Organizational Climate and Intensive Care Unit Nurses' Intention to Leave

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Organizational climate and intensive care unit nurses’ intention to leave*

Patricia W. Stone, PhD; Elaine L. Larson, PhD; Cathy Mooney-Kane, MPH; Janice Smolowitz, PhD; Susan X. Lin, DrPH; Andrew W. Dick, PhD

Objective: The purposes of this study were to a) estimate the incidence of intensive care units nurses’ intention to leave due to working conditions; and b) identify factors predicting this phenomenon.

Design: Cross-sectional design.

Setting: Hospitals and critical care units.

Subjects: Registered nurses (RNs) employed in adult intensive care units.

Interventions: Organizational climate, nurse demographics, intention to leave, and reason for intending to leave were collected using a self-report survey.

Measurements and Main Results: Nurses were categorized into two groups: a) those intending to leave due to working conditions; and b) others (e.g., those not leaving or retirees). The measure of organizational climate had seven subscales: professional practice, staffing/resource adequacy, nurse management, nursing process, nurse/physician collaboration, nurse competence, and positive scheduling climate. Setting characteristics came from American Hospital Association data and a survey of chief nursing officers.

Results: A total of 2,323 RNs from 66 hospitals and 110 critical care units were surveyed across the nation. On average, the RN was 39.5 yrs old (SD = 9.40), had 15.6 yrs (SD = 9.20) experience in health care, and had worked in his or her current position for 8.0 yrs (SD = 7.50). Seventeen percent (n = 391) of the respondents indicated intending to leave their position in the coming year. Of those, 52% (n = 202) reported that the reason was due to working conditions. Organizational climate factors that had an independent effect on intensive care unit nurse intention to leave due to working conditions were professional practice, nurse competence, and tenure (p < .05).

Conclusions: Improving professional practice in the work environment and clinical competence of the nurses as well as supporting new hires may reduce turnover and help ensure a stable and qualified workforce. (Crit Care Med 2006; 34:1907–1912)

Key Words: nursing; turnover; work environment; organizational climate

T

here is a preponderance of evidence suggesting that adequate nursing care is an important factor in the delivery of quality inpatient care (1). However, there are concerns about shortages of qualified personnel to provide this care. Nursing shortages have been related to both increased demand and decreased supply for workers (2). The aging population and increased complexity of hospital care are increasing the demand of all health care services (3). The decreased supply of qualified registered nurses (RNs) is related to an aging workforce, problems with recruitment and retention of personnel, and difficulty in recruiting young people into the nursing profession (4).

In many cases, hospital RN shortages have not been institution-wide but concentrated in specialty care areas, particularly intensive care units (ICUs) and operating rooms (5). In ICUs, nurses need to have specialized knowledge, skills, and experience to safely deal with the challenges of meeting the complex needs of critically ill patients. Improving the work environment of ICU nurses should help in retention and recruitment of nurses as well as improve patient safety (6). However, as with many areas related to ICU performance, there is limited scientific knowledge on how best to accomplish this. Further understanding of the organizational characteristics that help retain qualified nurses is needed. The purposes of this study were to a) estimate the incidence of ICU nurses’ intention to leave (ITL) due to working conditions; and b) identify factors predicting this phenomenon.

MATERIALS AND METHODS

Setting and Sample. This study was part of a larger U.S. national patient safety study in which health care-associated infections in the ICU was an important end point. Therefore, hospitals were invited to participate through the Association for Professionals in Infection Control and Healthcare Epidemiology (APIC) listserve and through the National Nosocomial Infection Surveillance (NNIS) system. Efforts were made to have a nationally representative sample of hospitals based on bed size and region by tailoring invitations to eligible target hospitals as needed. Because it is known that smaller, nonurban hospitals are under-represented in the NNIS system, personalized invitations were sent to these institutions with the goal of increasing the representativeness of the hospitals (7). Hospitals were invited to enroll ICUs that provided intensive observation, diagnosis, and therapeutic procedures for adults who were critically ill. This excluded step-down, intermediate care, telemetry only,
and bone marrow transplant units. Adult ICUs with ≥500 patient days per year were eligible.

**Data Collection Procedures.** Data were collected in a variety of ways including a) an ICU nursing staff survey; b) a survey of the chief nursing officer; and c) linking the hospital to the American Hospital Associations (AHA) annual survey data. A site coordinator in each hospital assisted with the distribution of the ICU nursing staff survey. The nurse surveys were anonymous and were only identified by the ICU to which they were distributed and the respondents’ answers to demographic questions. The survey was accompanied by an information letter describing the purpose of this study and a stamped return envelope addressed to the research team. Additionally, to encourage responses, separate postcards were distributed, which, if completed and returned, entered the respondents into lotteries for prizes such as stethoscopes and $25 gift certificates. A modified Dillman technique was used to further increase response rates: if an ICU had a <50% response rate, 2 months after the initial distribution, surveys were redistributed with a request for nurses who had not previously sent in a completed survey to please do so (8). Approval from each hospital’s institutional research review board and the investigators’ institutions was obtained. Variables from these data sources are described subsequently.

**Setting Characteristics.** Each ICU was categorized as medical, medical/surgical, surgical, or other according to the Centers for Disease Control and Prevention’s (CDC) NNIS definitions of ICU types (9). Setting characteristics such as region and bed size were identified using AHA data. Region was defined based on the U.S. Census Bureau’s divisions of the nation and collapsed into three geographical areas: East (New England, Middle Atlantic, South Atlantic), Central (East North Central, East South Central, West South Central, and West North Central), and Pacific (Pacific and Mountain).

To better understand the labor market in which the hospital was operating, the chief nursing officers were asked to assess whether their region was experiencing a nursing shortage and, if so, the extent of the shortage (i.e., mild, moderate, or severe). This question was patterned after the AHA Hospital Nursing Personnel Survey, which is no longer conducted (10).

**Nurse Characteristics.** Seven demographic questions were included on the nurse survey. These items included age, gender, education, employment status, nursing experience, ICU experience, and tenure in current position.

**Organizational Climate.** Organizational climate is defined as the employees’ perceptions about organizational features like decision making and norms in the workplace (11). To measure organizational climate, the nurses were surveyed using the Nursing Work Index-R (12). While in process of surveying the nurses, multiple conceptualizations of the Nursing Work Index-R were published (13, 14). Therefore, we conducted our own factor analysis and developed the Perceived Nurse Working Environment (see Appendix) (15). The Perceived Nurse Working Environment is a 42-item instrument with seven independent subscales, which are described in Table 1. Respondents are asked to indicate their perception of each item in their working environment by answering strongly disagree (1) to strongly agree (4) on a Likert scale. As needed, scores for items were reverse-coded, so that higher scores indicated positive perceptions of climate. Scales were normalized by dividing the number of items. Correlation between scales was examined using pairwise Pearson coefficients, and all scales were deemed independent ($r < .60$) (15).

**Intention to Leave Due to Working Conditions.** Nurses were categorized into two groups: a) those intending to leave due to working conditions; and b) others (i.e., those not leaving, those leaving for other reasons such as retirement or career advancement or not stated). Behavioral ITL due to working conditions was measured by a single self-report item, “Do you plan to leave your current position in the coming year?” In previous research of physicians, self-report intention to leave clinical practice had a sensitivity of 73.3% (16), and it is a frequently used in research assessing the nursing workforce (17, 18). If a respondent indicated ITL, they were asked to describe why. Narratives were independently reviewed by two researchers (PWS and JS) and coded into the two categories: those intending to leave due to retirement or positive career growth (e.g., promotion to clinical nurse specialist after obtaining master’s degree) and those intending to leave due to working conditions (e.g., wages or staffing policies). Interobserver agreement was 98%; disagreements were adjudicated by discussion and consensus was reached in all cases.

**Data Analysis.** Descriptive statistics including mean and SD of the sample were examined. Because of the anonymous nature of the survey and the two waves of data collection, demographic and setting characteristic data were accessed to avoid duplicate surveys from a single nurse. When exact duplication was present between waves, the second survey was omitted from analysis ($n = 11$).

To examine the generalizability, we compared our sample to national data. Age, gender, education level, and employment status (full-time or part-time) of the nurse respondents in our sample were compared with nurse respondents of the National Sample Survey of Registered Nurses 2000 who indicated they were currently working in ICUs (19). We also compared region, bed size, and percentage of teaching hospitals in our sample to the national sample of hospitals using AHA data.

To better understand differences in nurse, setting, and organizational climate characteristics of those intending to leave due to working conditions compared with others, we conducted bivariate analyses. Logistic regression was used to determine the independent predictors of ITL due to working conditions. Variables with differences ($p < .25$) between those intending to leave due to working conditions and others were entered into the logistic regression model. This lenient probability of differences was used to capture all potential predictors of ITL due to working conditions. Odds ratios (ORs) and corresponding 95% confidence intervals (CI) were examined. All statistics were conducted using SAS callble SUDAAN 8.0.0 software (Research Triangle Park, NC). This statistical program accounts for any clustering effect of respondents working in the same ICU using generalized estimating equation model-fitting techniques with robust jackknife standard errors.

**RESULTS**

A voluntary sample of 2,323 RNs (overall response rate 41%) employed in
110 ICUs from 66 hospitals across the nation was obtained. The average RN was 39.5 yrs old (SD = 9.40), had 15.6 yrs (SD = 9.20) experience in health care, and had worked in his or her current position for 8.0 yrs (SD = 7.50). Table 2 compares our sample to national data. Sample sizes of our nurse respondents vary because some did not provide demographic data (e.g., n = 98, 4.2% nurses did not give their age). Furthermore, because some nurses (n = 92, 4.0%) destroyed the tracking number on the survey, not all responses could be linked to the ICU where it was distributed. Nurses in our sample were of similar age and gender as the critical care nurses in the National Sample Survey of Registered Nurses. In the national sample, the nurses were less educated and a higher proportion worked part-time. Similar to the hospitals participating in the CDC’s NNIS system, the hospitals participating in our study tended to have more beds and were more likely to be affiliated with academic institution (20). Additionally, our sample overrepresented the Atlantic region.

In this experienced work force, 17% (n = 391) of the RNs indicated their intention to quit within 1 yr. Reasons given for ITL included working conditions (n = 202, 52%), positive career move (n = 87, 22%), personal or family reasons (n = 44, 11%), retiring (n = 10, 3%), and no reason given (n = 48, 12%).

There were no significant differences in the nursing demographics or setting characteristics of those intending to leave due to working conditions compared with others (Table 3). On average, nurses reporting ITL due to working conditions rated all organizational climate factors significantly lower than other nurses (all p < .001). The differences between those intending to leave and others were largest in professional practice (mean difference 0.57), followed by nursing management (mean difference 0.41) and nursing process (mean difference 0.39); the smallest difference (mean difference 0.18) was found in the perceptions of nurse/physician collaboration.

The results of the logistic regression are reported in Table 4. Our final model had a sample size of 2,080 nurses. The Hosmer-Lemeshow statistic was 5.7 (p = .68), indicating goodness of fit for the final model and adequate predictive power (C-statistic 0.67). Based on the logistic regression analysis, two subscales from the Perceived Nurse Working Environment (professional practice and nursing competence) were significantly independently related to ITL. That is, a one-unit increase in professional practice scale decreased the odds of ITL by 48% (OR, 0.52; 95% CI, 0.42, 0.64). Perceptions of high nursing competence were associated with reduced likelihood of ITL (OR, 0.61; 95% CI, 0.44, 0.83). Years in current job was a significant independent predictor in the logistic regression model (OR, 0.97; 95% CI, 0.94, 0.99). In other words, 1 yr increase at the current job decreased the odds of the ITL by 3%.

DISCUSSION

More than 17% of the critical care RNs surveyed indicated intention to leave their current job within 1 yr. Other researchers have estimated nurse turnover to range from 15% to 36% per year (17, 21). Although our finding is on the low side of other reports, it is still disconcerting because of those intending to leave, >50% expressed poor working conditions as the reason. Additionally, the nurse respondents were highly qualified, with an average experience in health care >15 yrs and an average tenure in current position of 8.0 yrs.

All organizational climate factors were rated higher by those not intending to leave due to working conditions. The relative ordering of differences between groups was not anticipated. For instance, based on survey results of employees in 42 ICUs across the country, Shortell and colleagues (22) found that caregiver interaction defined by the culture, leadership, coordination, communication, and conflict management abilities of the unit was significantly (p < .05) associated with lower nurse turnover (β = −.36). Therefore, it was somewhat surprising that nurse/physician collaboration had the smallest differences between groups in our study (mean difference .18). We believe that this finding reflects a consistent level of interdisciplinary collaboration present in all ICUs rather than indicates that collaboration is not important.

Table 2. Comparison of sample to national statistics

<table>
<thead>
<tr>
<th>Registered Nurses</th>
<th>Sample</th>
<th>National Statistics n = 2,645</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Age, yrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤29</td>
<td>407</td>
<td>(18.3)</td>
</tr>
<tr>
<td>30–44</td>
<td>1,162</td>
<td>(52.2)</td>
</tr>
<tr>
<td>45–59</td>
<td>641</td>
<td>(28.8)</td>
</tr>
<tr>
<td>≥60</td>
<td>15</td>
<td>(0.7)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>253</td>
<td>(10.9)</td>
</tr>
<tr>
<td>Female</td>
<td>2,066</td>
<td>(89.1)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate/diploma</td>
<td>960</td>
<td>(41.7)</td>
</tr>
<tr>
<td>Bachelor’s or higher</td>
<td>1,343</td>
<td>(58.3)</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>1,805</td>
<td>(78.4)</td>
</tr>
<tr>
<td>Part time</td>
<td>498</td>
<td>(21.6)</td>
</tr>
<tr>
<td>Hospitals</td>
<td>n = 66</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlantic</td>
<td>29</td>
<td>(43.94)</td>
</tr>
<tr>
<td>Central</td>
<td>21</td>
<td>(31.18)</td>
</tr>
<tr>
<td>Pacific</td>
<td>16</td>
<td>(24.24)</td>
</tr>
<tr>
<td>Size, beds &lt;300</td>
<td>20</td>
<td>(30.30)</td>
</tr>
<tr>
<td>300–399</td>
<td>25</td>
<td>(37.88)</td>
</tr>
<tr>
<td>≥400</td>
<td>21</td>
<td>(31.18)</td>
</tr>
<tr>
<td>Teaching status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>17</td>
<td>(26.09)</td>
</tr>
<tr>
<td>No</td>
<td>49</td>
<td>(73.91)</td>
</tr>
</tbody>
</table>

National sample of RN data comes from National Sample Survey of Registered Nurses 2000. National sample of hospital data comes from the American Hospital Association. Data displayed are means and standard deviations for continuous variables and sample size and percentages for nominal variables. Differences were tested using chi-square analysis. Sample size of nurse respondent in our sample changes due to missing data.
Table 3. Bivariate analysis comparing those intending to leave due to working conditions with others

<table>
<thead>
<tr>
<th>Nursing characteristics</th>
<th>Intention to Leave Due to Working Conditions</th>
<th>( p ) Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Yes Mean (SE) 38.9 (0.7) No Mean (SE) 39.6 (0.2)</td>
<td>.56</td>
</tr>
<tr>
<td>ICU experience</td>
<td>Yes Mean (SE) 15.1 (0.6) No Mean (SE) 15.7 (0.2)</td>
<td>.59</td>
</tr>
<tr>
<td>Tenure</td>
<td>Yes Mean (SE) 7.1 (0.5) No Mean (SE) 8.0 (0.2)</td>
<td>.23</td>
</tr>
<tr>
<td>Gender</td>
<td>Yes Mean (SE) 177 (8.5) No Mean (SE) 1908 (91.5)</td>
<td>.13</td>
</tr>
<tr>
<td>Education</td>
<td>Yes Mean (SE) 25 (10.7) No Mean (SE) 209 (89.3)</td>
<td>.84</td>
</tr>
<tr>
<td>Employment status</td>
<td>Yes Mean (SE) 121 (15.2) No Mean (SE) 1220 (84.8)</td>
<td>.45</td>
</tr>
<tr>
<td>Setting characteristics</td>
<td>Yes Mean (SE) 74 (8.5) No Mean (SE) 798 (91.5)</td>
<td>.25</td>
</tr>
<tr>
<td>Hospital bed Size</td>
<td>Yes Mean (SE) 57 (7.9) No Mean (SE) 669 (92.1)</td>
<td>.38</td>
</tr>
<tr>
<td>ICU type</td>
<td>Yes Mean (SE) 121 (15.2) No Mean (SE) 1220 (84.8)</td>
<td>.89</td>
</tr>
<tr>
<td>Organizational climate subscales*</td>
<td>Yes Mean (SE) 98 (9.2) No Mean (SE) 967 (90.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Professional practice</td>
<td>Yes Mean (SE) 32 (7.2) No Mean (SE) 411 (92.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Nursing management</td>
<td>Yes Mean (SE) 60 (11.1) No Mean (SE) 480 (88.9)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Staffing and resource adequacy</td>
<td>Yes Mean (SE) 92 (8.2) No Mean (SE) 1024 (91.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Nurse/physician collaboraion</td>
<td>Yes Mean (SE) 98 (9.2) No Mean (SE) 967 (90.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Nursing competence</td>
<td>Yes Mean (SE) 32 (7.2) No Mean (SE) 411 (92.8)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Positive scheduling climate</td>
<td>Yes Mean (SE) 60 (11.1) No Mean (SE) 480 (88.9)</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

ICU, intensive care unit.

All scores have been normalized on a scale of 1–4, with higher scores indicating more positive characteristic. Data are displayed as either means and standard errors or sample size and percentages. Chi-square and general estimating equations were conducted. Sample size changes due to missing data.

In fact, only two other subscales (nurse competence and staffing/resources) were perceived to be more important than collaboration by those intending to leave due to working conditions.

In the multivariate analysis, organizational climate factors associated with ICU nurse ITL due to working conditions were professional practice and nurse competence. Similar results were found by researchers investigating the nursing profession in England (23). This team of researchers found that dissatisfaction with promotion and training opportunities had the strongest impact on job satisfaction and intentions to quit.

Professional practice and nursing competence are core elements in the accreditation program (24, 25). Currently, the Magnet Recognition Program accredits its hospitals for nursing excellence that demonstrate the following characteristics: a) management, philosophy and practice; b) integration of recognized quality improvement standards; c) support for professional practice and continued (nursing) competence; and d) understanding and respecting cultural and ethnic diversity of patients, significant others, and health care providers (26). Our findings support the conclusion that the organizational factors, “support for professional practice” and “continued clinical competence of nursing” are important for nurses ITL. Organizations that exhibit these characteristics may experience decreased RN turnover.

In our analysis, we found that nurses with less tenure were more likely to indicate ITL due to poor working conditions. Similar results have been found in other industries by labor economists (27). Furthermore, in a study of 352 nurses with <5 yrs of experience, researchers found that 30% of respondents left in 1 yr and 57% left by 2 yrs (28). Supporting new hires in their roles may help decrease turnover.

We hypothesized that nurses employed in regions characterized as having a severe nursing shortage would be more likely to leave their current position in the presence of poor working conditions to seek a better employment opportunity, and previous researchers found similar self-reported measures of nursing shortages to be significantly correlated with vacancy and turnover rates (10). However, we did not find the chief nursing officers’ perception of nursing shortage to have a significant relationship with

Table 4. Factors associated with intention to leave due to working conditions (logistic regression)

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \beta )</th>
<th>Odds Ratio</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional practice</td>
<td>-0.66</td>
<td>0.52*</td>
<td>0.42, 0.64</td>
</tr>
<tr>
<td>Nursing management</td>
<td>-0.30</td>
<td>0.74</td>
<td>0.51, 1.08</td>
</tr>
<tr>
<td>Staffing and resource adequacy</td>
<td>0.20</td>
<td>1.23</td>
<td>0.88, 1.72</td>
</tr>
<tr>
<td>Nursing process</td>
<td>-0.21</td>
<td>0.81</td>
<td>0.54, 1.20</td>
</tr>
<tr>
<td>Nurse/physician collaboration</td>
<td>0.27</td>
<td>1.31</td>
<td>0.85, 2.03</td>
</tr>
<tr>
<td>Nurse competence</td>
<td>-0.50</td>
<td>0.61*</td>
<td>0.44, 0.83</td>
</tr>
<tr>
<td>Positive scheduling climate</td>
<td>-0.21</td>
<td>0.81</td>
<td>0.60, 1.11</td>
</tr>
<tr>
<td>Years in current position</td>
<td>-0.03</td>
<td>0.97*</td>
<td>0.94, 0.99</td>
</tr>
<tr>
<td>Gender (female)</td>
<td>-0.31</td>
<td>0.43</td>
<td>0.34, 1.24</td>
</tr>
<tr>
<td>Bed size*</td>
<td>-0.00</td>
<td>1.00</td>
<td>0.61, 1.63</td>
</tr>
<tr>
<td>Small</td>
<td>0.19</td>
<td>1.21</td>
<td>0.78, 1.88</td>
</tr>
<tr>
<td>Medium</td>
<td>-0.00</td>
<td>1.00</td>
<td>0.61, 1.63</td>
</tr>
</tbody>
</table>

* \( p < .01; \) \( p < .05; \) bed size referent category is large. \( n = 2,080 \).
nurses’ ITL due to working conditions. Although we patterned our questions after those used in previous research, there may have been differences in interpretation. Alternatively, there may not be a relationship between the chief nursing officers’ perceptions of regional shortages and nurses’ ITL due to working conditions. This may be an issue of statistical power. Previous researchers used national data sets (that are no longer available) and included 1,452 hospitals (10, 17, 29). Furthermore, our measure of ITL purposively excluded positive reasons for leaving such as furthering education and/or retiring and therefore is just measuring one of the forces that drive vacancy and turnover rates (25).

There are a number of limitations to this analysis. First, we measured ITL due to working conditions, not actual turnover rates. The actual behavior of the nurse may be different from the intention. However, behavioral intention to quit has been found to be a strong predictor of personnel turnover across industries and theoretically is believed to be an important antecedent to turnover (18). Second, we had no information on nonresponders, and a response bias may be present. The overall response rate of 41% is comparable to the 38–53% response rates recently found in other anonymous surveys of hospital-based nursing personnel (30–32). Third, this study did not employ a random sampling method, and hospitals volunteered to participate, which limits the generalizability of the results. Furthermore, since the nurse respondents were more highly educated and likely to work full-time, results may not be generalizable to part-time, less educated workers. Last, the study used multiple levels of data (hospital level, ICU level, and individual nurse level), which may result in problems with clustering. Statistically, clustering was controlled for using SUDDAN software.

Turnover, in and of itself, is not necessarily negative for workers or firms. In fact, workers may switch firms (causing turnover) because of a better potential match between workers’ skills and preferences and the jobs offered by other employers (33). However, even when the benefits to workers and firms are substantial, there are inevitably costs experienced by the organizations that lose workers. Past estimates of the cost to replace one medical surgical RN range between $30,000 and $50,000 and closer to $65,000 for critical care nurses (34). More recently, Jones (35) estimated the total turnover costs of one RN to range from $62,000 to $67,000 depending on the service line.

The results of our study may be useful to health administrators and policy makers who wish to decrease nurse turnover. Improving nurses’ perceptions of professional practice in the work environment and clinical competence of the nurses as well as finding ways to support new hires may reduce turnover and help ensure a stable and qualified workforce. This is especially important in the face of demographic changes in which an ever-increasing shortage of qualified nurses is projected (36). Monitoring nurse working conditions and improving the organizational climate of hospitals is likely to improve the quality of health care by assisting in retention of qualified nurses, possibly encouraging more men and women to enter the profession, and decreasing health care costs by reducing turnover and improving patient outcomes.

REFERENCES

1. Institute of Medicine: Keeping Patients Safe: Transforming the Work Environment of Nurses. Washington DC, National Academy Press, 2004


APPENDIX 1. Perceived nurse work environment scale items

Professional development and participatory decision making
Career development/clinical ladder opportunity
Opportunity for staff nurse to participate in policy decisions
Opportunities for advancement
Staff nurses are involved in the internal governance of the hospital
Support for new and innovative ideas about patient care
Nursing staff is supported in pursuing degrees in nursing
Staff nurses have opportunity to serve on hospital and nursing committee
Administration that listens and responds to employee concerns
Active in-service/continuing education program for nurses
Contribution that nurses make to patient care are publicly acknowledged
An active quality assurance program
Clinical nurse specialists who provide patient care consultation
A chief nursing executive is equal in power and authority to other top level hospital executives

Staffing and resource adequacy
Enough staff to get the work done
Enough RNs on staff to provide quality patient care
Adequate support services allow me to spend time with my patients
Enough time and opportunity to discuss patient care problems with nurse
A satisfactory salary

Nursing management
A nurse manager who is a good manager and leader
A nurse manager who backs up the nursing staff in decision making
Nurse managers consult with staff on daily program and procedures
A supervisory staff that is supportive of nurses
Praise and recognition for a job well done

Support for professional practice
Use of nursing diagnoses
Nursing care plans verbally transmitted from nurse to nurse
Written, up-to-date nursing care plans for all patients
Use of problem-oriented medical record
Each nursing unit determines its own policies and procedures
Team nursing as the nursing delivery system

Nurse/physician collaboration
A lot of teamwork between nurse and doctors
Physician and nurses have good working relationships
Collaboration between nurse and physicians
Physicians give high quality medical care

Institutional support for clinical competence
A preceptor program for newly hired RNs
Working with experienced nurses who know the hospital
Working with nurse who are clinically competent
Standardized policies, procedures, and ways of doing things
A good orientation program for newly employed nurses
Floating, so that staffing is equalized among units

Positive scheduling climate
Staff nurses actively participate in developing their work schedules
Regular, permanently assigned staff nurses never have to float
Flexible or modified work schedules are available

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