

# Reducing Annual Hospital and Registered Nurse Staff Turnover—A 10-Element Onboarding Program Intervention

SAGE Open Nursing  
Volume 3: 1–13  
© The Author(s) 2017  
Reprints and permissions:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/2377960817697712  
journals.sagepub.com/home/son



Emma Kurnat-Thoma, PhD, MS, RN<sup>1</sup>, Mary Ganger, BSN, MSHS, RN<sup>2</sup>, Kelly Peterson, BA<sup>3</sup>, and Lesley Channell, MBA, SPHR<sup>3</sup>

## Abstract

Employee turnover is a key metric and performance indicator when evaluating the fiscal and operational effectiveness of any health-care facility. This article outlines a turnover analysis and onboarding program performance improvement initiative used by a 187-bed community hospital in the Washington DC metropolitan area to reduce staff turnover. Using an evidence-based approach, we evaluated facility staffing statistics, exit survey data, research literature, and industry exemplars. We identified presence of severe turnover for hospital and nursing staff employed less than one year (new hires), with 2009–2012 annual new-hire losses ranging from 28.8% to 49.6%. Exit survey data identified only 50% to 62% of new employees who felt that: hospital orientation provided necessary information for successful employment; they had people to go to with concerns; and they had a realistic understanding of their job. Therefore, a 10-element program intervention was designed to strengthen and standardize the new employee onboarding process. Program elements focused heavily on retooled onboarding communications, including frequent new-hire interactions with managers and regular support from assigned high-performing colleagues. Post program implementation, overall annual hospital turnover decreased from 18.2% to 11.9% and new-hire turnover losses decreased from 39.1% to 18.4%, which was statistically significant between measurement periods (Wilcoxon signed ranks test,  $Z = -2.06$ ,  $p = .04$ ). Implementing a standardized onboarding format that was specifically tailored to support new-hire employees allowed our hospital to rapidly reverse unsustainable turnover increases. The successful reduction in hospital and nurse turnover we achieved was rooted in multidisciplinary engagement of institutional stakeholders, managerial collaboration across departments, and strong support from executive hospital leadership.

## Keywords

hospital turnover, nurse turnover, turnover analysis, hospital employee retention, exit surveys, onboarding, turnover reduction initiative

Date received: 16 December 2015; revised: 3 January 2017; accepted: 30 January 2017

## Introduction

Employee retention is one of the primary measures to determine the overall and fiscal health of an organization (Griffeth & Hom, 2001). Workplace dynamics that drive employee turnover, or voluntary employment termination, are often modifiable (Kovner, Brewer, Fatehi, & Jun, 2014). Hospital employers that fail to assess severity of their employee turnover are neglecting a key organizational resource impacting their financial interests, nursing care processes, patient outcomes, and the overall perception of a positive healing environment for patients

(Collini, Guidroz, & Perez, 2015; Hayes et al., 2012). For example, hospital staffing turnover is estimated to account for up to 5% to 5.8% of total hospital annual operating budget and is largely driven by the loss and

<sup>1</sup>Research Department, Reston Hospital Center, Reston, VA, USA

<sup>2</sup>Education Department, Reston Hospital Center, Reston, VA, USA

<sup>3</sup>Human Resources Department, Reston Hospital Center, Reston, VA, USA

### Corresponding Author:

Emma Kurnat-Thoma, Research Department, Reston Hospital Center, 1850 Town Center Parkway, Reston, VA 20190, USA.

Email: Emma.KurnatThoma@hcahealthcare.com



necessary replacement of qualified nurses (Waldman, Arora, & Smith, 2004).

Comprehensive turnover costs are challenging for health-care organizations to calculate. This is due to changing external market forces and regulatory controls, the inability to directly link revenues to staffing costs, and the variability in how institutional turnover is defined as an operational construct (Waldman et al., 2004). As such, cost estimates cited for hospital nursing turnover range considerably—from \$10,098 to \$88,000—and are due to variability in the research methodology used to obtain them, largely during cost categorization and conceptualization processes (Li & Jones, 2013). The Li and Jones (2013) estimate is based on a 20-year literature review (1990–2010) comprising 10 seminal studies, with turnover measures varying greatly across research efforts as to how investigators defined and calculated institutional turnover. For example, some facility metrics included nursing assistants and licensed practical nursing staff in addition to registered nurses (RNs), others included just full-time nurses, others incorporated all staffing categories (i.e., full-time, part-time plus others), while still others defined turnover as voluntary only, or both voluntary and involuntary.

Variable measure calculation and research methodology design appears to be typical in health-care turnover research. For example, the 2009 Retaining Experienced Nurses Research Initiative sponsored by the Robert Wood Johnson Foundation reported that RN replacement costs for 13 grantee hospitals ranged from \$14,225 to \$60,102, with the average cost of replacing a full-time equivalent RN being \$36,657 (Lewin Group, Inc., 2009). In contrast, a Consumer Price Index cost assessment technique obtained an average cost of replacing an experienced RN at \$62,000 to \$67,000, with a correlated total nurse turnover cost of \$5.9 to \$6.4 million, and after inflation adjustment, these values rose higher—to \$82,000 to \$88,000 and \$7.9 to 8.5 million (Jones, 2008). Regardless of the variability in turnover calculation technique employed by facilities and investigators, cumulative research findings indicate that hospital nurse turnover can be costly for organizations to ignore.

The priority designated to reduction of staff turnover by hospital executives, and in particular nursing turnover, is not always as high as it could be. Competing demands, expanding professional responsibilities, a rapidly changing health-care policy landscape, and the reality that some degree of turnover is ever-present, means nurse turnover can become a lower level priority in administrative settings. For example, a national survey of 240 U.S. hospital executives prioritized nursing and physician workforce issues behind government reimbursement, clinical quality, government regulations, commercial reimbursement, and uncompensated care (Pricewaterhouse Coopers' Health Research Institute,

2007). Often high nursing turnover is not detected until it is a severe problem, at which point it is challenging for organizations to ameliorate.

Published reports indicate creating a supportive work environment, especially between managers and employees, creates a strong deterrent to nurses leaving an organization by improving perception of organizational support, employee engagement, team cohesion, and connection to the mission of the health-care setting (Cline, Reilly, & Moore, 2003; Collini et al., 2015; Homburg, Van Der Heijden, & Valkenburg, 2013; Nei, Anderson Snyder, & Littwiller, 2015; O'Brien-Pallas, Duffield, & Hayes, 2006; Ritter, 2011; Tomey, 2009). Skilled managers with executive support can deliver the right work environment and nurture worker relations; however, numerous variables must be adequately addressed including: staffing, job satisfaction, nurse attitudes such as intent to stay, competitive compensation and benefits, professional autonomy, advancement opportunities, positive physician relationships, and presence of social support, among others (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Aiken, Clarke, Sloane, Schalski, & Silber, 2002; Brewer, Kovner, Greene, Tukov-Shuser, & Djukic, 2012; Buffington, Zwink, Fink, Devine, & Sanders, 2012; Larrabee et al., 2003; Unruh & Zhang, 2014). Determining and quantifying factors responsible for increased turnover can help hospitals to create a positive work environment and impact hospital and nurse staffing, and patient and financial measures at various levels of the organization.

A critical component to retaining qualified staff is ensuring that new employees are successfully assimilated into an organization's culture at the time of hire (Trossman, 2016). A 2007 study by the Wyndhurst Group (as cited in Maurer, 2015) reported that new-hire employees were 58% more likely to remain employed at 3 years' post-hire if they participated in a structured onboarding process (Maurer, 2015). When newly hires are placed into intense acute care practice environments without a structured orientation process, employees can become quickly discouraged and disconnected from their work and colleagues (Goldschmidt, Rust, Torowicz, & Kolb, 2011). Organizations that can acculture new employees to required professional skills and expected normative group behaviors can create a robust competitive advantage by retaining highly qualified individuals over long-term employment periods (Baldwin, 2016). New nurses are particularly susceptible to rapid turnover losses if not professionally and socially sustained through a structured format of employer support, commonly in the form of nurse residency programs (Bontrager, Hart, & Mareno, 2016; Bratt & Felzer, 2011).

Our medium-sized (187-bed), hospital network-affiliated, community hospital in the DC metropolitan area is engaged in transforming its clinical and nursing

practice environment. In December 2012, following several years of significant hospital staff turnover, nurse leaders and executive personnel identified a total hospital staff voluntary turnover rate of 18.2%, nursing staff voluntary turnover of rate of 12.5%, and a nurse vacancy rate of 7.4%. In comparison, 2012 national benchmarks were 14.3% for median hospital turnover, 13.2% for median nursing turnover, and a median bedside staff nurse vacancy rate of 4.4% (The Advisory Board Company, 2012). Using our corporate “Cost of Turnover Analysis” instrument, we estimated financial losses from hospital and nursing staff turnover at \$12,350 per termination (total of  $n=157$ ), yielding a total financial loss of \$1,938,950 to our facility for Fiscal Year 2012. We identified a concerning trend of increasingly severe new-hire turnover losses of 29.8% to 47.5% (staff employed less than one year) with corresponding exit survey data from the same periods indicating outgoing staff did not feel informed or supported at the time of hire. This article summarizes the evidence-based performance improvement process we used to reverse escalating levels of hospital and nurse staff turnover, and the notable outcomes achieved after implementation of a 10-element onboarding program intervention.

## Methods

Following consultation with hospital and nursing staff leaders in January 2013, a Human Resources Committee (HRC) was charged with reversing a trend of escalating severity in hospital and nursing staff turnover. As this was an internal performance improvement initiative based on administrative process data and no human subject risks were present beyond institutional standard of care, institutional review board approval was not obtained. We used an evidenced-based turnover analysis approach that included: (a) compilation and analysis of 2009–2012 facility staffing and turnover statistics, (b) analysis of standardized exit survey data, (c) literature review, and (d) review of industry practice exemplars in health-care and private sectors.

The HRC obtained and reviewed 2009–2012 staffing and turnover data and conducted additional drill-down analyses to identify concerning trends. Turnover definitions used to guide the HRC’s work were based on the industry standard, published by the Society for Human Resource Management (Table 1; Society for Human Resource Management, 2012). Facility turnover data were calculated by using Corporate Human Resource Turnover Reporting guidelines and downloading hospital data into Microsoft Excel (Table 1). Standardized exit surveys were administered to departing employees by a third-party vendor. Survey items evaluated a range of employer characteristic categories, including hospital orientation, management, culture, workload

**Table 1.** Turnover Terms and Definitions.

| Term                   | Definition and 12-month reporting period calculation   |
|------------------------|--|
| Employee turnover (TO) | Rate that employees enter and leave facility in a given fiscal year, categorized as involuntary and voluntary<br>$\text{Total TO \%} = \frac{(\# \text{ Terminations, involuntary and voluntary})}{(\text{Average \# of Employees by Job for the 12-month reporting period; includes FT, PT})}$ For 80 hours over 2 weeks: FT = 0.80 – 1.0; PT = 0.51 – 0.79 |
| Involuntary TO         | Employee asked to leave by the organization for cause  |
| Voluntary TO           | Initiated by employee, departure is choice of employee<br>$\text{Total TO-V \%} = \frac{(\# \text{ voluntary terminations})}{(\text{Average \# of Employees by Job for the 12-month reporting period; includes FT, PT})}$  |
| New-Hire TO            | Same as Employee TO definition and calculations, but applied to employees whose hire date is within the 12-month reporting period, i.e. for employees in their first year of employment (includes FT, PT)  |

(staffing), communication, and exit factors. Data were imported into Microsoft Excel and analyzed using descriptive statistics (frequencies, mean, median, standard deviation, quartile spreads). Human resources and health-care industry literature were reviewed for best practices in staff retention (Advisory Board Company, 2002; Bauer, 2007). A structured approach to the onboarding process was consistently recommended by leading professional human resource advocacy organizations and across human resource literature, including practices such as: stay interviews, new-hire champions, and regular check-ins with senior leadership. Health-care system programs known for their successful onboarding and turnover reduction programs were examined (Johns Hopkins University as cited in Barbazette, 1994; University of Michigan, 2012a; University of Michigan, 2012b). Prominent nonhealth-care organizations known for being effective national leaders in retaining new employees were also evaluated, such as The Walt Disney Company© Cast Member Arrival and Onboarding Program (Loveland, 2012). These programs all created a connection to the new hire beyond the initial orientation period which fosters a greater sense of belonging to the new organization.

The HRC matched our facility's deficit areas to the leaders' program components and extrapolated industry's best practices unique to health-care environment onboarding to create an onboarding program intervention for hospital and nursing staff turnover reduction. Table 2 outlines the program intervention's structure, implementation process, and outcome goals. There are 10 elements, which feature a heavy focus on communication and interpersonal support of new hires in the first 90 days of employment. Program implementation required formal training of hospital and nursing unit directors, supervisors, and high-performing hospital employees selected as "New-Hire Champions" for the buddy system. The program's requirements were in addition to unit Directors', supervisors', and new-hire champions' existing tasks and work-flow processes. Unit directors were responsible for monthly interviews

with the new hires for the first 90 days and postinterview documentation requirements submitted to the Human Resources Department.

We aimed to reduce the total turnover below 14% and the new-hire turnover below 20% by December 2013. The HRC created a proposal for the initiative and the Vice President Human Resources (VPHR) presented it to our hospital's executive leadership (Chief Executive Officer [CEO], Chief Operating Officer, Chief Financial Officer, and Chief Nursing Officer), who endorsed the adoption of the onboarding program facility-wide. Following additional hospital stakeholder approvals from department directors and staff, our 10-element turnover reduction intervention was initiated in April 2013.

Following implementation, the HRC monitored monthly program performance and compliance metrics,

**Table 2.** The 10-Element Onboarding Program for Hospital and Nursing Staff Turnover Reduction.

---

Program Elements

---

1. New employee profile (NEP)  
The NEP presents information about New Hires in departmental postings. The NEP helps current staff to better welcome New Hires and allows staff to learn about their interests outside of work, personal goals, and preferred methods of recognition (University of Michigan, 2012).
  2. New hire packet—Onboarding  
A packet is provided for all Hiring Managers to use when onboarding New Hires. Packets include a completed NEP, and blank checklists, evaluation forms, for use in the first 90 days (Johns Hopkins University, 2012; as cited in Barbazette, 1994).
  3. Offer letter copy  
A copy of the offer letter is provided to the New Hire to confirm the offer of employment, start date, salary, and required steps in completing the onboarding process.
  4. Required Communications
    - A. Welcome call to new hire by hiring manager
    - B. Email to staff welcoming New Hire(s) to the unit
    - C. Frequent, mandatory communications with Hiring Manager (i.e. every 2 weeks), (Advisory Board Company, 2002, Managers need to be held accountable; Loveland, 2012).
  5. New employee essentials list  
An administrative checklist to help Directors/Managers ensure the New Hire is oriented to basic information necessary to the first two weeks of employment (Hospital Tour, Interdepartmental Relationships, Department Safety Plan, etc.), (Johns Hopkins University, 2012; as cited in Barbazette, 1994).
  6. Buddy System with High Performing Staff—"New Hire Champions" (NHC)  
The NHC is a buddy who partners with a New Hire during their first 90 days to offer advice and guidance regarding day-to-day aspects of work. They offer encouragement and knowledge about resources, and help the New Hire acclimate to the hospital's culture (Advisory Board Company, 2002, Staff buddies).
  7. Onboarding checklist  
Provided to all New Hires, this document provides an overview of what they can expect during their first 90 days of employment, at 30, 60, and 90 days (University of Michigan, 2012).
  8. 30-, 60-, and 90-day stay interview  
At 30, 60 and 90 days, the Hiring Manager meets with the New Hire to discuss onboarding. The Hiring Manager asks the New Hire a series of questions on job fit, their work environment, and assesses need for support. Using the same questions at 30, 60, 90 days allows the Hiring Manager to evaluate how the New Hire is doing and to take actions to improve their experience. Staff members who are positively impacting the New Hire's onboarding experience are also recognized (Johns Hopkins University as cited in Barbazette, 1994).
  9. 90-day evaluation  
The Hiring Manager completes a 90 day evaluation of the New Hire's work performance (Bauer, 2007).
  10. Quarterly spotlight event  
Each quarter, an informal meeting between the CEO and New Hires is scheduled as needed to assess hospital s onboarding (Bauer, 2007).
-



analyzed for statistical significance using the nonparametric Wilcoxon signed ranks test (Wilcoxon matched pairs signed ranks test).

## Results

Table 4 outlines our hospital's 2009–2013 annual turnover and demographic information, including pre- and postintervention time points. While total annual turnover was increasing only ~1% to 2% increments in 2009–2012, taking a longer range perspective demonstrated a 5.1% total increase over four consecutive years—from 13.1% in 2009 to a peak of 18.2% in 2012. A drill-down analysis of standard employment turnover categories further identified that our new-hire losses (turnover of hospital staff employed for less than

one year) were driving this trend. Our 2009–2012 new-hire turnover (including RNs) ranged from 28.8% to an all-time high of ~49.6% in 2010. Our hospital's total turnover costs were estimated at \$1,938,950 in Fiscal Year 2012 (\$12,350 per termination times total of  $n=157$ ) and \$1,247,350 in Fiscal Year 2013 (\$12,350 per termination times total of  $n=101$ ), reflecting a cost savings of \$691,600 between pre- and postintervention time points.

Demographic trends for outgoing hospital and nursing staff from 2009 to 2013 appeared relatively stable and did not contribute to the intervention program design process. The average age of departing staff ranged from 41 to 43 years for hospital staff and 34 to 44 years for nursing staff, and was predominantly female across all categories. Outgoing nursing staff were

**Table 4.** Annual Turnover and Demographic Data for Hospital and Nursing Staff.

| Year   | 2009  | 2010   | 2011   | 2012 (Pre) | 2013 (Post) |
|--|-------|--------|--------|------------|-------------|
| I. All hospital staff TO data (includes RNs) |       |        |        |            |             |
| Total TO sample ( <i>n</i> )                 | 106   | 128    | 140    | 157        | 101         |
| Total TO <sup>a</sup>                        | 13.1% | 14.3%  | 16.9%  | 18.2%      | 11.9%       |
| Total TO-V <sup>b</sup>                      | 10.1% | 12.2%  | 13.4%  | 13.8%      | 10.6%       |
| Gender M/F ( <i>n</i> )                      | 19/87 | 24/104 | 25/115 | 36/121     | 21/80       |
| Age ( <i>M</i> )                             | 42    | 41     | 41     | 42         | 43          |
| New hire TO <sup>c</sup>                     | 28.8% | 49.6%  | 41.5%  | 39.1%      | 18.4%       |
| New hire TO-V <sup>d</sup>                   | 26.2% | 46.2%  | 31.4%  | 33.8%      | 16.1%       |
| II. Nursing staff-only TO data               |       |        |        |            |             |
| RN-only TO sample ( <i>n</i> )               | 37    | 45     | 48     | 40         | 35          |
| RN-only TO <sup>e</sup>                      | 12.6% | 13.9%  | 16.6%  | 13.3%      | 9.9%        |
| RN-only TO-V <sup>f</sup>                    | 8.9%  | 12.5%  | 14.9%  | 12.5%      | 9.9%        |
| Gender M/F ( <i>n</i> )                      | 4/33  | 2/43   | 2/46   | 3/37       | 2/33        |
| Age ( <i>M</i> )                             | 43    | 34     | 40     | 41         | 44          |
| Years experience ( <i>M</i> )                | 8     | 7      | 8      | 8          | 14          |
| Education diploma                            | 16.7% | 0.0%   | 0.0%   | 0.0%       | 0.0%        |
| AD   | 25.0% | 33.3%  | 66.7%  | 40.0%      | 42.9%       |
| BSN  | 41.6% | 50.0%  | 22.2%  | 46.7%      | 57.1%       |
| MSN  | 16.7% | 16.7%  | 11.1%  | 13.3%      | 0.0%        |
| RN-only new hire TO <sup>g</sup>             | 25.5% | 49.4%  | 33.8%  | 31.9%      | 12.4%       |
| RN-only new hire TO-V <sup>h</sup>           | 21.6% | 47.5%  | 29.8%  | 30.0%      | 12.4%       |
| RN-only TO-V <2yr <sup>i</sup>               | 12.2% | 24.5%  | 10.5%  | 2.2%       | 2.9%        |

Note. Preintervention annual turnover data are summarized for 2009–2012 and postintervention data in 2013. The denominator for all Table 1's percentage data are the total TO sample *n*.

<sup>a</sup>Total TO: total involuntary and voluntary turnover.

<sup>b</sup>Total TO-V: total voluntary turnover.

<sup>c</sup>New Hire TO: % of total involuntary and voluntary turnover comprised of individuals employed <12 months.

<sup>d</sup>New Hire TO-V: % of total voluntary turnover comprised of individuals employed <12 months.

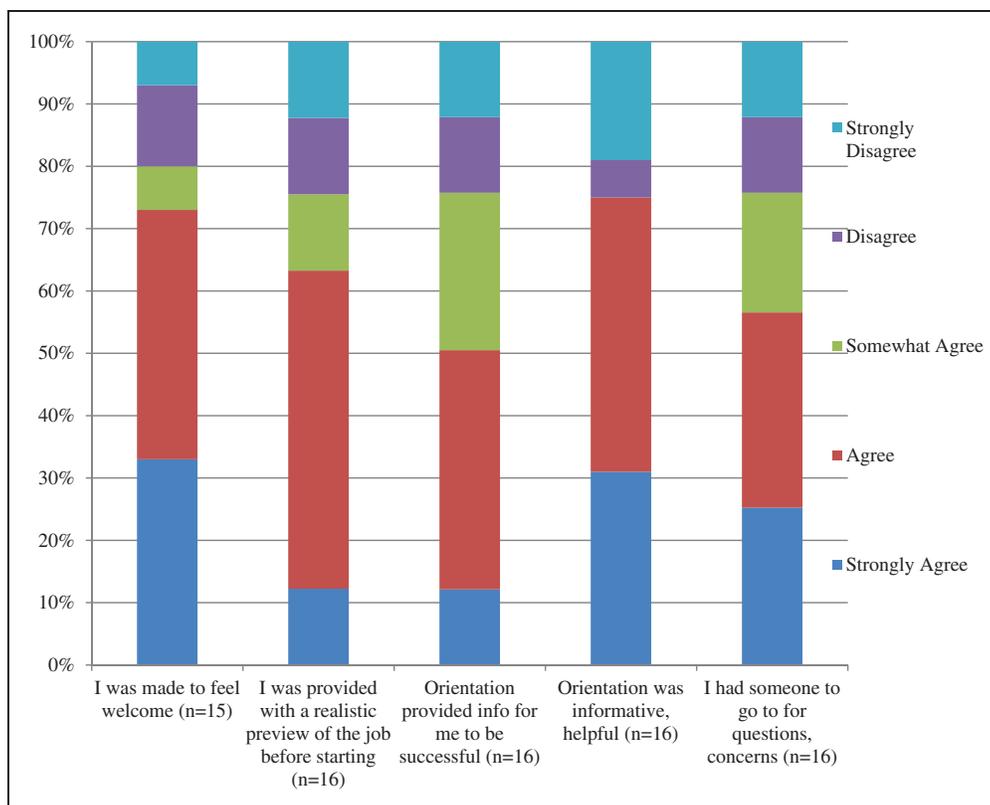
<sup>e</sup>RN-Only TO: total nursing involuntary and nursing voluntary turnover.

<sup>f</sup>RN-Only TO-V: total nursing voluntary turnover.

<sup>g</sup>RN-Only New Hire TO: % of total involuntary and voluntary turnover for RNs employed <12 months.

<sup>h</sup>RN-Only New Hire TO-V: % of total voluntary turnover for RNs employed <12 months.

<sup>i</sup>RN-Only TO-V <2yr: % of total voluntary turnover for RNs with <2 years' experience.



**Figure 1.** 2012 Selected Onboarding Exit Survey Elements.

primarily baccalaureate prepared and had an average of 7 to 14 years of clinical experience. Similar to the overall trend of increased new-hire hospital staff turnover, there was increased new-hire loss of RNs, which ranged between 29.8% and 47.5% in 2010–2012. RNs with less than 2 years of clinical experience comprised a small amount of nurse turnover for most years (2.2%–12.2%), except in 2010 (24.5%).

Figure 1 presents 2012 data on five key measures from standardized exit surveys collected by a third-party vendor. Results confirmed need for administrative retooling of our hospital orientation and onboarding programs, and provided additional insight to why our new-hire losses were occurring. Three of the five measures received special focus: only 50% of departing employees agreed that orientation provided information key to successful employment; only 57% agreed they had someone to go to for questions and concerns; and just over half (62%) agreed they had a realistic understanding of the job prior to their employment.

Participants who completed the program felt regularly scheduled interviews created a structured process to get to know their managers. Additionally, the seriousness with which their managers sought and recorded their feedback, and reported it to administrative leadership, allowed new-hire employees to feel they meaningfully contributed to the onboarding process and hospital's

practices. Participants felt managers really cared about what they thought and were seriously considering their input on how to improve things in their department. The use of specific interview questions ensured managers demonstrated caring concern during the 30-, 60-, and 90-day interviews when asking new-hire employees for their input. Managerial follow-through when acting on that input led to the overall perception of a highly individualized and supportive approach. All documented 30-, 60-, and 90-day information by the manager was turned into the Human Resources department, who created a database and monitored new-hire responses for problems and trends.

Following implementation of our program, total turnover dropped from 18.2% in 2012 to 11.9% in 2013 (–6.3%), the lowest level we experienced since 2009. Our primary focus area, total new-hire turnover for hospital staff, dropped from 39.1% in 2012 to 18.4% in 2013—a reduction of 20.7%. This also had an impact on nursing staff; total RN new-hire turnover dropped more than half—from 31.9% in 2012 to 12.4% in 2013. Table 5 presents 2012–2013 new-hire turnover data stratified by hospital department and nursing unit experiencing turnover changes. Of the 61 total hospital departments, 16 experienced decreased turnover, 6 experienced increased turnover, and 39 departments saw no change. We observed a significant reduction in

**Table 5.** Hospital and Nursing Department Pre- and Post-Intervention New-Hire Turnover.

| Selected department/unit              | Preintervention<br>TO 2012 TO% (n) | Postintervention<br>TO 2013 TO% (n) | Percent<br>change |          |
|---------------------------------------|------------------------------------|-------------------------------------|-------------------|----------|
| Food and nutrition                    | 94.7% (7)                          | 23.1% (1)                           | -71.6%            |          |
| Social services                       | 70.6% (1)                          | 0.0% (0)                            | -70.6%            |          |
| Imaging center                        | 66.7% (1)                          | 0.0% (0)                            | -66.7%            |          |
| CT scan                               | 52.6% (1)                          | 0.0% (0)                            | -52.6%            |          |
| Ultrasound                            | 43.5% (1)                          | 0.0% (0)                            | -43.5%            |          |
| Respiratory therapy                   | 42.9% (1)                          | 0.0% (0)                            | -42.9%            |          |
| Emergency room                        | 55.3% (7)                          | 13.1% (2)                           | -42.2%            |          |
| Laboratory                            | 67.9% (4)                          | 33.3% (2)                           | -34.6%            |          |
| Patient transport                     | 27.0% (1)                          | 0.0% (0)                            | -27.0%            |          |
| Progressive care unit                 | 38.7% (5)                          | 12.1% (2)                           | -26.6%            |          |
| Surgical unit                         | 24.8% (4)                          | 0.0% (0)                            | -24.8%            |          |
| Medical oncology unit                 | 36.0% (3)                          | 13.0% (1)                           | -23.0%            |          |
| Labor and delivery                    | 17.9% (2)                          | 0.0% (0)                            | -17.9%            |          |
| Environmental services                | 45.3% (5)                          | 27.9% (2)                           | -17.4%            |          |
| Operating room                        | 15.2% (2)                          | 25.0% (1)                           | -15.2%            |          |
| Telemetry                             | 133.3% (2)                         | 0.0% (0)                            | -                 |          |
| Stone spring ER                       | 0.0%                               | 11.9% (2)                           | +11.9%            |          |
| Quality assurance                     | 0.0%                               | 57.9% (1)                           | +57.9%            |          |
| Sterile processing                    | 0.0%                               | 73.3% (2)                           | +73.3%            |          |
| Reston sports medicine                | 0.0%                               | 100.0% (1)                          | +100.0%           |          |
| MRI                                   | 0.0%                               | 125.0% (2)                          | -                 |          |
| Plant                                 | 29.7% (1)                          | 200.0% (3)                          | -                 |          |
| Wilcoxon signed rank test             | <i>n</i>                           | Mean rank                           | <i>Z</i>          | <i>p</i> |
| Negative ranks (Post 2013 < Pre 2012) | 16                                 | 11.81                               |                   |          |
| Positive ranks (Pre 2012 > Post 2013) | 6                                  | 10.67                               |                   |          |
| Ties (Pre 2012 = Post 2013)           | 39                                 |                                     | -2.06             | 0.04     |

Note. Hospital and nursing department new hire turnover (FT, PT employees employed <12mths) before and after implementation of a 10-element pilot program; 0% change data not shown (n = 37). Telemetry, MRI, and Plant department staff are small (between 1 and 3 staff), producing > 100% TO changes and indicated by (-).

median hospital staff new-hire turnover following implementation of the intervention (Wilcoxon signed ranks test,  $Z = -2.06$ ,  $p = .04$ ). The Food and Nutrition (-71.6%), Social Services (-70.6%), and Imaging Center (-66.7%) departments experienced the most pronounced new-hire turnover decreases. Nursing units with prominent drops included Emergency Room (-42.2%), Progressive Care Unit (-26.6%), and Medical Oncology (-23.0%).

## Discussion

We identified unusually high new-hire turnover, need for a new onboarding program to better support our new-hire employees, and also need for improved collaboration with hospital/unit directors and supervisors to improve the new-hire experience. We created and implemented a 10-element program intervention focusing

heavily on the support of new-hire employees to reduce annual hospital and RN staff turnover. We achieved a statistically significant reduction in staff departures and met our stated goals of total turnover < 14% and new-hire turnover < 20% by December 2013.

While some degree of employee turnover is expected and healthy, increased turnover rates in a hospital environment can threaten the core primary function of providing safe, quality-driven patient care (Nowak, Holmes, & Murrow, 2010). There is strong consensus that turnover damages overall fiscal health and is often driven by the loss of qualified nursing staff (Kovner, Brewer, Greene, & Fairchild, 2009). While turnover was a problem at our facility, we found that it was primarily driven by new-hire losses and included both hospital staff and RN terminations. Replacement of qualified nurses is especially costly, and this was a category for which we experienced significant loss. Its impact is likely

underestimated by our corporate calculation of \$12,350 per termination. For example—replacement of qualified RNs is cited at \$48,000 for a medical-surgical nurse, \$64,000 for a critical care nurse, and can even extend up to 125% of the nurse's annual salary (Beecroft, Kunzman, & Krozek, 2001; Cline et al., 2003). These amounts are associated with the direct costs of supplanting staff (i.e., human resources department time and resources, hospital manager time, accrued paid time off, and temporary coverage costs) and the indirect costs of orienting new staff (i.e., mentoring time, productivity decreases, morale decreases, training equipment, and materials). Additionally, new-hire losses are especially serious and produce a greater effect than losing tenured employees. New-hire losses result in exponential increases in per capita hiring, produce intense workloads for remaining staff that are constantly onboarding new hires, and can drive departures and early retirements of tenured staff (The Advisory Board Company, 2015). Frequent orientation of new staff, working with staff that may not be as skilled, working short when staff replacements are not found collectively impact morale, attendance, patient and staff satisfaction, and further affects the hospital's bottom line.

During our turnover analysis, exit survey response data were used to assist in the design of the turnover reduction program initiative. While there is little scientific evidence from empiric research concerning their effectiveness, numerous reports affirm exit interview utility in gaining detailed work setting information to assist managers and executives in the design of turnover reduction initiatives (Brooks, 2007; Hawkins, O'Connor, & Potter, 2003; Leahey & Henderson, 1991; Flint & Webster, 2014; Whitis & Whitis, 1983). A primary criticism of exit interviews or surveys is decreased validity when departing employees do not want to share negative information about their reasons for leaving (i.e., negative feedback about a manager). Use of neutral, trained interviewers or a structured interview format, emphasizing confidentiality, using information gained to make positive changes that include managers, and cross-checking exit interview, survey results with other data sources are recommended techniques for enhancing their validity and gaining accurate data (Allen, 2008). We used a third-party vendor to administer a standardized assessment, cross-referenced our results with detailed drill-down analyses, and also worked with nursing and nonnursing unit managers and department directors to facilitate positive changes identified from our literature search.

One of the most striking successes we experienced came from providing our managers and supervisors with a standardized onboarding format to use for supporting new hires. There were several hospital and nursing units where losses were especially significant. Creating a buddy system with high-performing employee

leaders, posting new-hire profiles for other employees to learn about the new hire, requiring manager communications at frequent intervals, and implementing 30-, 60-, and 90-day structured interviews allowed challenged departments and units to address problems early. Improved coworker relationships and employee-manager professional dialogue during the new hire's first 3 months promoted an improved work environment and promoted staff retention. The standardized process positively influenced our workplace culture by ensuring that the employee had at least three sessions of designated one-on-one time with their manager in the first 90 days of employment, where three formal "stay interviews" were completed along with an essentials checklist (Table 3). During these sessions, the manager reviewed the department Mission, Values, and Service Excellence Goals as well as unit norms, safety plans, and structure standards. Because the stay interviews were designed to gather information about the new employee as well as provide information, managers sometimes found that the new employee's fresh perspective led to unit improvements. Designation of a Unit Champion provided new employees with one-on-one assistance whenever needed, helped facilitate coworker networking, provided an accurate source of hospital and unit-specific information, and promoted acclimation (Johns Hopkins University, 2012; as cited in Barbazette, 1994). All these onboarding steps led to improved new employee engagement and improved unit culture.

Also key to obtaining a successful outcome was that hospital administrators and leaders ensured our departmental managers viewed the initiative as a priority. For example, when the VPHR initially presented the onboarding program to all administrators and department managers, our CEO made it clear he was in favor of the program and managerial compliance was expected. The CEO received quarterly updates from VPHR on how effectively the managers were completing the 30-, 60-, 90-day interviews in addition to any pertinent trends or concerns. The VPHR then presented summary turnover data by department at monthly department manager meetings where hospital administrators were in attendance. Department managers who were not following through were required to develop a corrective action plan and present it to an administrator to ensure compliance was achieved. Finally, potential compliance barriers for hiring managers were identified and addressed as much as possible before starting the program. To alleviate the burden of adding a new initiative to their all-encompassing roles, department managers were provided as many supportive resources as possible up front. Upon offer acceptance, the recruiter would prepare an onboarding packet for the hiring manager which contained all the necessary checklists and documents needed for their new hire.

### *Strengths and Limitations*

This project presents the implementation of a well-researched hospital staff turnover reduction initiative at a medium-sized community hospital facility. The initiative was designed after extensive review of the human resources literature, industry exemplar practices, and by conducting detailed drill-down analyses of hospital turnover data. The initiative was supported by executive leaders and received interdisciplinary support from hospital supervisors and nursing managers in implementing a comprehensive 10-point plan specifically targeted to retain new-hire employees.

While we were able to drive down our hospital and nurse turnover in 2013 and 2014, especially that of new-hire employees, we were not able to sustain low turnover rates on a longer term basis. In November 2015, follow-up turnover metric outcomes identified a 57% increase in our voluntary turnover losses where staff left their positions for a better career opportunity ( $n = 20$  in 2014 and  $n = 33$  through November 2015). During that same time, we also observed a 20% increase in voluntary turnover due to relocation. November 2015 drill-down analyses identified that while our voluntary new-hire losses (<1 year employment) continued to be stable, voluntary turnover of staff with 1 to 4 years' of service climbed to 43%. The 1- to 4-year turnover trend was not reflective of our program or its implementation, but rather represented newly emerging issues in our facility's workforce and the surrounding regional labor market.

Although our initiative was sustained for a period of time, the program's focus developed into completing the required tasks rather than nurturing longer term, lasting relationships with new staff. As with many new initiatives, the meaningfulness of the tasks can become overshadowed by other priorities. We are currently retooling our peer interview process with the addition of a validated assessment tool. Earlier this year, we rolled out purposive employee rounding, where department directors meet with their direct reports on a monthly basis and ask many of the questions asked of new hires. Long-term sustainability of the program would benefit from reducing the unit Directors' and supervisors' workload in administering the program. For example, some units can onboard 2 to 10 new-hire employees at once depending on the department and time of year. Possible ideas to consider include enlisting the help of charge nurses, senior nurses aiming to complete clinical ladder requirements, and new-hire champions to perform some of the program's interview and documentation requirements.

We did not formally include organizational outcome measures suspected to be impacted by turnover for our pre- and postintervention statistical analysis (i.e., such as adverse events, national nursing quality indicators, and Hospital Consumer Assessment of Healthcare Providers

and Systems scores). However, we noted anecdotal improvements on a number of relevant quality and safety indicators that were possibly impacted by our intervention. At the conclusion of 2013, Catheter-Associated Urinary Tract Infections decreased by 28%, Surgical Site infections decreased by 40%, and staff injury rates were 8% lower than the corporate and state rates for the year. There were a number of patient satisfaction score improvements as well.

### *Labor and Nursing Implications*

As with any turnover analysis information, the labor and nursing implications of a hospital's turnover metrics should be interpreted in the larger context of national and regional workforce trends. While our hospital must now turn and address an emerging challenge of retaining staff at 1 to 4 years' of service, we identified that some of our internal turnover dynamics are being impacted by external factors. For example, in 2012, our hospital began a \$40 million expansion including the addition of 180,000 square feet of medical offices, a new pediatric emergency room, and expanded inpatient and outpatient surgical service infrastructure and resources. Additionally, our parent company expanded into a neighboring county with a new 124 bed hospital, which opened in December 2015. Thus, any hospital aiming to develop and implement a turnover reduction plan should appreciate the broader labor, staffing, and environmental contexts that will influence their initiative design efforts.

As the economy has grown since the Great Recession in 2008, so does turnover—national health-care turnover is currently estimated at 17.1% and has increased annually from 13.5% since 2013 (NSI Nursing Solutions, Inc., 2015). This means that as economic health improves, employees feel more secure and are willing to assume risks associated with relocation and seek improved employment conditions. Our facility is situated in Northern Virginia and is part of metropolitan Washington DC's health-care market. Northern Virginia has experienced a sustained rate of significant population growth, demonstrates extraordinary racial and ethnic diversity, is comprised of a high percentage of workers >55 years old, is highly educated, and is susceptible to intense competition for qualified workers (Billingsley, 2011). Turnover was low during the Great Recession for all health-care occupations in Northern Virginia through 2008–2011, and nurses in particular postponed retirement (Altstadt, 2014).

The Washington DC metropolitan health-care market is complex and characterized by multiple, overlapping hospital submarkets, with most hospitals belonging to several systems, including: Inova, MedStar, Hospital Corporation of America, Sentara Healthcare, Johns Hopkins Health System, Trinity Health, and Universal

Health Services. Hospitals in the region are experiencing significant uncertainty associated with the value-based payment transitions, are experiencing increased geographic competition, and are rapidly expanding their ambulatory care networks into broader overlapping areas (Koskinas & Giovanis, 2014). These market realities translate into competing employment opportunities for needed health-care workers and nurses to staff health-care operations. For example, in 2012, 78.2% of employers in Northern Virginia seeking RNs desired an experience level of 1 to 4 years (Altstadt, 2014).

Hospitals often use a mixture of short- and long-term strategies to retain health care and nursing staff, such as: temporary staffing, bonuses and other financial incentives, training opportunities (i.e., clinical ladders), clinical and nursing school partnerships, flexible scheduling, shared governance, Magnet credential application, care delivery changes, and communication model improvements (May, Bazzoli, & Gerland, 2006). However, hospitals focusing on modifiable factors that promote employee autonomy and supportive work environments over a long-term period are best situated to increase staff retention (Han, Trinkoff, & Gurses, 2015).

While regional demographic and health-care market factors impacting our hospital are complex and rapidly shifting, our current action plan is to first maintain the progress we made on new-hire turnover losses (<1 year employment). Second, we must replicate our 2013 turnover reduction intervention process with a specific focus on professional development tactics for employee staff retention with 1 to 4 years of service using a mix of the strategies presented herein. Our next turnover reduction plan will incorporate a longer term focus and include strategies to navigate the region's competitive market realities. Since we have a proven road map from a well-researched effort to attain these aims, we are confident that consistent follow-up with departmental managers on proper use of targeted initiative elements will improve our recent 1- to 4-year turnover increases.

## Conclusion

In 2012, our medium-sized metropolitan community hospital was experiencing increasing and unsustainable levels of hospital and nursing turnover. Because employee turnover is a key performance indicator that directly impacts a number of critical operational variables, a well-researched and collaboratively designed turnover reduction initiative, such as outlined here, including the contributions of human resources staff, hospital executives, and department/unit management, can serve as a valuable support system and resource. Our hospital's 10-element onboarding program intervention to reduce annual hospital and nursing turnover is one such initiative, and like any successful plan—needs

executive oversight, sustained management accountability, and continuous reevaluation in the context of national and regional policy and workforce trends to continually ensure long-term success.

## Acknowledgements

We gratefully acknowledge members of the Human Resources Turnover Committee for their assistance with research, program design and training, template development, and program implementation. We thank our facility's Executive Administration Team for their kind support of this work. We thank Strategic Programs, Inc. for exit survey data collection assistance. Thanks to Ms. Gillian Zeile, BSN, RN, Case Western Reserve University Master's student for manuscript preparation assistance. We also thank Resources, Inc. personnel for their research literature retrieval service support: Dr. Roberta Miller, EdD, MALS, President; Mr. Markus Compton, Chief Operations Officer; and Ms. Agnes Fortune, Northern Virginia Medical and Legal Retrieval Services.

## Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

## References

- Advisory Board Company. (2015). Perfecting the first year: New hire onboarding toolkit. Retrieved from <http://www.advisory.com/research/hr-advancement-center/studies/2008/perfecting-the-first-year>
- Advisory Board Company. (2012). Turnover and vacancy benchmarks: Final report for the calendar year. Retrieved from <http://www.advisory.com/~media/Advisory-com/Research/HRIC/Tools/2010/HR-Benchmarking/Final-results-for-2012-calendar-year.pdf>.
- Advisory Board Company. (2002). *The Advisory Board Company best practices for retaining a high performance workforce*. Washington, DC: The Advisory Board Company.
- Allen, D. (2008). *Retaining talent: A guide to analyzing and managing employee turnover*. Alexandria, VA: Society for Human Resources Management Foundation. Retrieved from <http://www.shrm.org/about/foundation/research/documents/retaining%20talent-%20final.pdf>
- Altstadt, D. (2014). *The state of the health care workforce in Northern Virginia*. Brattleboro, VT: David Altstadt Consulting, LLC. Retrieved 11/5/2016: [http://www.hoovers.com/company-information/cs/company-profile.David\\_Altstadt\\_Consulting\\_LLC.c55911ea76da3900.html](http://www.hoovers.com/company-information/cs/company-profile.David_Altstadt_Consulting_LLC.c55911ea76da3900.html)
- Aiken, L., Clarke, S., Sloane, D., Lake, E., & Cheney, T. (2008). Effects of hospital care environment on patient mortality and nurse outcomes. *Journal of Nursing Administration*, 38(5), 223–229.

- Aiken, L., Clarke, S., Sloane, D., Sochalski, J., & Silber, J. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA: Journal of the American Medical Association*, 288(16), 1987–1993.
- Baldwin, B. (2016). An onboarding program for the CT department. *Radiology Management*, 38(1), 26–29.
- Barbazzette, J. (1994). *Successful new employee orientation*. Hoboken, NJ: Pfeiffer & Associates, Wiley.
- Bauer, T. (2007). Onboarding new employees: Maximizing success. Alexandria, VA: Society for Human Resource Management. Retrieved from <https://www.shrm.org/about/foundation/products/Documents/Onboarding%20EPG-%20FINAL.pdf>
- Beecroft, P., Kunzman, L., & Krozek, C. (2001). RN internship: Outcomes of a one-year pilot program. *Journal of Nursing Administration*, 31(12), 575–582.
- Billingsley, K. (2011). *Major demographic forces shaping Northern Virginia's 2030 workforce. A look to the future*. Fairfax, VA: Northern Virginia Regional Commission. Retrieved from <http://www.nvtc.org/documents/committees/workforce/DemographicForcesShapingNOVA2030Workforce.pdf>
- Bontrager, S., Hart, P., & Mareno, N. (2016). The role of preceptorship and group cohesion on newly licensed registered nurses' satisfaction and intent to stay. *The Journal of Continuing Education in Nursing*, 47(3), 132–139.
- Bratt, M., & Felzer, H. (2011). Perceptions of professional practice and work environment of new graduates in a nurse residency program. *The Journal of Continuing Education in Nursing*, 42(12), 559–568.
- Brewer, C. S., Kovner, C. T., Greene, W., Tukov-Shuser, M., & Djukic, M. (2012). Predictors of actual turnover in a national sample of newly licensed registered nurses employed in hospitals. *Journal of Advanced Nursing*, 68(3), 521–538.
- Brooks, B. (2007). Evidence-based human resources: the case for exit interview surveys. *Journal of Nursing Administration*, 37(10), 421–424.
- Buffington, A., Zwink, J., Fink, R., DeVine, D., & Sanders, C. (2012). Factors affecting nurse retention at an academic magnet hospital. *Journal of Nursing Administration*, 42(5), 273–281.
- Cline, D., Reilly, C., & Moore, J. (2003). What's behind RN turnover? Uncover the 'real reason' nurses leave. *Nursing Management*, 34(10), 50–53.
- Collini, S., Guidroz, A., & Perez, L. (2015). Turnover in health care: the mediating effects of employee engagement. *Journal of Nursing Management*, 23, 169–178.
- Flint, A., & Webster, J. (2014). Exit interviews to reduce turnover amongst healthcare professionals. *Cochrane Database of Systematic Reviews*, 8, Article No.: CD006620.
- Goldschmidt, K., Rust, D., Torowicz, D., & Kolb, S. (2011). Onboarding advanced practice nurses: Development of an orientation program in a cardiac center. *Journal of Nursing Administration*, 41(1), 36–40.
- Griffeth, R., & Hom, P. (2001). Chapter 1: How turnover can be costly to organizations. *Retaining Valued Employees* (pp. 1–30). Thousand Oaks, CA: Sage Publications.
- Hawkins, C., O'Connor, L., & Potter, S. (2003). 'The ones that got away': Implementing an exit policy for nurses in a public hospital. *Contemporary Nurse: A Journal For The Australian Nursing Profession*, 15(1/2), 29–36.
- Han, K., Trinkoff, A., & Gurses, A. (2015). Work-related factors, job satisfaction and intent to leave the current job among United States nurses. *Journal of Clinical Nursing*, 24(21–22), 3224–3232.
- Hayes, L. J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., . . . , North, N. (2012). Nurse turnover: A literature review—An update. *International Journal of Nursing Studies*, 49(7), 887–905.
- Homburg, V., Van Der Heijden, B., & Valkenburg, L. (2013). Why do nurses change jobs? An empirical study on determinants of specific nurses' post-exit destinations. *Journal of Nursing Management*, 21, 817–826.
- Johns Hopkins University. (2012). On-boarding toolkit, guidance for hiring managers (Version 9, pp. 1–22). Retrieved from [https://hrnt.jhu.edu/working\\_here/documents/onbiringmanager9.pdf](https://hrnt.jhu.edu/working_here/documents/onbiringmanager9.pdf)
- Jones, C. (2008). Revisiting nurse turnover costs: adjusting for inflation. *Journal of Nursing Administration*, 38(1), 11–18.
- Koskinas, J., & Giovanis, T. (2014). *D.C. Metro Area, Washington, D.C., suburban Maryland & Northern Virginia. Community Report*. Princeton, NJ: Mathematica Policy Research. Retrieved from <http://jktgfoundation.org/data/DC%20CR%20Final.pdf?>
- Kovner, C., Brewer, C., Greene, W., & Fairchild, S. (2009). Understanding new registered nurses' intent to stay at their jobs. *Nursing Economics*, 27(2), 81–98.
- Kovner, C., Brewer, C., Fatehi, F., & Jun, J. (2014). What does nurse turnover rate mean and what is the rate? *Policy, Politics, and Nursing Practice*, 15, 64–71.
- Larrabee, J., Janney, M., Ostrow, C., Withrow, M., Hobbs, G. R. Jr., & Burant, C. (2003). Predicting registered nurse job satisfaction and intent to leave. *Journal of Nursing Administration*, 33(5), 271–283.
- Leahey, M., & Henderson, G. (1991). When nurses terminate: The exit interview/questionnaire. *Nursing Economics*, 9(5), 336–342.
- Lewin Group, Inc. (2009). Evaluation of The Robert Wood Johnson wisdom at work: Retaining experienced nurses research initiative. Retrieved from [http://www.issuelab.org/resource/evaluation\\_of\\_the\\_robert\\_wood\\_johnson\\_wisdom\\_at\\_work\\_retaining\\_experienced\\_nurses\\_research\\_initiative](http://www.issuelab.org/resource/evaluation_of_the_robert_wood_johnson_wisdom_at_work_retaining_experienced_nurses_research_initiative)
- Li, Y., & Jones, C. (2013). A literature review of nursing turnover costs. *Journal of Nursing Management*, 21(3), 405–418.
- Loveland, G. (2012, July 30). Disney English onboarding: Cast member arrival at centers. You don't get a second chance to make a first impression. *Training*, 1. Retrieved from <http://ip-50-63-221-144.ip.secureserver.net/content/disney-english-onboarding-cast-member-arrival-centers>
- May, J., Bazzoli, G., & Gerland, A. (2006). Hospitals' responses to nurse staffing shortages. *Health Affairs*, 25(4), W316–W323.
- Maurer, R. (2015). *Onboarding key to retaining, engaging talent*. Alexandria, VA: SHRM. Retrieved from <https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/onboarding-key-retaining-engaging-talent.aspx>
- Nei, D., Anderson Snyder, L., & Littwiller, B. (2015). Promoting retention of nurses: A meta-analytic examination

- of causes of nurse turnover. *Health Care Management Review*, 40, 237–253.
- NSI Nursing Solutions, Inc. (2015). 2015 National healthcare retention & RN staffing report. *Nursing Solutions, Inc.* Retrieved from <http://www.nsinursingsolutions.com/Files/assets/library/retention-institute/NationalHealthcareRNRetentionReport2015.pdf>
- Nowak, P., Holmes, G., & Murrow, J. (2010). A model for reducing health care employee turnover. *Journal of Hospital Marketing & Public Relations*, 20(1), 14–25.
- O'Brien-Pallas, L., Duffield, C., & Hayes, L. (2006). Do we really understand how to retain nurses? *Journal of Nursing Management*, 14(4), 262–270.
- Pricewaterhouse Coopers' Health Research Institute. (2007). What works. Healing the healthcare staffing shortage. Retrieved from <http://www.pwc.com/us/en/healthcare/publications/what-works-healing-the-healthcare-staffing-shortage.html>
- Ritter, D. (2011). The relationship between healthy work environments and retention of nurses in a hospital setting. *Journal of Nursing Management*, 19(1), 27–32.
- Society for Human Resource Management (SHRM). (2012). *Executive brief: Tracking trends in employee turnover*. Alexandria, VA: SHRM.
- Tomey, A. (2009). Nursing leadership and management effects work environments. *Journal of Nursing Management*, 17(1), 15–25.
- Trossman, S. (2016). Stepping into a culture of safety, onboarding programs help retain nurses, strengthen patient care. *The American Nurse*, November/December, 1, 6.
- University of Michigan. (2012a). *Onboarding and orientation. Human resources supervisor resources*. Ann Arbor MI: University of Michigan Health System. Retrieved from <http://www.med.umich.edu/umhshr/supervisor/orienting.html?>
- University of Michigan. (2012b). *University of Michigan Health System orientation checklist*. Ann Arbor MI: University of Michigan Health System. Retrieved from [http://www.med.umich.edu/umhshr/doc/Orientation\\_Checklist.pdf?](http://www.med.umich.edu/umhshr/doc/Orientation_Checklist.pdf?)
- Unruh, L. Y., & Ning Jackie, Z. (2014). Newly licensed registered nurse job turnover and turnover intent. *Journal for Nurses in Professional Development*, 30(5), 220–230.
- Waldman, J., Kelly, F., Arora, S., & Smith, H. (2010). The shocking cost of turnover in health care... Reprinted with permission from *Healthcare Management Review* 29(1), 2-7. *Health Care Management Review*, 35(3), 206–211.
- Whitis, R., & Whitis, G. (1983). The exit interview: A nursing management tool. *Journal of Nursing Administration*, 13(10), 13–16.