PERCEPTIONS OF PHYSICIANS, NURSES, AND RESPIRATORY THERAPISTS ABOUT THE ROLE OF ACUTE CARE NURSE PRACTITIONERS

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**BACKGROUND** Information about the contributions of acute care nurse practitioners to medical management teams in critical care settings is limited.

**OBJECTIVE** To examine contributions of acute care nurse practitioners to medical management of critically ill patients from the perspectives of 3 disciplines: medicine, respiratory care, and nursing.

**METHODS** Attending physicians, respiratory therapists, and nurses in 2 intensive care units were asked to list 3 advantages and 3 disadvantages of collaborative care provided by acute care nurse practitioners. Qualitative methods (coding/constant comparative analysis) were used to identify common themes and subthemes. Overall response rate was 35% (from 69% for attending physicians to 26% for nurses).

**RESULTS** Responses were grouped into 4 main themes: accessibility, competence/knowledge, care coordination/communication, and system issues. Acute care nurse practitioners were valued for their accessibility, expertise in routine daily management of patients, and ability to meet patient/family needs, especially for “long-stay” patients. Also, they were respected for their commitment to providing quality care and for their communication skills, exemplified through teaching of nursing staff, patient/family involvement, and fluency in weaning protocols. Physicians valued acute care nurse practitioners’ continuity of care, patient/family focus, and commitment. Nurses valued their accessibility, commitment, and patient/family focus. Respiratory therapists valued their accessibility, commitment, and consistency in implementing weaning protocols.

**CONCLUSION** Responses reflected unique advantages of acute care nurse practitioners as members of medical management teams in critical care settings. Despite perceptions of the acute care nurse practitioner’s role as medically oriented, the themes reflect a clear nursing focus. (American Journal of Critical Care. 2004;13:480-488)

Today, demand is increasing for acute care nurse practitioners (ACNPs) to work in collaboration with physicians in acute and critical care settings. That demand is being fueled by societal, technological, and educational forces. Because elders consume considerable healthcare resources, the aging of the population has led to an increased demand for services.¹ Technological advances allow patients at higher risk to undergo new treatment options, with an increased need for intensive monitoring.² In addition, new standards place strict limits on the number of hours that medical trainees can participate in providing care to patients, resulting in the need to shift hours to faculty or other providers.³

Results of previous studies⁴⁻¹¹ indicate that ACNP members of medical care delivery teams can provide high-quality, cost-effective care in a variety of settings. As examples, Dahle et al⁵ examined the impact of transferring medical management of selected patients with heart failure from a rotating team of house staff to an...
ACNP. Compared with historical controls, total hospital costs were lower ($P < .03$) during the year the ACNP participated in care delivery, and 30-day readmission rates did not change significantly. Spisso et al retrospectively examined the effect of adding 2 ACNPs to a trauma service. Introduction of ACNPs resulted in decreases in overall hospital length of stay, clinic waiting times, and the number of complaints from patients. Russell et al reported a decrease in overall length of stay ($P = .03$) and intensive care unit (ICU) length of stay ($P < .001$), lower rates of urinary tract infection and skin breakdown ($P < .05$), and a shorter time to mobilization after introduction of an ACNP team in a neuroscience ICU and an acute care neurosurgery unit. Hoffman et al examined differences in time spent in work activities by an ACNP and pulmonary/critical care fellows who provided medical management for patients in a subacute medical ICU. The ACNP and the fellows spent an equivalent amount of time in activities related to direct management of patients (40% vs 44%; not significant), suggesting similar efficiency in carrying out these responsibilities. Compared with fellows, the ACNP spent more time in activities related to coordination of care (45% vs 18%; $P < .001$) and less time in nonunit activities (15% vs 37%; $P < .001$). Such differences may provide an explanation for the different outcomes observed when practices of ACNPs and physicians were compared.

Additional studies support a high level of satisfaction with the ACNP role. Rhee and Dermyer conducted a telephone survey of patients whose care in the emergency department had been managed by a nurse practitioner or house staff. Overall satisfaction was good, with no significant differences in ratings. McMullen et al assessed the satisfaction of patients whose medical management was provided by either a nurse practitioner or house staff in collaboration with an attending physician. Compared with patients managed by house staff, ACNP-managed patients were more satisfied with communication about their care ($P < .001$). They were less satisfied, however, with explanations that the ACNP gave about test findings ($P = .02$). Patients’ satisfaction with the knowledge and skills of ACNPs and house staff did not differ significantly.

*Studies show that ACNP medical team members can provide high-quality, cost-effective care in a variety of settings.*

A key component of practice improvement involves continuous evaluation to find ways to improve role implementation. Using a multidisciplinary perspective, van Soeren and Micevski described perceptions of 4 groups of providers regarding the influence of the ACNP role on patient care: attending physicians ($n = 14$), nursing administrators ($n = 12$), staff nurses ($n = 48$), and ACNPs ($n = 14$). Respondents represented 3 practice areas (cardiac/critical care, geriatrics, and nephrology) in 4 tertiary care institutions where the ACNP role had been implemented for 4 years. The ACNPs’ perceptions reflected 3 themes: continuity of care, nursing leadership, and a holistic clinical focus. The perceptions of the attending physicians reflected 2 themes: continuity of care and a holistic clinical focus. The nursing administrators’ perceptions also reflected 2 themes: continuity of care and nursing leadership. The 3 themes reflected by the perceptions of staff nurses were continuity of care, being a clinical resource, and being a role model. Despite perceptions of the ACNP role as medically oriented, the themes identified reflected a clear nursing focus and, consistently, all groups cited improved continuity of care as a benefit of the ACNP role.

The Society of Critical Care Medicine recognizes the inclusion of ACNPs as members of critical care management teams. Little information, however, is available about the specific nature of the contribution that ACNPs make to medical and nursing care in the ICU, or how other members of the multidisciplinary care team view those contributions. To further amplify multidisciplinary perceptions, we examined perceptions regarding inclusion of ACNPs on medical management teams in 2 different critical care settings. Perspectives were sought from 3 disciplines: medicine, nursing, and respiratory care. To our knowledge, this study is the first to describe perceived contributions of ACNPs in the ICU from a multidisciplinary perspective.

**Materials and Methods**

**Design and Sample**

A comparative survey design was used. Attending physicians, staff nurses, and respiratory therapists in the 2 ICUs (each unit employed a single full-time ACNP) were asked to complete an open-ended survey that asked respondents to list 3 advantages and 3 disadvantages of care collaboratively provided by ACNPs. All attending physicians and respiratory therapists were eligible to participate in the study. Staff nurses were eligible to participate if they were permanent employees who did not work full time on the night shift. Casual employees were not eligible to participate. The study was reviewed and approved by the institutional review board.

**Setting**

The 2 ICUs were located in 2 adult teaching hospitals affiliated with the University of Pittsburgh Med-
The cardiothoracic ICU, a 22-bed unit, admitted patients who had undergone cardiothoracic surgery or heart, lung, or heart/lung transplantation. The subacute medical ICU (MICU), an 8-bed unit, admitted patients from the high-acuity MICU who had recovered from the acute phase of critical illness but were unable to be weaned off mechanical ventilation, experienced complications that precluded discharge from the ICU, or were awaiting placement. The eligible staff of the 2 ICUs included 13 attending physicians, 28 respiratory therapists, and 111 full-time nurses who worked 7 AM to 7 PM or rotated 7 AM to 7 PM and 7 PM to 7 AM (Table 1). Of these, 9 attending physicians (69%), 15 respiratory therapists (54%), and 29 staff nurses (26%) responded to the survey.

The ACNPs had master’s degrees and were certified (American Nurses Credentialing Center) graduates of an ACNP program with a focus in critical care. They were also credentialed within the hospital by the medical staff credentialing committee of the institution. Both were employed by the university-affiliated practice plan of the medical center and reported to the medical director of the ICU or a designee. Both had approximately 2 years’ experience in the ACNP role in the ICU.

Both ACNPs provided coverage 8 to 10 hours a day (Monday-Friday). In the subacute MICU, the ACNP was responsible for collaborative medical management for all admissions to the unit for a designated period, for example, 7 months on, 7 months off. In the cardiothoracic ICU, the ACNP was responsible for collaborative medical management of selected patients, for example, elective surgical cases. The role included assessment, diagnosis, and writing all orders for care, including orders for weaning and extubation. In both units, the attending physician made rounds daily to review the plan of care and was available for consultation throughout the day. ACNPs were responsible for admitting new patients, with subsequent consultation with the attending physician about the diagnosis and plan of care. In the cardiothoracic ICU, the ACNP performed invasive procedures, such as insertion of arterial and central venous catheters (femoral, jugular, subclavian), and bronchoscopies. In the subacute MICU, this responsibility was assumed by a fellow or attending physician.

### Methods

The survey instrument was distributed to attending physicians, staff nurses, and respiratory therapists working in the 2 ICUs by hospital mail, direct approach, or the Internet. Each clinician was asked to complete and return the survey by hospital mail, by putting it in a large envelope provided in the staff lounge, or by placing the survey in a sealed envelope for pickup by an investigator. Respondents were asked to indicate their professional affiliation by checking a box labeled attending physician, registered nurse, or respiratory therapist. No other identifying information was obtained. Respondents were asked not to place their names on the form.

### Data Analysis

Qualitative methods were used to analyze the study data. Coding and constant comparative analysis were used to identify regularities (or irregularities) in responses and thereby arrive at common themes and subthemes. These themes could be simple, such as the availability of the ACNP on the unit, or more comprehensive, such as analysis of complicated diagnoses or statements related to perceived expertise of the provider. The participants’ handwritten survey responses were transcribed in Microsoft Word as ACNP advantages or ACNP disadvantages. The 2 categorically different documents were then hand coded by 2 investigators (MBH, CS) who used consensus agreement to label and define codes. Recurring themes were identified within and across these main categories by first reading and rereading all responses and then coding each response for main ideas. Code definitions were developed collaboratively by a panel of 3 investigators (MBH, CS, FJT; Table 2). The documents were transferred to an ATLAS.ti computer program (Scientific Software Development, Berlin, Germany) and participants’ responses were “tagged” in the computer according to code labels. Relationships between codes were identified, and the codes were grouped into code “families” representing the core themes.

### Results

A total of 262 comments were received. Comments were grouped into 4 main themes: accessibility,
competence/knowledge, care coordination/communication, and system issues. Of the 4 categories, the most responses were received for care coordination/communication (n = 107).

**ACNPs were seen as easily accessible, approachable, very knowledgeable, committed, excellent teachers who are able to provide a holistic patient focus.**

### Accessibility

ACNPs were seen as accessible to clinicians, patients, and patients’ families (Figure 1). ACNPs were perceived as “readily available on (the) unit during the day” and “easily accessible and approachable,” and “open to suggestions,” a characteristic that was valued as it provided “immediate access to [a] decision-maker” who was “able to respond to problems quicker,” including issues related to patients and their families. The enhanced accessibility was viewed by respondents as creating an optimal environment for obtaining orders, answering questions, and responding to problems. Comments about disadvantages in the category of accessibility focused on the ACNPs’ work schedule (weekdays/daytime only). Respondents saw this schedule as a disadvantage because it precluded the “24/7” availability of the fellows.

### Competence/Knowledge

The theme of competence/knowledge included comments related to perceptions about the ACNPs’ ability to manage acute/complex problems, experience, and technical skills (Figure 2). The ACNPs were perceived as less skilled than pulmonary/critical care fellows in independently thinking through complicated diagnoses. As well, fellows were viewed as more
competent in situations involving emergent events. Conversely, the ACNPs were perceived as experts in providing care required as a part of routine daily management of patients. ACNPs were perceived as “very knowledgeable,” “dedicated to the type of medicine and patient care on the unit,” and “more interested in patient outcomes” than were fellows who were on the units for only a short time. Some comments highlighted benefits of the ACNPs’ nursing perspective:

- [ACNP] has good insight into nursing care issues. ~ Registered nurse
- [ACNPs are] more interested in patient outcomes. ~ Registered nurse
- [ACNP] knows reality of how quickly things can be done. ~ Respiratory therapist

Because of prior bedside nursing, [ACNP has] more compassion for patients/families. ~ Respiratory therapist

Several comments related to the proficiency of the ACNP who performed procedures, for example, “performs procedures/lines as do residents” and “can do same procedures as fellow.” However, comparative comments gave advantage to the fellows.

**Care Coordination/Communication**

The theme of care coordination/communication included comments related to perceived commitment, communication, care coordination, continuity, credibility, holistic focus, family interactions, role boundary, and role rapport (Figure 3). Commitment was uniformly perceived as an advantage for ACNPs. ACNPs were viewed as being “motivated to provide quality care” because “this is their life’s work versus the fellow [who is] here as a learning experience, then moving on.” The ACNPs were viewed as more understanding and appreciative care providers for chronically, critically ill ICU patients:

- [ACNPs have] appreciation for chronic care and recovery from acute illness. ~ Physician
- [ACNP has] enthusiasm for this type of patient case, consistent care provider, follow-up. ~ Physician
- [ACNPs are] not easily frustrated with mundane issues, more interested in subacute patients. ~ Registered nurse

ACNPs received positive (beneficial) comments from physicians, respiratory therapists, and staff nurses in regard to communication. ACNPs were perceived as “excellent teachers for staff (explain rationale)” and “fluent in weaning protocols [thereby] increasing efficiency.” Many advantages related to continuity of care and interactions with staff:

- [ACNP has] better continuity with families. ~ Physician
- [ACNP is] better [than fellows] at triage and supportive and palliative care issues, which are often the most important issues on the weaning unit. ~ Physician
- [ACNP has] better patient and family satisfaction due to knowledge of “whole” family and patient. ~ Registered nurse
- [ACNP is] more aware/attentive to nursing care issues. ~ Registered nurse
The [ACNP] is very caring, more attentive to responsibilities and concerns of staff. ~ 
Respiratory therapist

[ACNP] knows staff’s strong and weak points. ~ Respiratory therapist

Respondents saw various issues in regard to perceived credibility. A nurse commented, “[Fellows] appear to have more ‘clout’ in [the] facility than the [ACNP].” In this context, credibility referred to perceptions of others (staff, patients’ family members, and/or hospital administrators) based on social status of the role and/or discipline. There was also support for the idea that physicians have more credibility in interactions with patients’ families, because some families preferred to speak with a physician rather than a nurse. On the other hand, nurse respondents identified the following benefits of ACNP communication with staff and with patients’ families:

[ACNP] communicates with staff, reviews orders, and allows time for questions as well as feedback. ~ Registered nurse

[ACNP] interacts well with families using “nonmedical” terms. ~ Registered nurse

Families rarely complain about not being updated on progress of patient. ~ Registered nurse

ACNPs were recognized for their holistic focus, for example, “the whole patient, not just medical needs.” This focus was particularly recognized in regard to ACNPs’ concern for discharge needs, for example, “treats the whole patient, not just discharge priorities.”

There were also allusions to role acceptance and role boundary issues regarding the ACNP:

[ACNP has] challenging rapport with nursing staff. ~ Physician

[ACNPs] may have lack of respect from other RNs. ~ Registered nurse

Need to remember that role is that of a physician (write orders, direct care) not nurse or aide and [and] not micromanage. ~ Registered nurse

System Issues

System issues included comments related to the scope and structure of practice, including legal and institutional limitations on ACNP practice (Figure 4). The work schedule of the ACNPs (who were available only on weekdays and during the daytime shift) was seen as a disadvantage compared with the schedule of fellows, who provided constant 24/7 ICU coverage. According to hospital policy at the time the study was conducted, ACNPs were required to have their orders cosigned. This restriction was viewed as a disadvantage when the ACNPs were compared with fellows. This requirement has since been rescinded, as countersignature is not required by statute. Concern was also expressed about burnout, given the responsibilities of the ACNP role:

He/she might get burned out—the fellow on the other hand graduates and moves on to increased salary. Basically, a nurse practitioner is a permanent resident/fellow. ~ Registered nurse
Points of View According to Discipline

When the themes were examined according to discipline, physicians valued the continuity of care, patient/family focus, and commitment of ACNPs. Nurses valued the accessibility, commitment, and patient/family focus of ACNPs. Respiratory therapists were primarily concerned with accessibility and quality care outcomes.

Nursing perspective is valuable in and of itself. ~ Physician

Always available and able to tend to patient issues. ~ Registered nurse

Dedication of the ACNPs—this is their life’s work versus the fellows, who are here as a learning experience and then move on. ~ Respiratory therapist

Discussion

Numerous measures can be used to evaluate outcomes of ACNP practice. These measures may include medical outcomes, such as mortality, length of stay, complications, readmission rate, and costs, as well as patient-focused outcomes, such as symptom control, quality of life, and functional status. Although such comparisons are necessary to establish the benefits of ACNP practice, they do not provide any information about characteristics of ACNP practice that might benefit the medical management of critically ill patients.

The goal of this study was to increase understanding of the contributions of ACNPs as part of the ICU medical management team. Because practice in an ICU is highly collaborative, we chose to use an interdisciplinary perspective. We selected attending physicians, staff nurses, and respiratory therapists as respondents because of their direct daily involvement with ACNPs. To our knowledge, no other investigators have described perceptions of ACNP practice from this interdisciplinary perspective.

Several models are used for incorporating ACNPs into an ICU setting. The ACNP may function as a member of a team and, in comparison with fellows, manage less complex cases as was done in the cardiothoracic ICU. The ACNP may assume the role of manager for cases that are complex, involve chronic, critical illness, and/or are costly for institutions. The ACNP’s role as a case manager may be further expanded to outcomes manager and, in this instance, include responsibility for care management, staff development, research, and system change. Alternately, the ACNP may provide medical management for all patients admitted to the unit, as was done in the subacute MICU.

When the responses to our survey were analyzed, 4 main themes were found: accessibility, competence/knowledge, care coordination/communication, and system issues. Nurses and respiratory therapists viewed ACNPs as accessible, a factor that enhances the unit’s efficiency. Orders could be more easily obtained, questions answered, and problems resolved because of the unit-based focus of the ACNP. As Hravnak has noted, using multiple caregivers who are on the unit for short periods (ie, clinical rotations) to deliver care to patients with complex problems and lengthy stays can be risky. Gaps can develop in knowledge of differential diagnoses that have been examined and rejected; laboratory values that have been ordered, evaluated, and reordered; and weaning strategies that appeared successful, but were abandoned because another ventilator mode was preferred. Our findings provide strong endorsement for the benefits of ACNPs in enhancing continuity of care.

Additional benefits included the insight of ACNPs into nursing care issues and willingness to teach patients, patients’ families, and staff. As one respondent noted, “this is their life’s work,” unlike fellows, who are assigned to the unit as a learning experience and then move on to other venues. Similarly, other reported benefits of ACNP practice include a broader perspective in planning, a greater emphasis on patient/family issues, and more time spent in professional development of staff nurses.

These findings help define the unique contributions of ACNPs as members of medical management teams. The ACNP’s role typically involves responsibility for collaborative management of patients whose illnesses are less medically complex or whose conditions are unstable. In the cardiothoracic ICU, the ACNP focused on medical management of patients...
who have elective open heart surgery, and in the subacute MICU, the ACNP focused on medical management of patients who experienced difficulty being weaned off mechanical ventilation. Working with such patients is typically not viewed as a good learning experience for physicians-in-training. However, the care of such patients is an integral part of a busy ICU. Our findings suggest that such patients benefit from collaborative medical management provided by an ACNP.

Perceived credibility issues were suggested by references to patients’ families wanting to speak with a physician, but respondents also made references to provision of more detailed and frequent explanations to patients’ families by the ACNP, for example, more understandable and frequent updates. McMullen et al reported similar findings from a study of patients’ satisfaction with an ACNP service. Compared with patients managed by house staff, patients managed by an ACNP were more satisfied with communication about their care but less satisfied with explanations that the ACNP gave about test results. Because of the structure of our study, we could not determine why patients were viewed as more accepting of information provided by physicians. Potentially, this attitude resulted from patients’ lack of familiarity with this advanced practice role and/or social views of physicians as possessing unique authoritative knowledge.

**Although viewed as medically oriented, themes identified show that the ACNP role has a clear nursing focus.**

When the findings were examined according to discipline, physicians valued the continuity of care, patient/family focus, and commitment of the ACNPs. Nurses valued the accessibility, commitment, and patient/family focus of the ACNPs. Respiratory therapists valued the ACNPs’ accessibility and consistency in implementing weaning protocols. Finally, despite the perception of the role of the ACNP as medically oriented, the themes identified reflected a clear nursing focus.

**Limitations**

This study had several limitations. Although the response rate was high for attending physicians (69%) and respiratory therapists (54%), it was considerably lower for staff nurses (26%), resulting in an overall response rate of 35%. It is unknown why nurses chose not to respond in greater numbers or how responses of those who chose not to participate might have influenced the study’s results. The study was conducted in a single academic health center and 2 specialized ICUs that handle very complex cases. It is unknown whether similar perceptions might be identified in community ICUs or ICUs with a different specialization. Finally, the study examined the practice of only 2 ACNPs. It is unknown whether the practice of each ACNP was unique in ways that might have influenced our findings.

**Summary**

We examined the contributions of ACNPs from the perspective of 3 disciplines: medicine, respiratory care, and nursing. Attending physicians, respiratory therapists, and nurses in 2 ICUs that employed a full-time ACNP were asked to complete an open-ended survey by listing 3 advantages and disadvantages of care provided by ACNPs. Qualitative methods were used to identify common themes and subthemes. ACNPs were viewed as experts in providing routine daily management of patients and in meeting needs of patients and patients’ families, especially in regard to “long-stay” patients. In addition, ACNPs were valued for their commitment to providing quality care and for their communication skills, exemplified through teaching of staff, involvement with patients and patients’ families, and fluency in weaning protocols. When the findings were examined according to discipline, physicians, nurses, and respiratory therapists described unique benefits of the role of ACNPs. Finally, despite perceptions of the ACNP’s role as medically oriented, the themes we found reflect a clear nursing focus.

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Commentary by Mary Jo Grap (see shaded boxes).

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