Clinical Evidence Review

A regular feature of the American Journal of Critical Care, Clinical Evidence Review unveils available scientific evidence to answer questions faced in contemporary clinical practice. It is intended to support, refute, or shed light on health care practices where little evidence exists. To send an eLetter or to contribute to an online discussion about this article, visit www.ajcconline.org and click "Respond to This Article" on either the full-text or PDF view of the article. We welcome letters regarding this feature and encourage the submission of questions for future review.

Preceptor-Based Orientation Programs: Effective for Nurses and Organizations?

By Kristin E. Sandau, RN, PhD, and Margo A. Halm, RN, PhD, CNS-BC

Nursing orientation for acute or critical care nurses typically occurs in 3 stages: general hospital orientation (1 day), general nursing orientation (3-5 days), and a 6- to 12-week (or longer) precepted clinical experience whereby new nurses are paired with experienced nurses to learn directly on the unit of hire.1 Preceptors assist orientees to acquire basic nursing/unit-specific skills and become familiar with patients, protocols, care providers, and the unit's culture. By the end of orientation, orientees are expected to demonstrate competence in basic unit-specific skills.

Casey et al2 surveyed a cross-section of new graduate nurses (NGNs) from different hospital areas and found high stress and difficulty transitioning from student to professional roles. Root causes included lack of confidence in skill performance, deficits in critical thinking/clinical knowledge, relationships with peers and preceptors, struggles with dependence on others, frustrations related to the work environment (eg, nurse-to-patient ratios), organization/priority setting, and communication with physicians. As Casey et al acknowledged, preceptors are integral to role modeling of professional behaviors and facilitating nurses' adjustments to their role. Thus, preceptors have immense responsibilities.

This review was conducted to discover what impact preceptored orientation programs have on clinical knowledge and skills of nurse orientees as well as organizational and financial outcomes.

Methods

CINAHL was the primary search engine. Key words included nurse orientees, preceptors, critical thinking, competency, socialization, retention, and job satisfaction. Only reports of educational programs in acute/critical care settings with a preceptor component from the past decade were reviewed. Reported outcomes focus exclusively on orientees. Thus, evaluations of preceptor education were not included.3-6 Various types of evidence were considered, but small investigations (N < 10) and qualitative analyses were excluded.

Results

Twelve research or program evaluation reports from the United States were retrieved (Table 1). Samples included NGNs and experienced nurses, and ranged in size from 18 to 197. Interventions included both classroom and preceptor-based learning.

Program types included structured orientation (7 weeks-1 year), internship (8 weeks-1 year), and residency programs (1 year). Length of clinical preceptorships varied by specialty, experience, and learning needs. Some interventions incorporated structured cohort/roundtable sessions; regular meetings...
Table 1
Results matrix of educational interventions with preceptors

<table>
<thead>
<tr>
<th>Reference</th>
<th>Design; intervention (length)</th>
<th>N/ population</th>
<th>Competency/ autonomy</th>
<th>Job satisfaction/ organizational commitment</th>
<th>Program satisfaction</th>
<th>Retention/ vacancy</th>
<th>Turnover/cost avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morris et al(^7)</td>
<td>Quasi-experimental; orientation (NGNs: 7 weeks; ICU RNs, experienced or not: variable)</td>
<td>197/NGNs and RNs with variable experience</td>
<td>Autonomy: readiness to manage patient care at completion (perceptions of manager, preceptor, educator): • 80%-90% experienced ICU nurses • 53%-75% inexperienced ICU nurses • 54%-70% NGNs</td>
<td>Simulation experience and pocket guides rated high Satisfaction: orientees, 83%; preceptors, 73%; managers, 77%</td>
<td>94% retention at 18 months (2 cohorts), 59%-83% at 3 years (5 cohorts) Vacancy 14.3% (baseline) vs 4.8% (3 years)</td>
<td>8.8% (baseline) vs 6.3% (1 year) Program cost additional $24 810 but offset by improved recruitment/ retention</td>
<td></td>
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<tr>
<td>Pine and Tart(^8)</td>
<td>Program evaluation; residency (1 year)</td>
<td>48/BSN-prepared NGNs</td>
<td>Desired more spontaneous, team-based learning activities</td>
<td></td>
<td>50% (baseline) vs 13% (1 year) $823 680 savings from retention even with program cost</td>
<td></td>
<td></td>
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<tr>
<td>Halfer(^9)</td>
<td>Program evaluation; orientation (1 year with 4- to 9-month specialty-based preceptorship)</td>
<td>1 pediatric hospital/ NGNs</td>
<td></td>
<td>7.2% reduction in vacancy (first 3 years)</td>
<td>29.5% (baseline) vs 12.3% average each class Annual cost avoidance: $707 608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newhouse et al(^10)</td>
<td>Quasi-experimental (posttest); internship (1 year)</td>
<td>7 clinical depts vs control/ NGNs</td>
<td>Lower antecedent sense of belonging for interns at 6 months (vs baseline and 12 months) Organizational commitment, NS</td>
<td>Retention of internship RNs higher at 12 months (also at 18 and 24 months but NS)</td>
<td>Baseline RNs more likely to consider leaving than at 6 months</td>
<td></td>
<td></td>
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<tr>
<td>Altier and Krsek(^11)</td>
<td>Prospective (pre-test/posttest); residency (1 year with variable length preceptorship)</td>
<td>111 (6 health centers)/ NGNs</td>
<td>High satisfaction with praise and professional opportunities at 1 year</td>
<td></td>
<td>87% at 1 year</td>
<td></td>
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<tr>
<td>Shermont and Krepcio(^12)</td>
<td>Experimental (pre-test/posttest); orientation (variable)</td>
<td>100 new hires (3 surgical inpatient units)</td>
<td>High satisfaction with communication loop, coaching and collaboration to promote critical thinking, partnerships/sense of belonging</td>
<td></td>
<td>Turnover decreased from 54% (baseline) to 0-4% (over 3 years)</td>
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<tr>
<td>Krugman et al13</td>
<td>Descriptive comparative; residency (1 year)</td>
<td>6 sites/BSN-prepared NGNs</td>
<td>Competency: prioritizing outcomes improved at 6 and 12 months Autonomy: fairly high at outset, dipped at 6 months with continued satisfaction at 1 year (except 1 site)</td>
<td>Moderate satisfaction with interactions at baseline, increasing at 6 and 12 months (except 1 site)</td>
<td>Perceived stress high at baseline, decreasing at 6, 12, and 24 months Program satisfaction generally positive</td>
<td></td>
<td>8%</td>
</tr>
<tr>
<td>Marcum and West14</td>
<td>Program evaluation; orientation (13 weeks)</td>
<td>20 (medical unit)/NGNs</td>
<td></td>
<td>Program perceived strongly effective at 6 months</td>
<td>89% at 18 months (vs 29%-40% baseline)</td>
<td></td>
<td>$330 481 return on investment</td>
</tr>
<tr>
<td>Blanzola et al15</td>
<td>Quasi-experimental (posttest); internship (16 weeks) vs 6-week orientation</td>
<td>18/NGNs</td>
<td>Competency: Self/peer evaluation significantly improved for interns (vs controls)</td>
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<tr>
<td>Almada et al14</td>
<td>Program evaluation (posttest); orientation (11 weeks)</td>
<td>40/NGNs (150-bed hospital)</td>
<td>High satisfaction with choice of employment</td>
<td>High overall</td>
<td>Retention increased from 66% to 89% (NGN improved from 25% to 93%) Vacancy decreased by 9.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beecroft et al17</td>
<td>Quasi-experimental (pretest/posttest); internship (6 months)</td>
<td>78/NGNs (interns vs control group)</td>
<td>Competency: continuous increase in confidence for both groups; intern self-evaluation trended toward improvement at 2 months and end of program but NS Autonomy: NS</td>
<td>Comparable organizational commitment scores for both groups at 6 and 12 months</td>
<td>Intern group maintained more realistic view of professional nurse role</td>
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</tr>
<tr>
<td>Owens et al18</td>
<td>Program evaluation; internship (8 weeks)</td>
<td>75/NGNs (5 hospitals)</td>
<td>Competency: No difference in NGN/preceptor/director perceptions, except directors scored NGN significantly lower for “asks questions to increase practice knowledge”</td>
<td></td>
<td></td>
<td>Years 1 and 2: 73%-74% retention with additional 14%-15% staying within system Vacancy decrease from 7.3% to 6%</td>
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Abbreviations: ICU, intensive care unit; NGN, new graduate nurse; NS, not significant.

Competency/autonomy were assessed with an investigator-developed tool, the Skills Competency Self-Confidence Survey, the Slater Nursing Competencies Scale, the Organizing/Prioritizing Outcome, the Gerber Control Over Practice Scale, and the Scutzenhofer Professional Nursing Autonomy Scale; job satisfaction/organizational commitment were assessed with the Modified Hagerty-Patuky Instrument, the McCloskey-Mueller Satisfaction Survey, the American Society Training Development Evaluation, and the Organizational Commitment Questionnaire; program satisfaction was assessed with the Orientation Satisfaction Scale, the Self-Reported Stresses, and Corwins Nursing Role Conception Scale; and turnover/cost avoidance were assessed with the Anticipated Turnover Scale.

Critical thinking was assessed in only 1 study. Assessment was done by using the Performance Based Development System and the Professional Judgment Rating Form. The authors reported improvement in critical thinking at 8 weeks and that 83% showed very strong critical thinking skills at 1 year.
between orientees, preceptors, and managers; and professional role development sessions. Orientee outcomes that were evaluated included knowledge/skills (critical thinking, competency, autonomy), organizational (sense of belonging, job satisfaction, organizational commitment, program satisfaction), and financial (retention/turnover, cost avoidance). Various measurement approaches were used.

Knowledge/Skill Outcomes

Critical thinking increased in the 1 program that evaluated this outcome. In 2 reports, self/peer ratings of competency trended toward improvement or improved significantly by program completion, with a continuous increase in confidence. Prioritization of outcomes was also enhanced by 6 and 12 months. Findings were mixed with regard to autonomy. Perceived fairly high at the beginning of 1 program, nurses' autonomy dipped at 6 months but had recovered by year end. In another report, readiness to manage patient care at program completion was rated higher for experienced nurses than for NGNs. Autonomy was unaffected in another program.

Organizational Outcomes

In 1 evaluation, internship nurses at 6 months had a lower sense of belonging than at baseline or 12 months. Overall, satisfaction was high for choice of employment, as well as for praise, professional opportunities, and interactions at 12 months. Ori- entees also reported high satisfaction with their educational programs—even NGNs with high stress levels. Internship nurses maintained more realistic views of the professional nursing role. Nurses were satisfied with communication, coaching, and collaboration, as well as with spontaneous and simulation learning. Among all resources, preceptors were perceived to be most supportive during orientation.

Financial Outcomes

On the whole, evaluations were favorable for retention, vacancy, and turnover. Despite program overhead, good returns on investment were demonstrated, with cost avoidance associated with reduced turnover and employee replacement expenses.

Recommendations

Overall, studies reviewed represent class IIa evidence in support of preceptor-based orientation to increase program satisfaction and retention and to reduce turnover and cost (Table 2). Although institutions may initially look to education as a source for budget cuts, leaders should consider thorough, structured orientation programs with adequately prepared preceptors. Education to prepare preceptors for this critical role ranges from 1- to 3-day workshops. Further study is needed regarding appropriate ongoing education and support for preceptors. Preceptor-based orientation programs may ultimately lead to a return on investment at 1 year, as studies reported cost savings of $24 810 to $823 680 despite program costs.

Although class IIa evidence also supported the effect of preceptors on orientees' competency, this outcome has been less consistently and robustly measured. Other researchers could consider adding standardized competency rating scales. It is worth noting that no studies evaluated outcomes related to cultural competency, an expected competency from the Joint Commission.

Critical thinking was measured in only 1 study. Other authors have documented interventions to improve critical thinking that rely on methods that are not based on preceptors. Studies reviewed showed that stress continued for new nurses, even with solid orientation programs. Additionally, increased autonomy did not occur until the first full year after orientation. Thus, plans must be in place for continued support of NGNs after initial orientation. NGNs perceive that it takes at least 12 months to

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### Table 2: Evidence grading

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<thead>
<tr>
<th>Class</th>
<th>Criteria</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Class I</td>
<td>Definitely recommended</td>
<td>Supported by excellent evidence, with at least 1 prospective randomized controlled trial</td>
</tr>
<tr>
<td>Class IIa</td>
<td>Acceptable and useful</td>
<td>Supported by good to very good evidence; weight of evidence and expert opinion strongly in favor</td>
</tr>
<tr>
<td>Class IIb</td>
<td>Acceptable and useful</td>
<td>Supported by fair to good evidence; weight of evidence and expert opinion not strongly in favor</td>
</tr>
<tr>
<td>Indeterminate</td>
<td>Promising, evidence lacking, premature</td>
<td>Preliminary research stage; final class decision</td>
</tr>
<tr>
<td>Class III</td>
<td>May be harmful; no benefit documented</td>
<td>Not acceptable or useful; may be harmful</td>
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</table>

Adapted from “Part 1: Introduction to the International Guidelines 2000 for CPR and ECC,” with permission.
feel comfortable and confident in their practice\textsuperscript{2,11} and to feel that they belong. This time frame extends far beyond the typical several week orientation provided by hospitals. Thus, resources such as orientation facilitators and mentors should be used to provide ongoing support for NGNs throughout their first year. Deliberate and evidence-based interventions that use preceptors are pivotal in orientation of nurses in the complex and dynamic world of acute health care. Consequently, preceptors are key to the orientation of both NGNs and experienced nurses, and the contribution of preceptors to successful outcomes of orientees and organizations should not be underestimated.

FINANCIAL DISCLOSURES
None reported.

REFERENCES

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