Development of a Tele-ICU Postorientation Support Program for Bedside Nurses

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Although telemedicine dates back to the 1970s, when hospital caregivers reached out to off-site experts for consultation, it has only recently become a subspecialty of critical care practice (the tele–intensive care unit, or tele-ICU). Today, the tele-ICU operates with the goal of providing a “safety net” of additional surveillance and support to hospital-based critical care staff and to ultimately enhance outcomes for critically ill patients. Advocate Health Care, a 12-hospital Midwestern health care system with 15 critical care units, has had a functioning tele-ICU for more than 10 years. The tele-ICU staff includes 45 tele-ICU nurses (eRNs); is typically staffed with 7 eRNs, 2 physicians, and 2 clerical assistants; and routinely monitors up to 250 patients on each shift. Over the years, the focus of the tele-ICU has evolved from the management of and intervention in crises to the implementation of standardized evidence-based practices and the monitoring of key result areas. The bedside nursing staff and the eRNs have developed a collaborative relationship and the bedside nurses appreciate the additional expertise and support provided by the eRNs. In this article, we describe a postorientation program that was developed to meet the needs of novice nurses who have successfully completed their critical care unit orientation with a preceptor but who lack confidence in their performance and feel a need for additional support. We discuss not only how the need for this program arose, but also strategies for designing and implementing the program and the lessons learned from its operation.
Program Need and Development

The need for the program was first identified when the managers of 2 critical care units with a spike in 1-year turnover rates identified from exit interviews that lack of support after the formal orientation program was a key factor contributing to nurses' resignations. Research supported this finding. A survey of nurses' perceptions of first-job experiences revealed that 30% of new-to-practice nurses left within the first year and more than one-half left within the first 2 years. One of the factors most often cited as influencing a nurse's decision to leave the field was a stressful work environment that offered little guidance and support.

Although it is common to have structured orientation and internship programs in place to support novice critical care nurses for a defined period of time, it is rare to have programs in place to support nurses after their orientation period has ended. However, it is this immediate postorientation period that is often the most overwhelming for still-novice nurses who are unaware of their knowledge deficits and who lack in areas of clinical competency. According to Benner's model, a novice nurse progresses to the "advance beginner" level of nursing practice after gaining some clinical experience, but progresses to the "competent" level only after about 2 years of practice. Given the increase in 1-year turnover, it was thought that a structured support program following the formal orientation would meet the needs of the "advanced beginners" and help novice nurses feel more confident as they began their practice after orientation.

All of the health care system's critical care units provide a competency-based critical care unit orientation with a preceptor. The length of the orientation is dependent on the orientee's previous experience and his or her ability to complete orientation competencies. Before development of this postorientation program, once an orientee finished the orientation program, the orientee immediately began practicing without any formal support program in place for guidance.

The idea for the postorientation program first occurred when the managers of the 2 units with the greatest need collaborated with the tele-ICU manager. Together the development of an innovative, structured postorientation support program for select nurses was explored that used the eRNs' expertise to provide coaching and support to novice nurses. After developing a pilot program between the 2 units and the tele-ICU, the program was presented to the leadership of the eICU and the 2 pilot units. After leadership support was obtained, the program was immediately implemented.

Program Objectives

The goal of the program is to support novice critical care nurses as they transition out of orientation and into a more advanced level of practice and self-confidence. Unlike the orientation program, which focuses on validating competencies at the bedside, the postorientation program focuses on providing novice bedside nurses who lack critical care experience with a structured coaching relationship with experienced eRNs working in the remote tele-ICU immediately upon completion of orientation.

Program objectives, identified to meet the goal of moving the nurse to a higher level of practice, are based on the nurse competencies from the AACN Synergy Model for Patient Care.

Program Development

Initially, the establishment of a mentor-mentee relationship between the bedside nurses and the eRNs was considered. Mentoring relationships can enhance a nurse's success in practice and have been linked to ongoing quality standards and nursing professionalism. However, because the eRNs and the unit's nurses primarily work 12-hour shifts, their schedules could not be consistently matched; therefore a mentor-mentee relationship, which requires an ongoing long-term and consistent commitment, was not possible. Instead, a select group of eRN "coaches" who could provide structured support to the nurses in the participating unit was identified. The tele-ICU manager selected 10 eRN coaches for the program. The selected eRN coaches all have prior experience as critical care preceptors and have a mean of more than
The advanced beginner is beginning to discern patterns in clinical situations but is inconsistent in relating important data about a patient. According to Benner’s model, the advanced beginner has some clinical experience and is beginning to discern patterns in clinical situations but is inconsistent in relating important data about a patient to prioritizing care. Benner advises that effective strategies for development of the advanced beginner include monitoring performance, which ensures that important information about a patient is not forgotten; assisting nurses in establishing priorities on the basis of the patient’s clinical needs; and providing nurses with an opportunity to reflect on their experiences. The program format provides eRN coaches with an opportunity to meet these needs.

Before assuming the role of coach, the eRNs were provided with the program goals and objectives, an overview of the AACN Synergy Model for Patient Care, directions for using the daily evaluation tool, and an explanation of the program’s structure.

### Before the Program

Two weeks before the end of the unit orientation, a meeting is scheduled with the orientee, the clinical nurse manager of the orientee’s unit, the tele-ICU manager, and the unit advance practice nurse (APN) or educator. This meeting is designed to introduce the orientee to the program and to review the program’s goals and objectives. Each orientee is provided with a welcome letter and a copy of the daily evaluation tool (Figure 1), which is used by the eRN coaches throughout the program. The unit APN/educator and the orientee each independently complete the postorientation assessment (Figure 2). These assessments are then compared to identify the bedside nurse’s educational needs, to plan coaching by the eRNs, and to guide the APN/educator in making patient-care assignments for the bedside nurse.

In addition, a 4-hour structured session in the tele-ICU is scheduled before the end of the unit orientation to provide the bedside nurse with a better understanding of tele-ICU resources. The session includes a 1-hour didactic overview that is conducted by the tele-ICU manager or a charge nurse to discuss the tele-ICU team’s roles, responsibilities, and workflow. System-wide and individualized unit/tele-ICU initiatives are reviewed and specialized technology is explained. During this session, the bedside nurse also spends time with an assigned eRN coach at his or her workstation and completes planned activities. The bedside nurse evaluates the objectives of the 4-hour experience (see Table) and receives continuing education hours for the session. This experience at the tele-ICU provides the foundation for the ongoing collaborative relationship between the unit nurse and the tele-ICU staff.

### Program Implementation

The postorientation program begins with the first shift that the bedside nurse works after orientation without the preceptor. The eRN coach refers to the completed postorientation assessments in order to focus on the individual needs identified for the bedside nurse’s professional growth. The eRN notifies the unit’s charge nurse that support and collaboration will occur throughout the shift. The eRN contacts the bedside nurse both at the beginning and the end of the shift. The purpose of the first shift contact is to review and discuss patient problems, shift priorities, and the plan of care for the unit nurse’s assigned patients. The purpose of the end-of-shift contact is to review the plan of care to determine if the shift goals were met, to discuss what may have been learned, and to identify any areas for further professional development. The unit nurse is encouraged to call the eRN coach at any time during the shift to ask questions, to get advice on procedures, to discuss family dynamics, or even to request visual supervision with equipment setup or nonemergent procedures. The calls at the beginning and end of shift are initiated by the eRN, and the times are incorporated into both the tele-ICU and unit workflows. These calls generally last about 5 to 10 minutes, and they have effectively met the needs of the bedside nurses. The coaching provided by the eRN does not detract from the assistance that is available from unit resources; rather, it is another layer of support guaranteed to be there no matter how busy the unit may get. Occasionally the eRN coach needs to address urgent tele-ICU responsibilities and an alternative eRN coach
<table>
<thead>
<tr>
<th>Clinical Judgment</th>
<th>I √</th>
<th>MIN √</th>
<th>MAX √</th>
<th>AACN Synergy Model Rate Level (1/3/5)</th>
<th>Comments/Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides a succinct review of patient problems, plan of care, shift priorities, eg (SBAR)</td>
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<td>Collects and interprets patient data (assessment, labs, diagnostic tests).</td>
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<td>Demonstrates ability to focus on key elements of the patient’s case and sort out extraneous details.</td>
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<td>Recognizes limits and seeks help appropriately.</td>
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<td>Recognizes change in patient situation (eg, deterioration, crisis; seeks help as needed to identify patient’s problem.</td>
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<td>Articulates the rationale for patient interventions on the basis of evidence-based practice, policies and procedures, protocols.</td>
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<td>Demonstrates ability to access resources online (policies, procedures, protocols) or others on the interdisciplinary team.</td>
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<td>Advocates ethical conflict and issues from patient/family perspective, able to separate from own.</td>
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<tr>
<td>Advocates on behalf of patient and family; considers patient's values and incorporates in care, even when differing from personal values; demonstrates give and take with patient’s family, allowing them to speak and represent themselves when possible.</td>
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<tr>
<td>Maintains appropriate communication with tele-ICU coach.</td>
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<tr>
<td>Makes appropriate referrals regarding patient care/concerns–Social Work, Case Management, Pastoral Care,…</td>
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<td>Communicates in a timely manner with physicians/ ePhysicians, charge nurse.</td>
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<td>Anticipates needs of patients/families during periods of transition, including admission, transport to other units for diagnostic testing or procedures, transfer to other units.</td>
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Date: ___/____/_______ Site: _____________ Unit: _____________ Unit RN: ______________________________ Tele-ICU Coach: ___________________________

Assigned Communications: twice per shift Contact Time: __:__ __:__ __:__ __:__

Coaches: Refer to the postorientation evaluation as needed.

Figure 1 Daily evaluation tool.
is asked to coach the unit nurse after being given background information. The eRN coach completes a daily evaluation of the unit nurse at the end of each shift. The eRN coach reviews the daily evaluation with the tele-ICU manager. The tele-ICU manager then sends the evaluations electronically to the unit APN/educator for review. At the end of each week, the unit APN/educator reviews the evaluations provided by the eRN coaches with the unit nurse. The unit nurse then provides feedback on the program, which specifies their individual professional “wins” and their opportunities for improvement. They also provide the APN/educator with feedback on the effectiveness of the support program. The APN/educator then shares the unit nurse’s feedback with the tele-ICU manager and the eRN coaches to facilitate communication between the staff and leaders of both units. The APN/educator ensures that the nurse’s patient assignments align with the nurse’s postorientation assessment of performance and ongoing weekly evaluations and adjusts patient assignments as needed.

The program has specified “check points” of 30, 60, and 90 days. At these check points, a decision is made about whether or not to continue the postorientation program. The bedside nurse again completes a self-assessment and meets with the APN/educator and tele-ICU manager to discuss the nurse’s progress and to compare the nurse’s initial postorientation assessment with his or her more recent assessment. The decision is then made collaboratively whether to continue or to conclude the program. If the decision is made to continue the program, the unit nurse completes another postorientation assessment, which is then reevaluated at the end of the next 30-day period. When performance gaps have been bridged and the unit nurse expresses confidence in his or her performance, the nurse completes the final program evaluation. The unit manager, tele-ICU manager, APN/educator, eRN coach, and unit nurse meet one final time to debrief and provide verbal feedback on the overall program and postorientation experience of the unit nurse. This is typically a face-to-face meeting with all parties.

### Program Evaluation

Metrics developed to measure the program’s success include the following:

- Progression of performance demonstrated on the postorientation assessments by unit nurse participants and APNs/educators,
- Progression of performance evidenced on daily evaluations, and
- Retention rates of unit nurse participants.

Thus far, 16 nurses have completed the program and 14 of the 16 remain after 1 year of practice. Select comments received on participants’ program evaluations include the following:

- “My conversations with my tele-ICU coach provided a safe haven to discuss questions and concerns.”
- “My coach helped me refine my time management skills.”
Name: ___________________________
Unit/Hospital: ____________________
Today’s Date: _____________ Last Day of Orientation: _____________

Read each item and choose the ONE appropriate level that best describes your current nursing practice. If you choose level 3 or 5, please provide an exemplar outlining how you have achieved this level of competency at the end of this form.

### Nurse Competencies*

#### Clinical Judgment (Clinical decision making, global grasp of the situation, coupled with skills)

<table>
<thead>
<tr>
<th>Level 1 (Competent)</th>
<th>Collects basic-level data; follows algorithms, decision trees and protocols with all populations and is uncomfortable deviating from them; matches formal knowledge with clinical events to make decisions; questions the limits of one’s ability to make clinical decisions and delegates the decision making to other clinicians; includes extraneous detail</th>
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<tbody>
<tr>
<td></td>
<td>This describes my current practice</td>
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<tr>
<td>Level 3</td>
<td>Collects and interprets complex patient data; makes clinical judgments based on an immediate grasp of the whole picture of common or routine patient populations; recognizes patterns and trends that may predict the direction of illness; recognizes limits and seeks appropriate help; focuses on key elements of case, while sorting out extraneous details</td>
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<td></td>
<td>This describes my current practice</td>
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<tr>
<td>Level 5 (Expert)</td>
<td>Synthesizes and interprets multiple, sometimes conflicting, sources of data; makes judgment based on an immediate grasp of the whole picture, unless working with new patient populations; uses past experiences to anticipate problems; helps patient and family see the “big picture”; recognizes the limits of clinical judgment and seeks multidisciplinary collaboration and consultation with comfort; recognizes and responds to the dynamic situation</td>
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<td>This describes my current practice</td>
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#### Clinical Inquiry (Question and evaluate practice)

<table>
<thead>
<tr>
<th>Level 1 (Competent)</th>
<th>Follows standards and guidelines; implements clinical changes and research-based practices developed by others; recognizes the need for further learning to improve patient care; recognizes obvious changing patient situation (eg, deterioration, crisis); needs and seeks help to identify patient problem</th>
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<td></td>
<td>This describes my current practice</td>
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<tr>
<td>Level 3</td>
<td>Questions appropriateness of policies and guidelines; questions current practice; seeks advice, resources or information to improve patient care; begins to compare and contrast possible alternatives</td>
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<td></td>
<td>This describes my current practice</td>
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<tr>
<td>Level 5 (Expert)</td>
<td>Improves, deviates from or individualizes standards and guidelines for particular patient situations or populations; questions and/or evaluates current practice based on patients’ responses, review of the literature, research and education/learning; acquires knowledge and skills needed to address questions arising in practice and improve patient care; (The domains of clinical judgment and clinical inquiry converge at the expert level; they cannot be separated)</td>
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<td>This describes my current practice</td>
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#### Advocacy and Moral Agency (Represent concerns of the patient/family/staff)

<table>
<thead>
<tr>
<th>Level 1 (Competent)</th>
<th>Works on behalf of patient; self-assesses personal values; aware of ethical conflicts/issues that may surface in clinical setting; makes ethical/moral decisions based on rules; represents patient when patient cannot represent self; aware of patients’ rights</th>
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<td>This describes my current practice</td>
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<tr>
<td>Level 3</td>
<td>Works on behalf of patient and family; considers patient values and incorporates in care, even when differing from personal values; supports colleagues in ethical and clinical issues; moral decision making can deviate from rules; demonstrates give and take with patient’s family, allowing them to speak/represent themselves when possible; aware of patient and family rights</td>
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<td></td>
<td>This describes my current practice</td>
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<tr>
<td>Level 5 (Expert)</td>
<td>Works on behalf of patient, family and community; advocates from patient/family perspective, whether similar to or different from personal values; advocates ethical conflict and issues from patient/family perspective; suspends rules - patient and family drive moral decision making; empowers the patient and family to speak for/represent themselves; achieves mutuality within patient/professional relationship</td>
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<td></td>
<td>This describes my current practice</td>
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* This describes my current practice

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**Figure 2** Postorientation program assessment.
### Nurse Competencies*

<table>
<thead>
<tr>
<th>Caring Practices (Create compassionate, supportive, therapeutic environment)</th>
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</table>
| **Level 1 (Competent)**  
Focuses on the usual and customary needs of the patient; no anticipation of future needs; bases care on standards and protocols; maintains a safe physical environment; acknowledges death as a potential outcome  | This describes my current practice |
| **Level 3**  
Responds to subtle patient and family changes; engages with the patient as a unique patient in a compassionate manner; recognizes and tailors caring practices to the individuality of patient and family; domesticates the patient's and family's environment; recognizes that death may be an acceptable outcome  | This describes my current practice |
| **Level 5 (Expert)**  
Has astute awareness and anticipates patient and family changes and needs; fully engaged with and sensing how to stand alongside the patient, family, and community; caring practices follow the patient's and family's lead; anticipates hazards and avoids them, and promotes safety throughout patient's and family's transitions along the health care continuum; orchestrates the process that ensures patient's/family's comfort and concerns surrounding issues of death and dying are met  | This describes my current practice |

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<tr>
<th>Collaboration (Work with others in a way that promotes each person's contribution)</th>
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</table>
| **Level 1 (Competent)**  
Willing to be taught, coached and/or mentored; participates in team meetings and discussions regarding patient care and/or practice issues; open to various team members' contributions  | This describes my current practice |
| **Level 3**  
Seeks opportunities to be taught, coached, and/or mentored; elicits others' advice and perspectives; initiates and participates in team meetings and discussions regarding patient care and/or practice issues; recognizes and suggests various team members' participation  | This describes my current practice |
| **Level 5 (Expert)**  
Seeks opportunities to teach, coach, and mentor and to be taught, coached, and mentored; facilitates active involvement and complementary contributions of others in team meetings and discussions regarding patient care and/or practice issues; involves/recruits diverse resources when appropriate to optimize patient outcomes  | This describes my current practice |

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<tr>
<th>Systems Thinking (Body of knowledge and tools that allow management of resources)</th>
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</table>
| **Level 1 (Competent)**  
Uses a limited array of strategies; limited outlook—sees the pieces or components; does not recognize negotiation as an alternative; sees patient and family within the isolated environment of the unit; sees self as key resource  | This describes my current practice |
| **Level 3**  
Develops strategies based on needs and strengths of patient/family; able to make connections within components; sees opportunity to negotiate, but may not have strategies; developing a view of the patient/family transition process; recognizes how to obtain resources beyond self  | This describes my current practice |
| **Level 5 (Expert)**  
Develops, integrates, and applies a variety of strategies that are driven by the needs and strengths of the patient/family; global or holistic outlook—sees the whole rather than the pieces; knows when and how to negotiate and navigate through the system on behalf of patients and families; anticipates needs of patients and families as they move through the health care system; utilizes untapped and alternative resources as necessary  | This describes my current practice |

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<tr>
<th>Response to Diversity (Recognize patient/family differences and incorporate into plan of care)</th>
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</table>
| **Level 1 (Competent)**  
Assesses cultural diversity; provides care based on own belief system; learns the culture of the health care environment  | This describes my current practice |
| **Level 3**  
Inquires about cultural differences and considers their impact on care; accommodates personal and professional differences in the plan of care; helps patient/family understand the culture of the health care system  | This describes my current practice |
| **Level 5 (Expert)**  
Responds to, anticipates, and integrates cultural differences into patient/family care; appreciates and incorporates differences, including alternative therapies, into care; tailors health care culture, to the extent possible, to meet the diverse needs and strengths of the patient/family  | This describes my current practice |

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Figure 2 Continued
• “I know there is someone on the other side of the camera to help me even when the program is complete.”
• “I'm not afraid to call the tele-ICU for help because of my coaches.”
• “Coaches have helped me implement appropriate protocols and follow evidence-based practices.”
• “I would call my coach before I would call the attending physician in the middle of the night.”

Table  Objectives of the tele-intensive care unit (tele-ICU) clinical experience

After completing the tele-ICU clinical experience, reading the handouts, and completing the review questions, you will be able to

1. Discuss the goals of a tele-ICU program.
2. Describe primary responsibilities, tasks, role of technology, and the usual workflow of the tele-ICU team.
3. Describe various clinical outcomes monitored by the tele-ICU.
4. Discuss potential barriers to implementation of a successful tele-ICU program and factors most likely to lead to a successful program.
5. Identify strategies your unit might adopt for optimizing the role of the tele-ICU in the management of your patients.
6. Successfully answer the written questions on the basis of the assigned reading and program objectives.
“We could never have on-boarded as many new novice nurses without the program.” (unit manager)

Incidental positive program results include increased collaboration between program participants, unit staff, and tele-ICU staff. The inclusion of the program has also improved the hospital’s recruitment and retention of new critical care staff. As with any significant change or program implementation, leaders’ commitment is essential not only for program development, but, more importantly, for program sustainability and success.10

Lessons Learned
Postprogram evaluations and interviews have provided information for program improvement and modification. Based on the program reviews, provision of the eRN coaches with additional education, including education on effective coaching skills, communication skills, adult learning principles, and critical thinking skill development is planned. The tele-ICU manager is also partnering with the System Organizational Development Department to arrange for eRNs to attend available classes on coaching skills. Because it can be challenging for an eRN to coach more than 2 unit nurses per shift, the number of unit nurses has been limited to 2 per eRN coach. Additionally, because of the number of unit nurses in the program, eICU staff and eRN coaches need to be flexible in their assignments. At times, this requires eRN coaches to work with a unit nurse who is not from the eRN’s assigned unit. The coaching sessions have not resulted in overtime for either eRNs or unit nurses. Additional critical care units are seeking to participate in the program, however, because of the limited availability of eRN coaches, a method of prioritization for participation is planned.

The original daily evaluation tool was adapted from a document in the Philips VISICU Program11; this original tool was thought to be too similar to the unit’s orientation skills assessments and was later revised to reflect competencies included on the postorientation assessment. Accountability for organizing the weekly evaluations and “check point” meetings needed clarification, and it was determined the tele-ICU manager would be the best person to oversee these meetings.

Summary
The progression from novice to advanced beginner to competent level of critical care nursing practice according to the Benner model generally takes at least 2 years of experience in critical care,5 although time alone does not guarantee competent practice. The eRN is in a unique position to be an additional team member who can provide immediate support and guide decision making of nurses who have just completed the formal orientation period. Hospitals that use tele-ICUs have the opportunity to develop a structured program that builds on the collaborative relationship between the tele-ICU and the hospital unit for support of nurses during this important postorientation period. CCN

Acknowledgments
The authors thank the eRN coaches of the Advocate Health Care eICU for their contributions to the success of the program.

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None reported.

Letters
Now that you’ve read the article, create or contribute to an online discussion about this topic using eLetters. Just visit www.ccnonline.org and select the article you want to comment on. In the full-text or PDF view of the article, click “Responses” in the middle column and then “Submit a response.”

References