), and more respect from administration (50%). These data are consistent with findings of a recent McKinsey report on intent to leave, which indicated that "the strongest drivers of intent to leave included insufficient staffing levels, seeking higher pay, not feeling listened to or supported at work, and the emotional toll of the job."[12(p6)] This year, with the pandemic exacerbating staffing shortages and travel nurses earning considerably more money than full-time employees, has brought the issue of higher salaries front and center. The finding that 66% of nurses in this large study stated an intent to leave their current positions provides a clarion call

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to action for all involved in the support and retention of health care clinicians.

Limitations

The 2021 AACN nurse work environment survey instrument is an online survey that uses a convenience sample. The respondents were invited to participate via email and online invitations on association websites. Because the respondents were not chosen randomly, the sample may not be representative of the population. Therefore, the generalizability of the findings may be limited.

Implications

Actions to improve nursing work environments are urgently needed to correct the cycle of inappropriate staffing and nurse attrition. Failure to address the staffing deficits shown in this study will have devastating implications on the nursing profession and acutely ill patients, even if the toll of the pandemic wanes. Immediate action is needed to address the staffing crisis; however, addressing staffing without addressing the health of the work environment is futile because of the symbiotic nature of their relationship. One cannot exist without the other. Healthy work environments are essential for nurses to provide their optimal contribution and derive fulfillment from their work.

Conclusion

These results serve as a clarion call to all members of the health care team, health care leaders, government officials, community leaders, and patients. The exodus of nurses from the health care system poses a very real threat to the health of the nation because a hospital without appropriate nurse staffing cannot provide safe, high-quality care.

Without improvements in the work environment, the results of this study indicate that nurses will continue to exit the workforce in search of more meaningful, rewarding, and sustainable work. Fortunately, the study data also powerfully show that actively focusing on the work environment makes a difference, and across the board, results are improved when the environment is addressed.

A challenge without possible solutions is an insurmountable crisis. In this case, the solutions are evident. Creating a work environment in which one's work is honored and respected, all voices are heard, teams communicate skillfully, appropriate levels of staff engage together on patient care decisions, and everyone feels valued is the key to addressing this crisis. It is time for bold action, and this study shows the way. The future of the health care system and the patients whose lives are at stake depend on it. CCN

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Funding for this study was provided by the American Association of Critical-Care Nurses.

See also

To learn more about healthy work environments in the critical care setting, read "A Hospital's Roadmap for Improving Nursing Excellence Using AACN's Healthy Work Environment Standards" by Blake et al in *AACN Advanced Critical Care,* 2022;33(2):208-211. https://doi.org/10.4037/aacnacc2022632. Available at **www.aacnacconline.org.**

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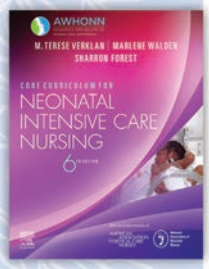

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Supplemental Table 1 Relationships (*P* values) between HWE measures, demographic information, and outcomes[a,b]

	Satisfaction with current job	Intent to leave	Quality of communication in organization between RNs	Quality of communication in organization between RNs and physicians	Quality of collaboration in organization between RNs	Quality of collaboration in organization between RNs and physicians	Frequency of moral distress	Appropriate staffing (>75% and <75%)
Satisfaction with current job	>.99	–.42	.30	.30	.26	.30	–.47	.37
Intent to leave	–.42	>.99	–.13	–.14	–.10	–.13	.22	–.18
Quality of communication in organization between RNs	.30	–.13	>.99	.51	.71	.48	–.16	.20
Quality of communication in organization between RNs and physicians	.30	–.14	.51	>.99	.44	.77	–.17	.20
Quality of collaboration in organization between RNs	.26	–.10	.71	.44	>.99	.57	–.13	.17
Quality of collaboration in organization between RNs and physicians	.30	–.13	.48	.77	.57	>.99	–.18	.21
Frequency of moral distress	–.47	.22	–.16	–.17	–.13	–.18	>.99	–.28
Appropriate staffing (>75% and <75%)	.37	–.18	.20	.20	.17	.21	–.28	>.99
FNM overall effectiveness	.49	–.24	.35	.28	.32	.29	–.30	.32
Organization values RN health and safety	.66	–.29	.28	.28	.26	.29	–.40	.36
Beacon unit	.07	–.08	.10	.07	.12	.09	–.06	.05[d]
Frequency of care for patients with or suspected of having COVID-19	–.13	.06	–.003[c]	.02[c]	.005[c]	.01[c]	.16	–.12
Quality of care for patients in your work unit	.50	–.24	.36	.33	.33	.32	–.33	.34
Unit implementation of any HWE standards	.43	–.21	.28	.24	.26	.25	–.25	.30
Work unit: RNs are as proficient in communication skills as they are in clinical skills.	.26	–.12	.43	.32	.37	.32	–.18	.17
Work unit: RNs are relentless in pursuing and fostering true collaboration.	.30	–.13	.43	.33	.41	.34	–.16	.19
Work unit: RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations.	.50	–.23	.32	.30	.31	.32	–.31	.29
Work unit: RNs are engaged in the selection, adaptation, and evaluation of technologies that increase the effectiveness of nursing care delivery.	.45	–.21	.31	.28	.29	.30	–.30	.28
Work unit: RNs have opportunities to influence decisions that affect the quality of patient care.	.49	–.22	.31	.30	.29	.31	–.33	.30
Work unit: RN staffing ensures the effective match between patients' needs and nurse competencies.	.52	–.25	.28	.26	.25	.27	–.36	.43
Work unit: Nurse leaders (formal and informal) fully embrace the concept of a healthy work environment.	.54	–.26	.33	.28	.31	.28	–.34	.33
Work unit: Nurse leaders (formal and informal) engage others in achieving a healthy work environment.	.56	–.26	.34	.28	.32	.29	–.34	.34
Work unit: RNs are recognized for the value each brings to the work of the organization.	.52	–.24	.35	.28	.34	.31	–.29	.30
Work unit: RNs recognize others for the value they bring to the organization.	.34	–.16	.44	.31	.44	.32	–.18	.22

Abbreviations: FNM, frontline nurse manager; HWE, healthy work environment; RN, registered nurse.

[a] Numbers reflect the average level of agreement with the statement with a range from 1 (strongly disagree) to 4 (strongly agree); a higher score indicates a higher level of agreement.
[b] All correlations significant at *P*= .01, unless otherwise indicated.
[c] Correlation not significant at *P*= .01 or *P*=.05.
[d] Correlation is significant at *P*= .05.

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FNM overall effectiveness	Organization values RN health and safety	Beacon unit	Frequency of care for patients with or suspected of having COVID-19	Quality of care for patients in your work unit	Unit implementation of any HWE standards	Work unit: RNs are as proficient in communication skills as they are in clinical skills.	Work unit: RNs are relentless in pursuing and fostering true collaboration.	Work unit: RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations.	Work unit: RNs are engaged in the selection, adaptation, and evaluation of technologies that increase the effectiveness of nursing care delivery.	Work unit: RNs have opportunities to influence decisions that affect the quality of patient care.	Work unit: RN staffing ensures the effective match between patients' needs and nurse competencies.	Work unit: Nurse leaders (formal and informal) fully embrace the concept of a healthy work environment.	Work unit: Nurse leaders (formal and informal) engage others in achieving a healthy work environment.	Work unit: RNs are recognized for the value each brings to the work of the organization.	Work unit: RNs recognize others for the value they bring to the organization.
.49	.66	.07	−.13	.50	.43	.26	.30	.50	.45	.49	.52	.54	.56	.52	.34
−.24	−.29	−.08	.06	−.24	−.21	−.12	−.13	−.23	−.21	−.22	−.25	−.26	−.26	−.24	−.16
.35	.28	.10	−.003	.36	.28	.43	.43	.32	.31	.31	.28	.33	.34	.35	.44
.25	.28	.07	.02	.33	.24	.32	.33	.30	.28	.29	.26	.28	.28	.28	.31
.32	.26	.12	.005	.33	.26	.37	.41	.31	.29	.29	.25	.31	.32	.34	.44
.29	.29	.09	.01	.32	.25	.32	.34	.32	.30	.31	.27	.28	.29	.31	.32
−.30	−.40	−.06	.16	−.33	−.25	−.18	−.16	−.31	−.30	−.33	-.36	−.34	−.34	−.30	−.18
.32	.36	.05[d]	−.12	.34	.30	.17	.19	.29	.28	.30	.43	.33	.34	.30	.22
>.99	.48	.10	−.06	.43	.51	.26	.33	.50	.44	.51	.46	.62	.64	.60	.40
.48	>.99	.05[d]	−.12	.42	.46	.22	.27	.51	.45	.52	.50	.56	.58	.52	.32
.10	.05[d]	>.99	.03[c]	.11	.16	.07	.08	.11	.09	.10	.04[c]	.06	.06	.06[d]	.06[d]
−.06	−.12	.03[c]	>.99	−.10	−.05	.01[c]	.02[c]	−.08	−.06	−.08	−.10	−.07	−.08	−.07	−.02[c]
.43	.42	.11[c]	−.10	>.99	.35	.30	.36	.41	.37	.42	.43	.44	.43	.45	.37
.51	.46	.16[c]	−.05	.35	>.99	.23	.30	.48	.44	.47	.43	.52	.54	.48	.31
.26	.22	.07[c]	.01[c]	.30	.23	>.99	.57	.35	.31	.28	.30	.30	.31	.28	.34
.33	.27	.08[c]	.02[c]	.36	.30	.57	>.99	.44	.40	.37	.33	.39	.40	.37	.42
.50	.51	.11[c]	−.08	.41	.48	.35	.44	>.99	.68	.64	.49	.56	.57	.53	.36
.44	.47	.09[c]	−.06	.37	.44	.31	.40	.68	>.99	.63	.47	.50	.52	.46	.33
.51	.52	.10[c]	−.08	.42	.47	.28	.37	.64	.63	>.99	.50	.56	.58	.53	.36
.46	.50	.04[c]	−.10	.43	.43	.30	.33	.49	.47	.50	>.99	.54	.54	.46	.30
.62	.56	.06[c]	−.07	.44	.52	.30	.39	.56	.50	.56	.54	>.99	.84	.62	.40
.64	.58	.06[c]	−.08	.43	.54	.31	.40	.57	.52	.58	.54	.84	>.99	.63	.43
.60	.52	.06[d]	−.07	.45	.48	.28	.37	.53	.46	.53	.46	.62	.63	>.99	.55
.40	.32	.06[d]	−.02[c]	.37	.31	.34	.42	.36	.33	.36	.30	.40	.43	.55	>.99

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Supplemental Table 2 Quality of care

Survey question: How would you describe the quality of care for patients in your organization or work unit?	Percentage			
	Organization		Unit	
	2018	2021	2018	2021
Excellent	23.5	15.7	43.7	29.5
Good	54.4	46.3	43.4	46.0
Fair	19.1	30.0	9.4	19.9
Poor	9.4	8.0	1.6	4.7

Survey question: In the past year, how has the quality of patient care changed in your organization or work unit?	Percentage			
	Organization		Unit	
	2018	2021	2018	2021
Much better	14.9	3.9	20.6	5.2
Somewhat better	29.5	7.5	26.3	10.1
About the same	24.8	26.4	26.2	31.4
Somewhat worse	26.6	43.2	23.5	38.7
Much worse	4.2	19.1	3.4	14.6

Supplemental Table 3 Comparison of views of participants working in units that are well on the way to implementing or have fully implemented any of the 6 AACN HWE standards with views of participants working in units that have not implemented or are just beginning to implement the standards[a]

HWE standards and CEHWE items	Percentage	
	HWE implemented, agree/strongly agree	HWE not implemented, agree/strongly agree
Skilled Communication: In your work unit, RNs are as proficient in communication skills as they are in clinical skills.	85	66
True Collaboration: In your work unit, RNs are relentless in pursuing and fostering true collaboration.	87	61
Effective Decision-making: In your work unit, RNs are valued and committed partners in making policy, directing and evaluating clinical care, and leading organizational operations.	78	33
Effective Decision-making: In your work unit, RNs are engaged in the selection, adaptation, and evaluation of technologies that increase the effectiveness of nursing care delivery.	73	31
Effective Decision-making: In your work unit, RNs have opportunities to influence decisions that affect the quality of patient care.	85	45
Appropriate Staffing: In your work unit, RN staffing ensures the effective match between patient needs and nurse competencies.	74	34
Meaningful Recognition: In your work unit, RNs are recognized for the value each brings to the work of the organization.	90	52
Meaningful Recognition: In your organization, RNs are recognized for the value each brings to the work of the organization.	74	34
Meaningful Recognition: In your work unit, RNs recognize others for the value they bring to the work of the organization.	92	72
Meaningful Recognition: In your organization, RNs recognize others for the value they bring to the organization.	82	57
Authentic Leadership: In your work unit, nurse leaders (formal and informal) fully embrace the concept of a healthy work environment.	85	40
Authentic Leadership: In your work unit, nurse leaders (formal and informal) engage others in achieving a healthy work environment.	85	38

Abbreviations: AACN, American Association of Critical-Care Nurses; CEHWE, Critical Elements of a Healthy Work Enviroment; HWE, healthy work environment; RN, registered nurse.

[a] The 6 AACN HWE Standards are Appropriate Staffing, Authentic Leadership, Effective Decision-making, Meaningful Recognition, Skilled Communication, and True Collaboration.

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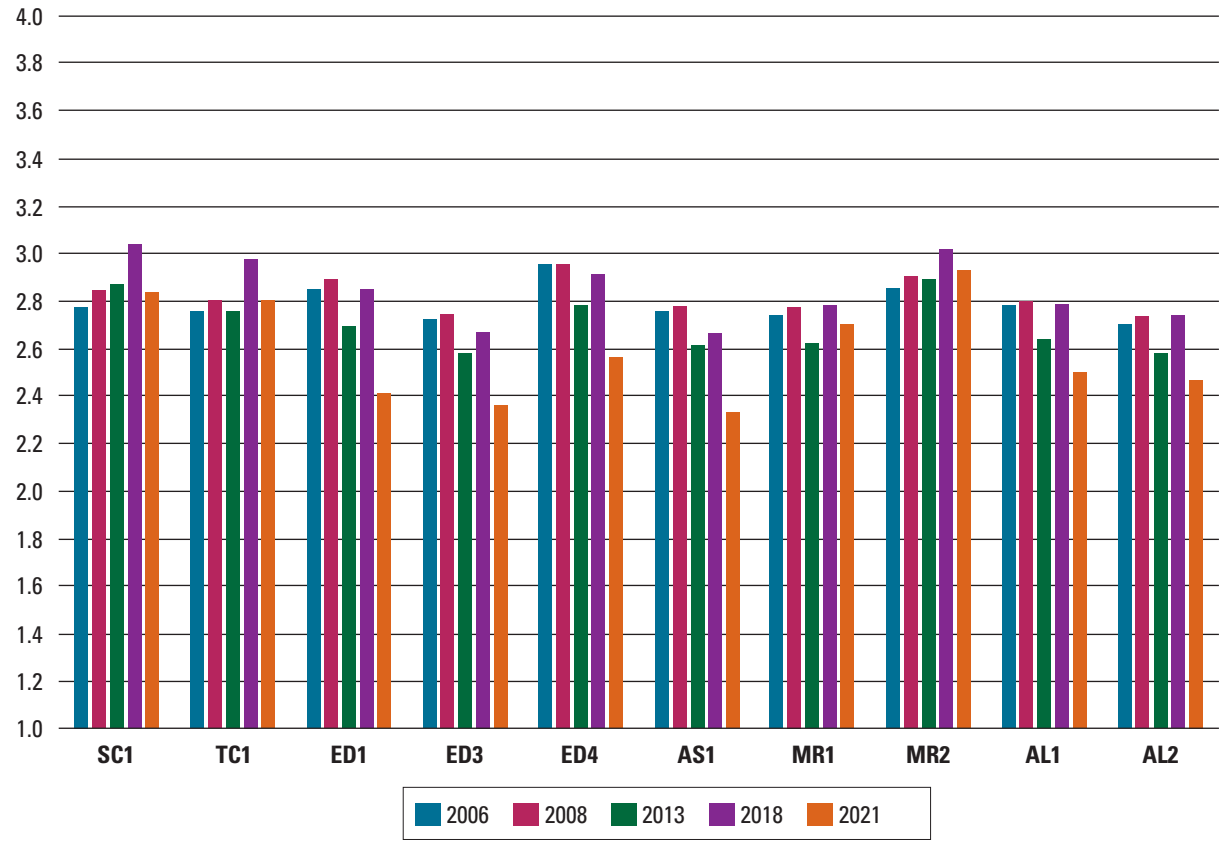

Supplemental Figure 1 Mean ratings of nurses' work environments on the Critical Elements of a Healthy Work Environment scale in 2006, 2008, 2013, 2018, and 2021.

Abbreviations: AL1, nurse leaders (formal and informal) fully embrace healthy work environment; AL2, nurse leaders (formal and informal) engage others in achieving a healthy work environment; AS1, registered nurse staffing ensures the effective match between patient needs and nurse competencies; ED1, registered nurses are valued and committed partners; ED3, registered nurses are engaged in the selection, adaptation, and evaluation of technologies that increase the effectiveness of nursing care delivery; ED4, registered nurses have opportunities to influence decisions that affect patient care; MR1, registered nurses are recognized for the value each brings; MR2, registered nurses recognize others for the value they bring; SC1, skilled communication; TC1, true collaboration.

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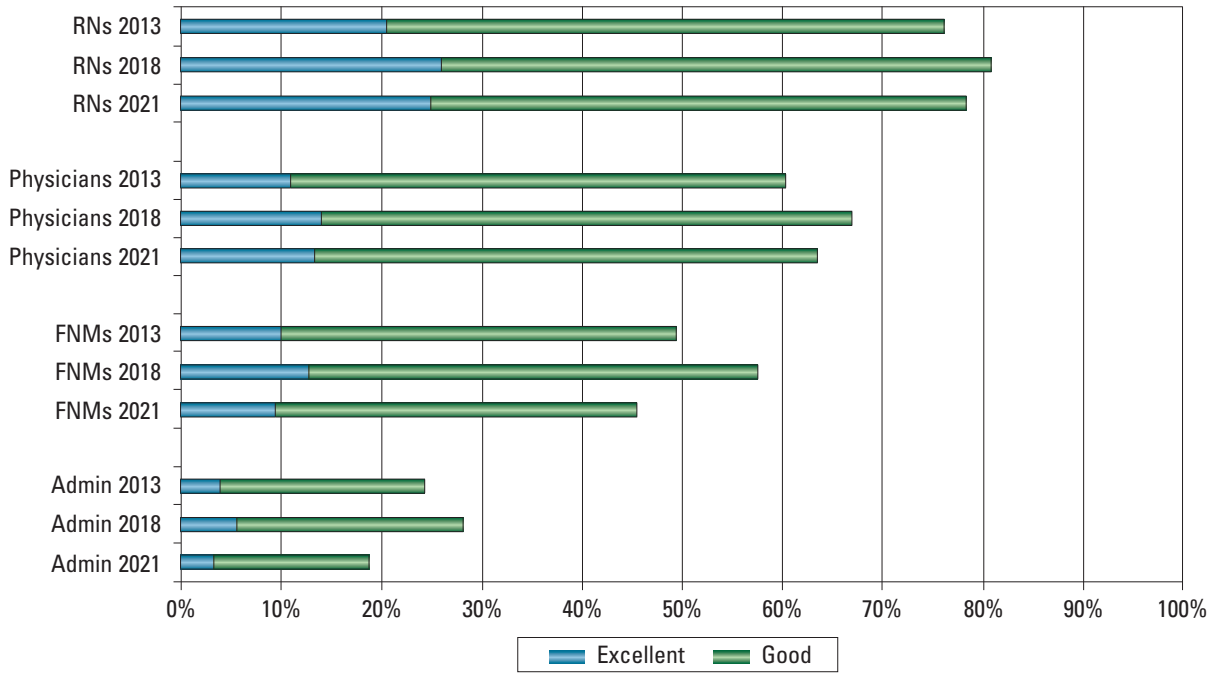

Supplemental Figure 2 Quality of collaboration among RNs and between RNs and physicians, frontline nurse managers, and administration.

Abbreviations: RN, registered nurse; FNM, frontline nurse manager; admin, administration.

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