Influence of Graduate Nurse Participation in a Nurse Residency Program on Turnover: A Synthesis of the Literature
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Problem:
Graduate nurses in today's health care environment are entering the workforce and nursing profession in very turbulent times. Uncertainties with health care reform, the economic downturn, and an aging nursing workforce add unique stressors to the employment setting that new graduate nurses are entering. Additional stressors with higher acuity patients and lack of situational experience can add to concerns for patient safety and workforce stability.

Various studies have reported graduate nurse turnover in the first year to be very high. A Healthcare Advisory Board survey of members estimated turnover in the first year of practice to be as high as 36% (Nursing Executive Center, 2002). In 2004, Casey, et al reported median turnover rates for graduate nurses during their first year of employment ranged from 35% to 61%. A comprehensive study on healthcare staffing conducted by PricewaterhouseCoopers Health Research Institute (2007) documented that the median voluntary turnover rate for first-year nurses is 27.1%.

The financial burden to an organization is significant related to graduate nurse turnover. The average cost associated with graduate nurse turnover is estimated at $88,000 per nurse (Jones, 2008). Healthcare organizations spend an estimated $300,000 in nurse turnover costs for every 1% increase in turnover (PricewaterhouseCoopers Health Research Institute, 2007). Given the decrease in reimbursements related to health care reform, the financial impact to organizations takes on an even higher level of concern for nurse administrators.

Evidence:
A successful strategy to impact graduate nurse turnover, specifically a nurse residency program, has not been closely explored. The objective of this review was to determine the influence of graduate nurse participation in a nurse residency program on turnover rates. A total of nine articles met the inclusion criteria. Three were quasi-experimental studies (Newhouse, et al., 2007; Williams et al., 2002; Miller, 1990), five were descriptive, comparative studies (Hafler, et al., 2008; Bratt, et al., 2009; Pine & Tart 2007, Krugmann et al., 2006; Collins, 1991), and one was a descriptive, comparative study with a prospective, longitudinal design (Altier, et al., 2006).

Strategy:
All nine of the studies chosen for this study had the problem of high level of graduate nurse turnover and evaluated the implementation of a nurse residency program to address the problem. The studies all addressed an appropriate and clearly focused question related to the problem of interest.

Practice Change:
Findings from all nine studies showed that graduate nurse participation in a nurse residency program decreased turnover supporting the use of such a program to impact retention. All nine of the studies were of the experimental design. The strongest in design were the three which were quasi-experimental studies (Newhouse et al., 2007; Williams et al., 2002; Miller, 1990), considered the second-best design. One was a descriptive, comparative study with a prospective, longitudinal design (Altier et al., 2006) and the remaining five were descriptive, comparative studies (Hafler et al., 2008; Bratt et al., 2009; Pine & Tart, 2007; Krugmann et al., 2006; Collins, 1991).
All of the studies used a convenience sampling methodology. The study sites ranged from inclusion of multiple sites (Altier et al.; Krugmann et al.; Collins, 1991; Bratt et al., 2009), to utilizing several departments within an institution (Newhouse et al., 2007; Miller, 1990), and finally to only sampling a single institution (Pine & Tart, 2007; Williams et al., 2002; Krugmann et al., 2007). Sample size in the studies ranged from 26 to 1,100 graduate nurses. The eight studies that focused on graduate nurses were homogeneous in obtaining data pre and post intervention (Newhouse et al., 2007; Williams et al., 2002; Altier et al., 2006; Bratt et al., 2009; Pine & Tart, 2007; Krugmann et al., 2006; Hafler et al., 2008; Miller, 1990). Six of the studies (Newhouse et al., 2007; Hafler et al., 2008; Altier et al., 2006; Pine & Tart, 2007; Krugmann et al., 2006; Miller, 1990) provided detail related to the type and structure of the nurse residency program intervention.

Evaluation:
All of the studies supported that there was a decrease in graduate nurse turnover after participation in a nurse residency program. Prior to the intervention of a nurse residency program, annual graduate nurse turnover ranged from 20% (Hafler et al., 2008) to as high 50% (Pine & Tart, 2007; Bratt et al., 2009; Miller, 1990). At the end of a one-year nurse residency program, graduate retention was noted to range from 87% (Altier et al, 2006; Pine & Tart, 2007) to 90% in the statewide study with 51 hospitals and 1,100 graduate nurses (Bratt et al., 2009).

Results:
Evidence from the nine research studies were homogenous for reduction in graduate nurse turnover with participation in a nurse residency program (Newhouse et al., 2007; Williams et al., 2002; Bratt et al., 2009; Krugmann et al., 2006; Hafler et al., 2008; Altier et al., 2006; Pine & Tart 2007; Collins, 1991; Miller, 1990). Three quasi-experimental studies (Newhouse, et al., 2007; Williams et al., 2002; Bratt et al., 2009) supported a nurse residency program for decreasing nurse turnover. One longitudinal, descriptive study (Altier et al., 2006) showed a decrease in graduate nurse turnover at two years after participation in a nurse residency program. Five descriptive, comparative studies, (Krugmann et al., 2006; Hafer et al., 2008; Pine & Tart 2007; Collins, 1991; Miller, 1990) including two multi-site studies (Altier et al., 2006; Bratt et al., 2009), demonstrated an increased retention rate at the one-to two-year mark with the use of a nurse residency program.

Recommendations:
There are gaps in the evidence that are specific to the best programmatic design for a nurse residency program to best impact retention of graduate nurses. Further research is needed to determine if a nurse residency program has an influence on retention of experienced registered nurses working in an organization while graduate nurses are participating in a nurse residency program. Additional research to describe the characteristics of organizations that utilize a nurse residency program could be a beneficial contribution to the literature. Finally, for nurse administrators to effectively gain budgetary approval for additional expense within their organization, further research is needed to quantify the organizational return on investment with a nurse residency program.

Lessons Learned:
With the knowledge of the impact of health care reform and the graying workforce, nurse leaders are particularly challenged to decrease turnover costs associated with graduate nurses. There is consistent evidence to support that graduate nurse participation in a nurse residency program has positive influence on graduate nurse retention. The findings from the literature indicate that further research is needed to identify the best programmatic design for a nurse residency program to best impact retention of graduate nurses. By utilizing already established programs noted in the literature and identified by regulatory agencies and professional organizations, nurse administrators can translate best practices to their individual workforce and significantly start to impact retention one graduate nurse at a time.
Bibliography:


