The Preparation–Practice Gap: An Integrative Literature Review

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Abstract

Background: The purpose of this integrative literature review was to evaluate and synthesize the evidence regarding the existence, extent, and significance of a preparation–practice gap—namely, the deficits in knowledge and skills that novice nurses may demonstrate on entry into the clinical setting and the identified best practices to narrow this gap.

Method: An integrative literature review was performed.

Results: A final set of 50 articles were included in the review. Three main themes permeate the evidence: a preparation–practice gap exists; this gap is costly; and closing the preparation–practice gap will likely rely on changes in undergraduate education and on-the-job remediation (i.e., nurse residency or preceptor programs).

Conclusions: The preparation–practice gap is a challenge that has faced the nursing profession for years. Efforts to close this gap can be justified on the hopes of decreasing turnover (and its attendant costs), boosting morale of novice nurses and their preceptors, decreasing stress among the novice nurses, and improving patient safety.

Nursing schools in America may be among the best in the world, yet a significant gap between the demands of practice and the educational preparation for that practice has been identified (Times Higher Education, 2014). Specifically, nurse administrators have reported that novice nurses (defined as recent graduates in their first clinical positions) are simply not ready for all aspects of their jobs. Several factors contribute to this preparation–practice gap, including deficits in educational programs, a lack of mentors and poor support in the workplace, and high stress and poor morale of preceptors and novice nurses (Candela & Bowles, 2008; Fink, Krugman, Casey, & Goode, 2008; Maben, Latter, & Clark, 2006; Wolff, Pesut, & Regan, 2010). The following integrative review of the evidence aims to present the state of the preparation–practice gap and the methods proposed to ameliorate it.

BACKGROUND

The existence of a preparation–practice gap was initially reported in the nursing literature 40 years ago (Armstrong, 1974). More recently, the preparation–practice gap was defined from the largest combined sample of administrators and educators who described this gap in relation to skills and competencies (The Advisory Board, 2008). An iterative process, which incorporated input from more than 100 industry experts, identified 36 competencies; that list was used to evaluate new graduates’ performance (Berkow, Virkstis, Stewart, & Conway, 2009). A majority of nurse administrators felt that new graduate nurses were not prepared for the health care environment they would encounter upon graduation (The Advisory Board, 2008; Berkow et al., 2009). In fact, 92% (n = 5,700) of the managers surveyed deemed that novice nurses were less-than-competent, with respect to the 36 competencies. Additional investigations reported a similar mismatch between nurse managers’ expectations and novice nurses’ abilities (Lee, Chen, & Wang, 2002; Takase, Nakayoshi, & Teraoka, 2012; Ullrich et al., 2010). In another study, 50% (n = 62) of preceptors surveyed believed that novice nurses were not proficient in the competencies defined by the American Association of Colleges of Nursing (AACN, 2008), and the Institute of Medicine (IOM, 2010). Specifically, the new graduate nurses were not prepared to think critically, communicate effectively, perform physical assessments, demonstrate psychomotor skills, and practice safely (Hickey, 2009). In another study, 95% (n = 62) of preceptors felt novice nurses could not correctly characterize patients’ illness severity status (Kantar, 2012). del Bueno (2005) reported that 65% to 76% of novice nurses (n = 10,988) did not meet entry-level clinical judgment, regardless of educational preparation. In summary, the literature concludes that novice nurses have difficulty transitioning into practice; as a result, they experience stress, anxiety, and lack of support. Consequences to these difficulties include high turnover among the novice nurses, increased costs to the institution, and patient safety issues. The purpose of this review is to outline an evidenced-based novice nurse preparation solution focused on the hospital–practice aspect that may help bridge the preparation–practice gap.

METHOD

Studies between 2001 and 2013 were gathered using CINAHL®, PubMed®, and EMBASE™, and hand searching followed. Major search terms were novice nurse and entry into practice, new graduate and preparation, or novice nurse and preparation. The terms novice and recent graduate were used to identify nurses beginning their first job.

The set of key words for inclusion comprised education, clinical competence, nursing baccalaureate, nursing students, program development, needs assessment, evidence-based nursing, employee performance, personnel turnover, satisfaction, mentors/education, nurses/psychology. From articles in which those key words were tagged, studies were retained if they were written in English and either provided evidence assessing whether the novice nurse is indeed prepared to practice (the preparation–practice gap) or identified solutions to the problem. From that group, articles were excluded if studies were of low quality, were done in a nonhospital setting, focused on school-based educational reform, or did not address undifferentiated novice nurses (i.e., reported on nurse practitioner programs). A total of 1,886 articles were found in CINAHL, PubMed, and EMBASE. The reference lists of these articles were examined, and an additional 78 articles were discovered (Figure).

The final set of 50 articles was constructed by applying the Johns Hopkins evidence-based practice guidelines (Dearholt & Dang, 2012). In this scheme, the level of evidence is graded from I through V (Table 1) and quality is then rated either high, good, or low/major flaw (Dearholt & Dang, 2012). Articles were selected for inclusion if their quality was rated as high or good and their level of evidence was recorded.

RESULTS

Thirty-three level III studies were rated as good quality or better, eight were rated as high, and 25 were rated as good. Two articles were rated in the level IV category—these were position statements from the AACN and the IOM, and both were rated to be of high quality. Finally,
there were 15 level V articles, six of which were rated as high and eight as good. No level I or level II randomized control trials or quasi-experimental studies were found.

**Major Findings**

Three major findings can be identified: first, the preparation–practice gap is real; second, the gap is costly; and third, the effective solutions will likely involve on-the-job remediation, such as nurse residency programs or preceptor educational sessions.

The preparation–practice gap is real and costly. Since it was first reported, the preparation–practice gap has been shown to have significant implications for clinical nursing. First and foremost, inadequately prepared nurses are less likely to thrive, may leave their jobs prematurely (thereby increasing turnover), or may stay at their jobs under stress and duress. Nurse managers and preceptors have reported that lack of preparation contributes to high turnover (Kantar, 2012; Muir et al., 2013; Thomas, Ryan, & Hodson-Carlton, 2011; Utley-Smith, 2004). As many as 60% of novice nurses do not remain for a full year at their first job, and many intend to leave on completion of the first year (Beecroft, Dorey, & Wenten, 2008; Candela & Bowles, 2008; Fink et al., 2008; Friedman, Delaney, Schmidt, Quinn, & Macyk, 2013; Institute of Medicine, 2010; Kovner et al., 2007; Robert Wood Johnson Foundation, 2014; Theisen & Sandau, 2013; Ulrich et al., 2010). Ultimately, the preparation–practice gap is linked to higher turnover, and, inevitably, high turnover leads to higher costs (Beecroft, Dorey, & Wenten, 2008; Jones, 2008).

**Stress**

Novice nurses are aware of their preparation gap and deficiencies. They experience high levels of stress and psychiatric distress as a result (Candela & Bowles, 2008; Casey, Fink, Krugman, & Propst, 2004; Wolff, Pesut, & Regan, 2010). Novice nurses reported frustration with their lack of expertise and felt overwhelmed by their responsibilities (Thomas, Bertram, & Allen, 2012). Candela and Bowles (2008) conducted a survey with novice nurses. These novices reported that it took more than 12 months to acclimate to the clinical environment, and 80% ($n = 281$) were able to identify particular deficits. It is concerning that 51% ($n = 181$) thought their programs prepared them for success on the NCLEX® but not for practice. Finally, the majority of the novice nurses (77%; $n = 271$) believed they “did not have enough clinical hours in their nursing program” (Candela & Bowles, 2008, p. 269). Duchscher (2008) and Benner (1984) discussed the developmental stages a novice nurse experiences as they transition into practice. Both described the process of becoming an expert nurse as being marked by intense emotions and stress.

**Costs**

Failure to remain at one’s first job may represent a personal setback to the novice nurse, but it is also a set-
back for the institution. Specifically, workforce turnover is expensive to the institution that must seek a replacement. The estimated cost to replace a single staff nurse ranges from $60,000 to $108,000 (Theisen & Sandau, 2013; Ulrich et al. 2008). Jones (2008) estimated that organizations spend $300,000 annually in nurse turnover costs for every 1% increase in turnover in the organizations. Cost of turnover in these models includes hiring temporary employees, recruiting, advertising, and decreased productivity from the new hires, among other expenses. Although such models must be seen as estimates, even the lower estimates represent significant loss. Furthermore, because novice nurses represent as much as 40% of nursing staff (IOM, 2010; Theisen & Sandau, 2013), high turnover within this group can lead to significant staffing gaps overall.

Medical Errors

Increased patient errors and poor patient outcomes can be seen when inadequately prepared nurses enter practice. In one report, 75% of medication errors and 40% of patient falls involved novice nurses (Smith & Crawford, 2003). Near-miss situations and adverse events are disproportionately associated with novice nurses as well (Ebright, Urden, Patterson, & Chalko, 2004). Poor patient care and poor patient outcomes are more likely to be reported with high turnover of nursing staff (Aiken, Clark, & Sloane, 2002). Together, these findings suggest that the preparation–practice gap and its contribution to high nursing staff turnover may have other indirect and negative effects on patient outcomes.

Evidence-Based Solutions

Although the observation that novice nurses are not prepared to practice has been well reported (Aiken, Clark, Cheung, Sloane, & Silber, 2003; Beecroft, Dorey, & Wenten, 2008; Berkow et al., 2009; Bowles & Candelia, 2005; Del Bueno, 2005; Ebright et al., 2004; Hickey, 2009; Smith & Crawford, 2003; Theisen & Sandau, 2013; Thomas et al., 2011), the same cannot be said about solutions to the problem. To date, no universally accepted solution exists, and the problem continues across most hospital settings. Even those studies appearing to report the answer are open to question. Many were idiosyncratic and pertain to only one setting. Others lacked rigor and involved only surveys, small samples, or descriptive designs. The strongest evidence suggests some form of on-the-job remediation, such as nurse residency or preceptor programs, as being the most efficient and effective solutions. Presented below is an integrative review of the strongest evidence base on which to build a bridge between preparation and practice.
Bridging the Gap

Novice nurses receive some form of orientation when their first job is begun. Programs attempting to bridge the preparation–practice gap have gone beyond provision of a basic, prescribed orientation. They have crafted programs that educate and support novice nurses to achieve clinical competence. The most influential of these is a nurse residency program, reported by the AACN (http://www.aacn.nche.edu/education-resources/nurse-residency-program).

Residencies

Residency programs are intended to transition the novice nurse to full practice by providing supplemental education within the context of the workplace. Several types of residency programs have been described; some have been developed by individual institutions, whereas others have been developed by consortia. Data strongly favor the success of the University HealthSystem Consortium Nurse Residency Program, The American Nurses Credentialing Center’s Nurse Residency, and The Versant RN Residency, especially because hospitals applying for Magnet status are required to provide a 12-month nurse residency program for new graduates and these programs provide those data (American Nurses Credentialing Center, 2014; IOM, 2010; Pine & Tart, 2007; Ulrich et al., 2010).

Residency programs have been shown to improve nurse satisfaction two-fold (Scott, Engelke, & Swanson, 2008) and decrease turnover by 55% (Beecroft, Dorey, & Wenten, 2008; IOM, 2010; Ulrich et al., 2010). Nurse residencies provide an overall improvement in new graduate training (Rush, Adamack, Gordon, Lilly, & Janke, 2013). These programs have been shown to provide the greatest benefit when they extend beyond the initial orientation period (Beecroft, Hernandez, & Reid, 2008; Casey et al., 2004; Dyess & Shermann, 2009; Fink et al., 2008; Pine & Tart, 2007; Rush et al., 2013; Theisen & Sandau, 2013; Ulrich et al., 2010). In general, residency programs provide clinical experiences in other areas of the hospital, classroom time and hands-on skills training laboratories, debriefing sessions, and self-care sessions (Pine & Tart, 2007; Ulrich et al., 2010). Both studies (Pine & Tart, 2007; Ulrich et al., 2010) conclude that the success of residency programs is often contingent on the performance of participants and the active support of hospital administration. The literature acknowledges the benefit of nurse residency programs, but some studies concede that these programs are costly and depend on strong mentors and preceptors (Pine & Tart, 2007; Trepanier, Early, Ulrich, & Cherry, 2012).

Preceptor Programs

The preceptor model is another appealing approach, combining some of the formal structures of a residency program but tailored more to the specific needs of the novice nurse in context of his or her job. Some of the benefits of the preceptor model have been reported in the literature (Beecroft, Hernandez, & Reid, 2008; Creakbaum, 2011; Horton, DePaoli, Hertach, & Bower, 2012; Long, 2004). Ebright et al. (2004) and Lee, Tzeng, Lin, and Yeh (2009) reported that a strong preceptor-ship and orientation program could decrease near-miss and adverse events. Some adverse events involved poor patient reports and hand-offs, medication errors, and the inability to connect the current patient’s clinical situation with the big picture. It has also been suggested that a preceptor program can decrease turnover rates among new staff (Friedman, Delaney, Schmidt, Quinn, & Macyk, 2013; Kovner et al., 2007; Ulrich et al., 2010). Preceptors themselves acknowledge their role in developing the novice nurses’ professional success, as well as serving as the bridge between what the new employees learn in school and what they experience at the bedside (Kantar, 2012; Maben et al., 2006; Richards & Bowles, 2002). The studies cited above suggest tools and methods for improving the preceptor programs. Some of elements seen in successful preceptor programs are provided in Table 2.

CONCLUSION

The preparation–practice gap is a looming challenge for the nursing profession. It has long been reported that novice nurses have difficulty transitioning into practice because of this gap. High turnover, poor morale (among
new nurses and the existing staff), patient safety issues, and high cost to the institution all likely flow from this gap. The authors of the current integrative review proposed solutions on the practice side, and promising approaches that are both feasible and cost effective toward bridging the gap have been outlined.

REFERENCES


