

Strengthening New Graduate Nurse Residency Programs in Critical Care: Recommendations From Nurse Residents and Organizational Stakeholders

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abstract

Background: Thirty-four new graduate nurses participated in a critical care nurse residency program in preparation for opening a new intensive care unit. At the end of the program, multi-constituent focus groups were held to assess program effectiveness.

Method: Participants included 34 new graduate nurses, 18 preceptors and staff nurse partners, five clinical nurse specialists, and five nurse directors. Twelve focus groups were held; groups included four to eight nurses from the same role group. Two independent reviewers analyzed recordings and transcripts of focus group content to identify themes.

Results: Five themes were identified: program design, developing nursing expertise, program impact on the unit, future expectations, and communication. Comments were used to guide program improvements and offer new insights for residency programs in acute and critical care.

Conclusion: Obtaining structured input from multiple program stakeholders is beneficial in evaluating a program's impact and identifying areas for improvement.

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In its seminal report, *The Future of Nursing: Leading Change, Advancing Health*, the Institute of Medicine (2010) called on health care organizations, state boards of nursing, government agencies, and other groups to support the transition of new nurses into practice through the implementation of nurse residency programs. The recommendation reflected numerous reports describing how such programs not only help new graduate nurses transition successfully into practice, but also promote

retention and enhance nurses' organizational engagement and job satisfaction (Anderson, Linden, Allen, & Gibbs, 2009; Barr, 2005; Bratt, 2009; Goode, Lynn, Krsek, & Bednash, 2009). Many hospitals have heeded the call for implementing residency programs (Barnett, Minnick, & Norman, 2014). Among these, a number of organizations have built on what has been learned about programs for nurses entering acute care settings to develop residency programs for new graduate nurses entering critical care (Eigsti, 2009; Jones, Mims, & Luecke, 2001; Williams, Sims, Burkhead, & Ward, 2002).

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in Boston, Massachusetts, nurse educators introduced a critical care nurse residency program in 2001 to support new graduate nurses hired to work in MGH's seven intensive care units (ICUs). The 6-month program combined classroom instruction and simulated learning opportunities with a preceptored clinical experience in which experienced nurses supported new graduate nurses in developing critical care skills and transitioning to independent practice. The nurse residency program generally enrolled between six and eight nurses at a time, and by 2010, the program had prepared a total of 153 new graduate nurses for practice in a critical care unit.

In 2011, the program directors were called on to help the nursing department meet a unique staffing challenge that stemmed from a decision by hospital leaders to add 150 beds, including 18 in a new ICU. Although efforts to recruit nurses for the non-ICU beds had been successful, hiring critical care nurses had proved more difficult. A shortage of critical care nurses was a long-standing problem, as evidenced by the number and duration of open ICU positions at MGH and nearby hospitals. In addition, reports in the nursing literature identified a nationwide critical care nursing shortage and identified various contributing factors, such as the aging of the nursing workforce and the specialty knowledge and skills required of ICU clinicians (Reader, Flin, Lauche, & Cuthbertson, 2006; Siela, Twibell, & Keller, 2008; Stechmiller, 2002; Williams, Schmollgruber, & Alberto, 2006). After a sustained recruitment effort, the nursing department had been able to hire only a small number of experienced nurses for the new ICU. Faced with a staffing shortfall, nurse leaders decided to use a two-pronged approach, in which they continued efforts to recruit experienced nurses and also dedicated the resources of the Critical Care Nurse Residency Program to prepare a cohort of 34 new graduate nurses for practice in the new unit.

In light of the cohort's size and task, and ongoing dilemmas related to the emerging need for more ICU-level care in a busy tertiary care facility, the program directors determined that several modifications and enhancements were needed to assure sufficient preparation and support for the new graduate nurses. Working with nurse directors and clinical nurse specialists (CNS) from the critical care areas, the program directors modified the program's clinical component to assure the new graduate nurses had adequate time and sufficiently diverse experiences to develop competency in caring for a range of critical care patients. The program directors also worked with MGH nurse leaders and nurse researchers to develop a plan for evaluating the program's effectiveness and identifying additional supports the new graduate nurses might need as they began caring for patients on their own.

A key component of this evaluation involved a series of focus groups, conducted toward the end of the residency, in which all of the program's stakeholders—the new graduate nurses, their preceptors or staff nurse partners, unit-based CNS, and critical care nurse directors—provided feedback on the program, including what worked well in preparing the new graduate nurses for independent practice and what could be improved. The nurse leaders and educators used this information to design additional supports for the new graduate nurses and to improve the Critical Care Nurse Residency Program, thus ensuring it achieved optimal outcomes for new graduate nurses and the organization in the future.

By capturing the voices and perspectives of all of the groups involved in and impacted by the residency program, these focus groups add to what has been documented in the literature about how nurse residency programs impact new graduate nurses and the organizations in which they work, and factors that contribute to program success. This article reports the findings from the focus groups so that this information might be used by other institutions working to implement residency programs that meet the needs of new graduate nurses and the broader organization.

CRITICAL CARE NURSE RESIDENCY PROGRAM

With the Boston area being home to many schools of nursing, MGH was able to recruit a large pool ($N = 400$) of new graduate nurses who were interested in the nurse residency program and a position in the new ICU. Among the applicants, 200 met the nurse residency program's eligibility criteria, which included at minimum a baccalaureate nursing degree, a grade point average of 3.5 or higher, current licensure by the Massachusetts Board of Registration in Nursing, completion of a clinical practicum in critical care or experience as a patient care assistant within the past 12 months, and a 2-year commitment to the hiring unit (**Table 1**). Eighty applicants were invited to participate in interviews with nurse leaders. Of these, the nurse leaders selected 34 new graduate nurses who demonstrated an aptitude for critical thinking and a commitment to collaborative, patient-focused care, as well as other attributes deemed important for critical care nursing practice and successful completion of the Critical Care Nurse Residency Program.

Although nurse residency programs in the United States vary in structure, content, and length (Barnett et al., 2014), most include both classroom and experiential learning opportunities and focus on helping new graduate nurses develop competence in essential skills, gain confidence in their new abilities, and become socialized to the professional nursing role. Like these other

TABLE 1
EXPANDED CRITICAL CARE RN RESIDENCY PROGRAM

Element	Description
Program length	6 months (960 hours)
Participants	New RN graduates (<i>n</i> = 34) selected from a pool of 400 applicants Criteria: baccalaureate nursing degree from an accredited nursing education program; minimum GPA of 3.5; 2-year commitment to hiring unit Selected through competitive process involving human resources and nursing leaders
Classroom component	244 hours 64 hours: standard hospital and central nursing orientation 180 hours: specialty-specific and professional practice education Core critical care course curriculum infused with case presentations, clinical narratives, and simulated scenarios Teaching–learning methods: didactic presentations, group discussion with subject matter experts, skills laboratories, self-directed e-learning modules, debriefing guided reflection on clinical experiences, journaling, and facilitated group discussion of clinical narratives
Clinical component	716 hours Hands-on clinical practicum in designated “host” critical care unit Host intensive care units: cardiac, cardiac surgical, medical, neuroscience, and surgical Supported by staff nurse partners, with oversight by unit-based CNS Two-week clinical rotations in transplant unit, postanesthesia care unit, and respiratory acute care unit Option to extend time with staff nurse partner or preceptor for an additional 6 months

Note. GPA = grade point average; CNS = clinical nurse specialists.

programs, the MGH nurse residency program for new graduate nurses entering the new ICU used a blend of classroom and clinical experiences and a range of learning methods.

Classroom Component

The program’s classroom component spanned 244 hours. Sixty-four hours addressed standard hospital and central nursing orientation topics and activities. The remaining 180 hours were dedicated to specialty-specific and professional-practice education and included a core critical care course curriculum that was infused with case presentations, clinical narratives, and simulated scenarios reflecting a mixed, medical–surgical patient population. Through these learning methods, the new graduate nurses were supported in developing and refining essential psychomotor, critical thinking, and communication skills that are essential for safe and effective critical care nursing practice. The methods also provided opportunities for guided discussion, in which the new graduate nurses reflected on what they had learned and how it could be applied in situations encountered in clinical practice. Other learning methods used in the classroom component included group discussion with subject

matter experts, skills laboratory exercises, self-directed e-learning modules, and biweekly journaling.

Practicum Component

The program’s practicum component consisted of 716 hours and involved hands-on, day-to-day learning experiences in the clinical setting. Each new graduate was assigned to one of five “host” ICUs:

- Cardiac ICU.
- Cardiac surgical ICU.
- Medical ICU.
- Neuroscience ICU.
- Surgical ICU.

Due to the number of residents and scheduling challenges, the units were not able to adhere to the preferred 2:1 preceptor-to-resident ratio. Rather, each new graduate nurse was paired with a range of staff nurse partners, who provided guidance and instruction in the care of patients. The nurse partners had approximately 7 years of critical care nursing experience on average, and most had previously served as preceptors. The CNS on each unit assumed primary responsibility for monitoring the development of their unit’s nurse residents and served as a resource to the residents and staff nurse partners. In

TABLE 2
DEMOGRAPHICS OF FOCUS GROUP PARTICIPANTS

Participants	Female	Average Age (y)	Graduate Preparation
ICU nurse residents (n = 34)	92%	25.4	4%
Preceptors or staff nurse partners (n = 18)	94%	45.8	18%
Clinical nurse specialists (n = 5)	100%	56	100%
Nurse directors (n = 5)	100%	58.7	67%
Aggregate (n = 62)	94%	37.6	22%

Note. ICU = intensive care unit.

addition to the time spent on their host units, the nurse residents spent 2 weeks in an adjunct clinical area, such as the transplant unit, postanesthesia care unit, and respiratory acute care unit, to gain exposure to a broader range of patient populations.

In addition to providing a range of clinical experiences, the program directors also introduced some flexibility into the program by allowing nurses who needed more time to transition to independent practice to continue working with their staff nurse partners for up to 6 additional months or until the staff nurse partners, the CNS, and the nurse director of the host unit determined the new graduate nurses were ready to practice independently. This added flexibility was made possible by a delay in the opening of the new ICU and by a decision to open the ICU beds in phases, beginning with less acute patients, rather than all at once. The opportunity to remain in the program beyond 6 months was welcomed by the new graduate nurses. Although some of the new graduate nurses completed their residency in 6 months, the majority continued working with their staff nurse partners for several additional months, for a total of 10.5 months on average.

METHOD

Focus Groups

The focus groups of residency program participants were held in October and November 2011 as the program was nearing completion. After obtaining approval from the Institutional Review Board, the focus groups were conducted using methods and criterion sampling described by Stewart, Shamdasani, and Rook (2007). All of the nurses who participated in the residency program as a nurse resident, preceptor or staff nurse partner, unit-based CNS, or ICU nurse director were invited to par-

ticipate in one of the focus groups. A total of 62 nurses accepted the invitation: 34 new graduate nurse residents, 18 preceptors or staff nurse partners, five CNS, and five nurse directors. As indicated in Table 2, the majority of participants were women. In addition, participants in the preceptor or staff nurse partner, CNS, and nurse director groups were considerably older than the new graduate nurses and were more likely to have graduate preparation. Participants were invited to participate in voluntary focus groups via e-mail. Upon their interest to do so, participants were assigned to one of 12 focus groups, with each group containing between four and eight nurses from the same role group. Verbal informed consent was received from each participant prior to beginning the focus group.

The focus groups were facilitated by a doctorate-prepared nurse researcher and lasted approximately 60 minutes. The nurse researcher asked participants to respond to a series of open-ended questions, including:

- “Tell me about your experience with the critical care nurse residency. Was it what you expected?”
- “From your perspective, how could the critical care nurse residency be improved?”
- “Were there things you needed that were not provided?”

Follow-up questions were posed as needed to elicit further input and discussion about issues and topics raised by participants. Participants also were invited to share any additional insights or comments that had not been addressed through the other questions. At the start of each group, the nurse researcher informed participants that the session was being audio recorded via digital recorder for research and evaluation purposes, and that individuals would not be identified in any results.

Content Analysis

The recordings from the first two focus groups from each constituency group were transcribed verbatim. Focus group results were analyzed as sessions were completed. Using a criteria of a minimum of 25 participants for data saturation (Charmaz, 2006), content from focus groups nine through 12 was not transcribed; however, the recorded content was reviewed to validate existing themes. A graduate nursing student and a doctorate-prepared nurse researcher independently analyzed the transcribed data for themes using constant comparative content analysis techniques (Krippendorff, 2004; Weber, 1990). To minimize semantic differences, the independent analyses were then compared and refined by the researchers. These data were then reviewed by an additional doctorate-prepared qualitative research expert for further validation.

TABLE 3
THEMES AND ELEMENTS ADDRESSED BY FOCUS GROUPS

Theme	Operational Definition	Key Points Identified
Program design	Facilitators and mediators of optimal developmental experiences for all organizational constituents	Lack of consistent preceptors hampered continuity and learning Opportunity to extend program gave nurse residents time to explore practice issues and transition to independent practice Nurse residents valued core clinical content as well as discussions about professional topics and issues unique to critical care nursing practice
Developing nursing expertise	Developmental stage, knowledge, and skill acquisition of the resident, preceptor or partner, leader, and organization	Progress and pride related to progress in developing expertise Access to expert resources remains important after program completion
Impact on the unit	Burden, support, challenges, and resilience of workforce on host units	Stressors and challenges include coordinating resident and preceptor schedules and inability to hire and orient other new hires or implement new projects
Future expectations	Expected challenges and successes for residents, unit, and organization resulting from the program and new unit	Sources of stress include uncertainty about future practice environment, role expectations, and personal capabilities
Communication	Lucidity, frequency and transparency of planning, expectations, changes, evaluation, and feedback	Build in opportunities for feedback from program participants and stakeholders Clearly defining roles and responsibilities promotes effective collaboration and continuity

RESULTS

Through the content analysis, the researchers determined that most of the focus group comments addressed one of the following five themes:

- Program design.
- Developing nursing expertise.
- Impact on the unit.
- Future expectations (related to the new unit).
- Communication.

Operational definitions and focus group findings pertaining to each theme are summarized in **Table 3**.

Program Design

Focus group participants commented on strengths as well as problems related to several aspects of program design, including preceptor assignments, rotations to the adjunct clinical areas, and program length. Not having dedicated nurse preceptors was a key area of concern identified by nurse residents as it compromised the continuity of their learning and practicum experience. As one nurse resident noted, “[Each] week there was another preceptor who does not know you, does not know your skills, and you kind of have to start fresh.” Another nurse resident observed, “If you have the same preceptor and work with that person one-on-one for 3 months,

it builds trust and confidence,” which in turn benefits learning. The nurse residents also noted that the rotations to the adjunct practice areas added little to their experience.

An aspect of the program that was praised by the nurse residents was the flexible program length that allowed them the potential to extend their time with staff nurse partners to as long as 12 months. It was noted by nurse residents that the possibility of having additional residency time as needed gave them the space and time required to transition from working closely with a staff nurse partner to practicing independently while still having ready access to expert resources. The added time also provided them with the opportunity to more carefully examine complex professional issues encountered in critical care, such as the care of dying patients and their families, quality and safety concerns unique to critical care, and scope of practice considerations for critical care nurses.

The CNS and nurse directors shared the nurse residents’ concerns about not having dedicated preceptors and the impact of this on the continuity of learning. They agreed that assigning variable staff nurse partners was not ideal, but noted it was necessary because of the number of nurse residents assigned to each unit, the dif-

faculty of coordinating multiple preceptor and nurse resident schedules, and the nurse residents' scheduling limitations (which included not working weekends).

Developing Nursing Expertise

Many of the nurse residents' comments focused on accomplishments and concerns related to the development of nursing expertise. Nurse residents expressed their appreciation for having an opportunity to begin nursing practice in an ICU, and they spoke with pride of their developing expertise and transition to independent practice. At the same time, they realized they were not at the same level as the expert nurses who served as their staff nurse partners, and they expressed worry about not having their partners nearby after they began working in the new ICU. One resident said, "In my [host] unit, I can just step out of the room and there is someone who has been practicing in the ICU for 20 years." Another nurse resident added, "There is always someone with experience who can tell you, 'Oh yeah, that's how you do XYZ,' and you don't have to look it up."

Like the nurse residents, the CNS, nurse directors, and staff nurse partners acknowledged the accomplishments of the nurse residents, and they commented on how quickly the nurse residents had mastered numerous complex competencies. They also expressed concern about helping the nurse residents transition to the new unit and noted the importance of assuring the nurse residents had continued access to expert support and learning opportunities.

Impact on the Unit

The impact and burden of the residency program on the host units was highlighted in comments by many of the nurse directors, CNS, and preceptors and staff nurse partners. One focus group participant observed that "everyone on the unit made sacrifices" to ensure that the nurse residents received needed teaching and support, and had a positive learning experience. Especially burdensome were the numerous schedule changes that were necessary to assure the availability of staff nurse partners and preceptors.

Another area of strain involved the inability of host units to fill open staff positions because their resources were dedicated to supporting the preparation of nurses for the new ICU. As noted by one participant, "On our unit, there are a bunch of open staff positions that we can't fill right now because there are too many [nurse residents]. So that's another burden; we can't hire because we can't orient." Focus group participants also noted that in some cases, units were unable to implement new projects until the nurse residency program reached

an end. One participant explained, "A lot of things were volume related, so there have been a few projects that had to go on hold until [the residency] was finished. It was just a concern of people."

Future Expectations

For many of the nurse residents, concerns about future practice in the new unit loomed large. A particular worry of the residents concerned the types of patients that would be admitted and whether they had acquired sufficient expertise and skills to care for the patients. One nurse resident commented, "It depends a lot on the patient population. It is scary not knowing the kind of patients you will be taking care of." Although they readily shared their anxiety, the nurse residents also indicated they were pleased to learn that patients would be admitted to the unit in a tiered fashion, beginning with less acute patients, thus giving the nurse residents time to get to know the patient population and become comfortable with unit processes and routines.

The nurse directors and CNS observed that other hospital staff had expressed concern about the new ICU and having so many new graduate nurses on the nursing staff. The nurse directors and CNS also noted their frustration with having few opportunities for dialogue and information sharing on this issue.

Communication

The importance of ongoing dialogue and clear communication was addressed by all of the focus groups. Nurse residents, for example, expressed disappointment that opportunities for providing feedback about the program, promised at the start of the residency, had not materialized. One nurse resident commented, "We were told within the first 3 months we were going to have a review and give feedback on the unit and the general program, which never occurred."

Staff nurses and CNS also commented on the need for better communication about preceptor assignments, noting that the confusion about having multiple preceptors hampered coordination, continuity, and nurse resident development. Nurse directors discussed needing more communication from organizational leaders about the new unit and its staffing plan, suggesting this would have been helpful in allaying concerns.

DISCUSSION

With the opening of the new ICU and the hiring of 34 new graduate nurses, the MGH Critical Care Nurse Residency Program faced an unusual challenge. Despite the uniqueness of the situation, many of the focus group findings are broadly relevant and may be useful to any

new graduate nurse residency program in acute or critical care. The scope and value of the findings are due in part to the inclusion of multiple stakeholders (i.e., nurse residents, staff nurse partners and preceptors, CNS, and nurse directors) as focus group participants. The range and diversity of participants distinguishes these focus groups from other evaluation efforts reported in the literature and resulted in new insights about how to strengthen and improve nurse residency programs in ways that benefit new graduate nurses as well as the broader organization.

Some of the findings, such as the importance of stable preceptor–resident relationships and the impact of these relationships on learning and professional development, validate what has been reported in the literature (Giallonardo, Wong, & Iwasiw, 2010; Kramer, Maguire, Halfer, Brewer, & Schmalenberg, 2013; Moore & Cagle, 2012). Other findings, such as those pertaining to the burden that nurse residency programs place on patient care units, have been studied less extensively and have important implications for program design and decision making about the size of nurse resident cohorts and other factors. The findings suggest that nurse educators should involve nurse leaders and staff from host units in planning the timing and scope of residency programs, as this will ensure that a sufficient number of nurse preceptors are available and that the residency program does not compromise the pursuit of other unit initiatives and priorities.

Another important finding involves the length of a residency program and the amount of time that new graduate nurses work with preceptors. As noted by the nurse residents, having the potential to extend their residency time assured them of having sufficient opportunities to optimize their skills, explore more nuanced aspects of critical care nursing and professional practice, and gain additional confidence in their ability to practice independently. Also of note is the anxiety the new nurse graduates experienced as they contemplated leaving the residency program. Although their anxiety was due in part to uncertainties regarding the new ICU, it also was fueled by worries about their ability to manage unfamiliar situations without the immediate guidance and support of their preceptors. With most new graduate nurses experiencing some level of anxiety as a residency program comes to an end, it behooves nurse leaders to build in sources of support during the transition period. In addition to ensuring access to expert clinical resources, also needed are opportunities for new nurses to share their concerns with one another, reflect on their experiences, and benefit from the support, guidance, and perspective that can be provided by nurse educators and leaders.

key points

Residency Programs in Critical Care

Adams, J.M., Alexander, G.A., Chisari, R.G., Banister, G., McAuley, M.E., Whitney, K.B., Ives Erickson, J. (2015). **Strengthening New Graduate Nurse Residency Programs in Critical Care: Recommendations From Nurse Residents and Organizational Stakeholders.** *The Journal of Continuing Education in Nursing*, 46(1), 41-48.

- 1 Although nurse residency programs rely on the participation and support of many constituent groups, the perspectives of these constituents are rarely captured in program evaluations.
- 2 Focus groups are an effective mechanism for obtaining input from a broad range of program stakeholders.
- 3 A content analysis of 12 multi-constituent focus groups involving nurse residents, preceptors, clinical nurse specialists, and nurse directors involved in a critical care nurse residency program revealed five themes: program design, developing nursing expertise, impact on the unit, future expectations, and communication.
- 4 Focus group participants offered fresh insights and suggestions relating to preceptor continuity, program length, opportunities for feedback, communication about future expectations, availability of expert resources following the program, and leadership participation in decision making affecting unit operations.

The focus group findings prompted a number of changes to the MGH Critical Care Nurse Residency Program. In direct response to comments from the new graduates, the program directors formally lengthened the residency program from 6 months to 12 months. In addition, through the educational program, preceptors examined some of the unique challenges facing new graduates as they transition to independent practice and explored strategies for facilitating learning and socialization to the professional nursing role. Other changes introduced by the program directors included increasing the number of clinical narratives required of each nurse resident from one to two to facilitate reflection and discussions about practice, and reinstating a policy that ensures decisions about the number of nurse residents supported by a unit are made by the unit's nurse director.

The focus group findings also helped guide steps taken by MGH nurse leaders to ensure continued support for the nurse residents as they began working in the new ICU. In the 2 months before the unit opened in December 2011, the unit's nurse director held weekly drop-in

sessions for all of the nurses who would be working in the ICU, providing time for them to get to know one another. In addition, all of the unit staff participated in a retreat several weeks before the unit opened. During the retreat, unit leaders focused on team building and decision making about unit operations. The drop-in sessions and retreat proved effective in building a unit identity and assuring that everyone was familiar with and contributed to defining unit practices and routines. After the unit opened, the unit leadership implemented the tiered admission process to ensure that unit volume and patient requirements did not exceed staff capabilities.

The unit leadership evaluated unit and nurse performance throughout the first year by monitoring key outcomes and nursing quality indicators, including patient satisfaction and rates of central line-associated bloodstream infection, medication errors, pressure ulcers, and ventilator-associated pneumonia. On each indicator, the new ICU consistently performed as well as, and in some cases better than, the other critical care units at MGH.

CONCLUSION

The richness of the focus group findings underscore the value of obtaining input from a full range of stakeholders when evaluating nurse residency programs. Information obtained through the focus groups benefited not only the cohort of nurses who were hired to open the new ICU, but also new graduate nurses, patient care areas, and nursing staff members who will participate in future programs. It is hoped that these findings will also be valuable to organizations that are planning to establish critical care nurse residency programs or are searching for ways to strengthen existing programs.

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