Communication between physicians and nurses as a target for improving end-of-life care in the intensive care unit: Challenges and opportunities for moving forward

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Our objective was to discuss obstacles and barriers to effective communication and collaboration regarding end-of-life issues between intensive care unit nurses and physicians. To evaluate practical interventions for improving communication and collaboration, we undertook a systematic literature review. An increase in shared decision making can result from a better understanding and respect for the perspectives and burdens felt by other caregivers. Intensive care unit nurses value their contributions to end-of-life decision making and want to have a more active role. Increased collaboration and communication can result in more appropriate care and increased physician/nurse, patient, and family satisfaction. Recommendations for improvement in communication between intensive care unit physicians and nurses include use of joint grand rounds, patient care seminars, and interprofessional dialogues. Communication interventions such as use of daily rounds forms, communication training, and a collaborative practice model have shown positive results. When communication is clear and constructive and practice is truly collaborative, the end-of-life care provided to intensive care unit patients and families by satisfied and engaged professionals will improve markedly. (Crit Care Med 2006; 34[Suppl.]:S332–S340)

Key Words: intensive care unit; end of life; communication at end of life; nurse–physician communication; nurse–physician collaboration

There is strong recognition that a collaborative interdisciplinary care framework should be the basis on which quality of end-of-life care is provided to intensive care unit patients and their family members (1–5). This framework is one in which ICU nurses, physicians, and other healthcare professionals work together cooperatively and share responsibility for decision making to carry out the best plan for patient care (6). A collaborative framework has the potential to improve not only patient and family member satisfaction with care (7, 8) but also has shown to improve ICU nurses’ and physicians’ satisfaction (9–12). When collaboration does not occur, it can have negative outcomes for patients and their families (13–15) and for nurses and physicians who provide this care (16, 17).

In this article, we will discuss obstacles and barriers to effective communication and collaboration between nurses and physicians from multiple perspectives. We will evaluate practical interventions for improving communication and collaboration between nurses and physicians and will conclude with future practice and research recommendations. Our goal is two-fold: 1) to promote the use of collaborative practice methods so that critical care colleagues can best serve patients and their families at the end of life and 2) to stress the importance of recognizing and respecting each professional’s contribution to end-of-life care.

Challenge: The “Physicians Are from Mars and Nurses Are from Venus” Phenomenon

With all of the evidence that speaks to the importance of collaborative care, why does true collaboration still elude ICU professionals when teamwork and open communication are desperately needed, especially in the area of end-of-life care? Several reasons are attributed to this lack of collaboration, including the nurse–physician relationships, work philosophies, responsibilities, and education (18). A brief history of the often disparate values, beliefs, and attitudes toward end-of-life care of the two professions may help to explain the disjointed relationship.

Philosophies and perspectives on end-of-life care in the ICU have been derived primarily from qualitative and descriptive research. Several recent studies describe how nurses often feel unsupported and that their opinions about end-of-life care processes are not respected (16, 19–21). Nurses speak of being unprepared educationally and often have to learn how to care for dying patients by “trial and error” (16, p 40). Physicians, like nurses, also cite a lack of adequate end-of-life education (15, 22). Physicians, traditionally, are trained to diagnose the problem so the patient can be cured and discharged from the ICU (22). Nurses have primarily been prepared to look at the whole person and evaluate more than the disease process. At times, nurses tend to have a less optimistic view of the patient’s situation than do physicians (16). They commonly feel frustrated by the medical plan, especially when there are conflicting opinions given to the patient and family members (16, 19, 21). A physician’s time in the ICU is more limited because he or she must attend to other patients and responsibilities. Nurses spend more direct time with the patient and family members and can offer ongoing support (3, 16). Because they spend more time with patients and families, nurses have to deal directly with the actual process of dying and death on a routine basis. Thus, on several levels, there are differences between physicians and...
nurses that can create obstacles to communication and collaborative care.

Using a grounded theory approach, Simmonds (23) sought to understand experiences of ICU professionals who work with dying ICU patients and how this work affected them, particularly when they believed patients were being overtreated. Noting that the “ICU is the setting that has the greatest ability to delay death” (23, p 168) by continuing to treat patients who will ultimately die, she had her subjects (eight physicians, six house staff, and seven nurses who practiced in ICUs) focus on this type of patient. What Simmonds observed was that, for physicians, the daily routine of ICU allows them to avoid or ignore death. As one physician stated, “because we have technology, we have to use it...you get caught up in that...you forget about the rest...it’s easier just to ignore the issues” (23, p 171). For nurses, when a patient is dying, they spoke of feeling abandoned by the physicians. Likewise, physicians feel abandoned by patients who die (23), and both nurses and physicians alluded to their feelings of failure when their patients die. Simmonds (23) also reported that physicians were fearful of litigation. This last factor is emphasized by the legal responsibility that physicians have for many of the patient care decisions (5, 18). According to Simmonds, to avoid difficult decisions, ICU physicians practice “decision-making by default” (23, p 172). To do so, they continue treatments and avoid confrontations and ethical decision making. This shields them from the reality that the patient is going to die. These different practice responsibilities and perspectives can serve as obstacles to communication and collaboration or they can lead to integrated care.

The conclusions from this study, that all ICU professionals need greater support and better end-of-life education and that increased collaboration and communication could result in more appropriate care, are important to note. However, due to the small sample size and the type of research methodology, Simmonds’ findings cannot be generalized to a larger population.

Research conducted in Australia and Canada corroborate Simmonds’ findings. Cartwright et al. (24) reported results from a postal survey of Australian critical care nurses (n = 231) about their knowledge, attitudes, and beliefs concerning death and dying in ICUs. A major concern expressed by these nurses was doctor-nurse communication. Nurse respondents noted that they frequently have intimate knowledge of the wishes of families and patients, and this knowledge should be respected and sought when end-of-life decisions are being made. The nursing profession has its own body of knowledge and scope of practice that supports their involvement in end-of-life discussions. Cartwright et al. (24), echoing findings from other studies, emphasized the strong need for more education of ICU health professionals.

Canadian nurses (n = 14) and physicians (n = 7) in one acute care hospital provided their perspectives on ethical issues associated with end of life (26). Again, the views of nurses and physicians were different. What surfaced from these interviews was that physicians bear the burden of having to make decisions, whereas the burden of nurses is in having to live with practice decisions made by someone else. The differences between the two were noted in the following quotes:

Physician: “I sense a lot of time the nurses [wonder] what I’m doing to these patients. Until you’re in that position of actually having to make the final decision to turn somebody off, it’s a lot easier to say it and a lot harder to do it” (26, p 710). Nurse: “[We’re] very frustrated. I think we hurt a lot for the patients. It doesn’t matter what we tell most of the physicians, about the pain or suffering... about how miserable they are with all the treatments they’re getting, etc. It’s almost like falling on deaf ears” (26, p 711).

Once again, the problem of communication was a distinct theme in this study. The researchers concluded that these professionals, with the support of their administration, need to engage in cross-disciplinary discussions. When such dialogue occurs, according to Miller et al. (22), the different “narratives” of the two disciplines may be apparent: the physician’s biomedical interpretation of disease and the nurse’s holistic approach to curing and caring. From this recognition, an understanding and respect for the perspectives and burdens felt by the other could lead to shared decision making. Miller et al. (22) recommended that institutions create an end-of-life care committee as a venue for implementing shared decision making (Fig. 1).

Clearly, the perspectives and experiences of ICU physicians and nurses are different and, at times, create problems during end-of-life care. To improve end-of-life care, the two planets, Venus and Mars, need to align so that strengths and expertise of both disciplines are maximized. Yet, evidence exists that optimal communication and collaboration between physicians and nurses are sometimes elusive practices in ICUs (23–26), that these professionals are not always able to make their optimal contributions to good end-of-life care, and that, as such, they do not feel good about their practice. Research of ICU patients’ families, nurses, and physicians provides such evidence.

State of the Practice: What Families of Dying ICU Patients Tell Us

It could be argued that during end-of-life care in the ICU, family members suffer the most because they are often called on to make difficult decisions in the event that the patient cannot make those decisions (27–30). Most of the literature focusing on family members of patients at the end of life in the ICU address their needs, comprehension of information, and satisfaction with care (27, 31–33). Very few of these studies focus on how family members perceive the role of the physician or nurse as a communicative, collaborative team. However, recent studies focused specifically on the family members’ perceptions of how the physician and the nurse work together collaboratively to meet their needs (34, 35).

Azoulay et al. (34) prospectively asked 920 family members of 637 ICU patients to assess the ability of the staff to meet their needs and to identify areas of improvement that would increase their satisfaction. They found that 11.7% of family members thought that they received contradictory information; this was associated with satisfaction scores that were 21.1% lower than those who thought the information they received was consistent (p = .002). They also found that 55% of family members did not know the specific role of each caregiver. Satisfaction scores of the family members who did not know specific caregivers’ roles were 13.9% lower than those who did know the caregivers’ roles (p = .002).
Auerbach et al. (35) were interested in how information was transmitted to family members from the ICU healthcare team. They examined several factors, but most importantly, they examined the family members’ impressions of the bedside nurse and primary physician’s interpersonal relationships while caring for the patients. Family members then noted whether these impressions affected their own needs and emotional stress levels. The investigators surveyed 40 family members of ICU patients at a tertiary care center using the Impact Message Inventory. There were significant differences between how family members viewed physicians compared to nurses. Physicians were viewed as having a higher “controlling” score than nurses at admission (p = .002). Family members viewed the nurse as having a higher “affiliation” score than the physicians at both admission and discharge (p < .001, for both). Family members also had poorer emotional adjustment if they viewed the physician as having low “affiliation.” They reported that their needs were not met if they perceived the physician as being more controlling. Conversely, the more they viewed the physician as being “affiliated,” the less they reported emotional distress and the more they thought their needs were met.

The perspectives of family members can have a tremendous effect on how they view the care their loved one receives while in the ICU. These perspectives have the potential to affect their satisfaction and their comprehension of information. As noted by Azoulay et al. (34) and Auerbach et al. (35), most of these findings are caregiver-related and can be improved with further research. Family members in the first study (34) were more satisfied if they received consistent information and knew the roles of each team member, and they wanted to avoid contradictions in information. Family members in the second study (35) were more satisfied if healthcare workers were less controlling and more affiliated. Without planned interventions to improve collaboration and teamwork, these areas will remain deficient. If there is not consistent open communication and collaboration between the nurse and the physician, these end-of-life decisions can become even more challenging. If the healthcare team does not approach the patient and the family member with a collaborative framework, it could ultimately affect the family members’ satisfaction with care, comprehension of information, and decision-making capability. However, this can be modified with interventions to improve outcomes, such as a structured communication program (34).

**State of the Practice: Nurses’ and Physicians’ Perspectives on Obstacles, Barriers, and Supporting Behaviors in Providing End-of-life Care**

Nurses’ viewpoints and perspectives on collaboration and communication with physicians in end-of-life care in the ICU have also been explored in the literature, and similar themes have emerged. A sample of 21 nurses from two community hospitals described their experiences and perceptions in providing quality end-of-life care to patients and family members in the ICU (16). Semistructured interviews were used, and demographic data were gathered on the sample. Nurses in this study stated that it was important for the physician to give the patient and family member a clear, accurate and realistic prognosis. Nurses also thought that physicians were much more optimistic than the nurses, or at least presented things to the family with more optimism. They thought that an overly optimistic approach may give the family member false hope about outcomes of care or may make it difficult for the family member to give permission to let go. Nurses thought that physicians of different specialties often gave contradictory information to the family members. They noted that many times the physician would use technical jargon to explain things and then leave the room or avoid the family altogether, leaving the nurse to clarify the information to the family.

Nurses have been asked to identify obstacles that they deemed to be important in providing end-of-life care to dying ICU patients, and one that continues to surface is poor communication between nurses and physicians. In fact, in a sample of >900 critical care nurses surveyed about their end-of-life knowledge and attitudes, only 18% of the nurses thought that nurse–physician communication was highly effective, whereas 64% thought communication between them was somewhat effective, and 11% thought this communication was highly conflicted (36).

To further explicate the views of a broader range of critical care nurses, Kirchhoff and Beckstrand (21) developed the National Survey of Critical Care Nurses Regarding End-of-Life Care survey and sent it to members of the American Association of Critical-Care Nurses. A large sample of 199 nurses representing various ICUs throughout the United States echoed that there were problems in communication with physicians. According to these nurses, when physicians disregarded the patient’s advance directive, gave false hope to the family, avoided the family member, did not let the patient die (when death appeared inevitable), and had conflicting opinions among themselves, quality patient care at the end of life was affected. What is implied here is that better communication between health-team members (nurses and doctors, specifically) will lead to better satisfaction and outcomes for dying patients and their families.

A practice environment that favors nurse–physician communication is strongly related not only to better end-of-life care but also to nurse and physician job satisfaction (11). Nordgren and Olsson (37) conducted tape-recorded interviews of nine professionals (seven nurses and two physicians) about their perceptions on working relationships. In this small study, the nurses noted that they were mainly responsible for making patients and families feel cared for, safe, and comfortable. They believed that providing support was a major part of their professional role. The two physicians stated that they inform patients and families on medical matters, whereas nurses serve as a primary source of information. They also thought that nurses were responsible for communication because they were in immediate contact with the patient and family member. The interviewed professionals noted that caregivers had to be confident in their respective roles because they each bring their own particular knowledge and expertise. However, disagreements between different professionals can arise. For example, withholding life-sustaining treatments was extremely difficult for physicians, whereas nurses did not understand the agony that those decisions caused physicians. The author concluded that mutual respect, collaboration, and concern were essential. To foster this, there needs to be time and space for professional conversation and reflection about care and about relationships among different categories of professionals. A replication of the study by Nordgren and Olsson (37) in a larger sample is warranted to determine the generalizability of their results.

**Decision Making: Is It a Team Sport?**

Decision making is a major role and responsibility associated with end-of-life care practices. There are decisions that
need to be made all along the trajectory of an ICU patient’s illness, and there are specific decisions that are made such as do-not-resuscitate (DNR) status. Decision-making practice patterns differ among various world cultures, but it is routine in the United States that the patient’s family has an active role in determining DNR status. We will discuss the general topic of decision making and then concentrate on research specifically focused on decision making regarding DNR status.

**ICU Nurse’s Role in Decision Making**

A body of research has focused specifically on nurses’ perceptions of end-of-life decision making in the ICU and their role in this process. A large sample of Australian critical care nurses described their attitudes and beliefs about end-of-life care and decision making. Again, many of the nurses’ concerns regarding death and dying in the ICU had to do with a lack of communication between doctors and nurses (24). These nurses echoed the findings of others that, even though they spend the most time with the patients and family members and function as advocates, their opinions were often overlooked by physicians. They also noted that they appreciated it when the physician sought out their opinion and valued their judgment in end-of-life decision-making processes.

Patients, their nurses, patient surrogates, and physicians involved in the patient’s care in the United States’ SUPPORT study (38) were interviewed about the nurses’ involvement in decision making. According to 60% of patients and their surrogates, their nurse had no influence of choice of treatment. Physicians thought that nurses’ preferences regarding choice of treatment had “quite a bit” or “very much influence” only 4% of the time. Nurses themselves thought that their preferences were very influential only 10% of the time. However, 78% of the nurses who did discuss the prognosis with their patients reported being comfortable with the discussions. The majority of the SUPPORT patients and their surrogates noted that they would like to have more conversations with the nurses and have them provide more information. However, 30% of the nurses reported being excluded by physicians from patient care decisions, and these nurses thought that this was a major or extreme obstacle to the delivery of optimum care. These SUPPORT researchers recommended that, to promote collaborative care, professionals in an institution could use joint grand rounds, patient care seminars, and interprofessional dialogues. These steps could be the bases for increasing understanding and respect of team members’ feelings, knowledge, and desire to participate more fully in end-of-life care.

Ho et al. (39) surveyed 611 ICU nurses from New Zealand to determine 1) their involvement in end-of-life decision making, 2) their wishes to be more or less involved, and 3) their beliefs and opinions regarding end-of-life care in the ICU. Using a validated questionnaire, they found that a great percentage of respondents were involved in end-of-life decision making, but most would like a larger role (Table 1 provides selected survey responses).

These findings suggest that there is, indeed, room for improvement in involving nurses in end-of-life decision making. Less than half of this sample was involved in the process all or most of the time. However, more than half of the sample wanted a larger role in the process, so it is clear that nurses value their role in end-of-life decision making and want to be included. Another important finding was that that many of the nurses’ responses were dependent on the nurse’s culture or ethnicity. They found that nurses of European descent were more likely to be involved with end-of-life decision making. Other studies have shown consistency in this finding and that ICU professionals in non-European cultures tend to have a more conservative attitude and are less involved in end-of-life decisions (40). In fact, in a large survey study, 1,961 physicians in 21 countries were asked to respond to questions related to a scenario of a woman without family who is dying in an ICU. Only 29% of physician respondents from the United States noted that they would include nurses in the end-of-life decision-making process, a much smaller percentage than physicians from many northern and central European countries (41). Recently, when European physicians were asked their perceptions of nurse involvement in end-of-life decision making, they reported that >78% of the decisions made had involved nurses (42). With these findings in mind, it is important for healthcare professionals to consider factors such as ethnicity and culture when attempting to “transcend the silos” (43, p 15), break down collaboration barriers, and strive to improve team collaboration in end-of-life decision making.

Nurses who participated in focus group research were asked their experiences of transitions from cure- to comfort-focused care (44). These nurses noted inconsistencies between how physicians manage end-of-life care and what they say to family members, and they believe that patients’ wishes are not always respected. Reaching a consensus about the direction of treatment, according to these nurses, would help them to move from cure- to comfort-oriented care. Nurses bring important characteristics to the dialogue among patients, families, and physicians: they serve as intermediaries between patients and physicians, they develop an intimacy with their patients and families, and they are a constant presence.

Ferrand et al. (45) note that failure to consider a nurse’s opinion is an ethical shortcoming in decision making. Nurses have a heavy moral responsibility in their work with patients and their families at the end of life because they are closer to the patient and interact with the team. They hypothesized that good collaboration would increase nurses’ satisfaction and improve patient experiences at the end of life. Their team surveyed >500 physicians and >3,000 nurses in 133 French ICUs using a validated questionnaire. They noted several discrepancies between responses of nurses and physicians, some of which are outlined in Table 2.

A review of these findings could lead to the conclusion that, although most nurses and physicians agreed that collaborative decision making was mandatory, they perceived actual practice quite differently. Furthermore, although most physicians were satisfied with existent practice, most nurses were not. Less than one third of the nurses noted that physicians sought their opinion before making decisions to forego life-sustaining therapies, although the vast majority of the physicians (79%) thought they had done so. Indeed, the researchers’ hy-
A recent study from Canada explored nurses’ attitudes toward DNR status in the ICU and how frequently they were involved in these decisions (47). Of the 405 nurses surveyed, almost all of the nurses (99%) believed that the physician was responsible for the DNR decision. About 70% observed that physicians were hesitant to write DNR orders. More than half (52.4%) of the nurses perceived DNR orders differently from other healthcare professionals. There was also a large discrepancy between the percentage of nurses who believed they should be involved with DNR decision making (80.7%) vs. those (19.3%) who were actually involved. More than 42% reported having some conflict with DNR decisions being made. Many thought that they were isolated and had little support when they remained with the patient and family once the DNR decision was made.

How nurses and physicians in one military hospital arrive at DNR decisions and how frequently they disagree about these decisions were the subjects of an opinion survey (48). As opposed to previous research, these investigators found that, of those patients who had a DNR order, there was close agreement in the timing of the DNR decisions between the nurse and physician. In only 7% of the cases did the nurse disagree with the physician’s DNR order. In those patients who did not have a DNR order, >12% of the physicians and nurses disagreed about the decision. In this case, the physician was significantly more likely to recommend a DNR order than the nurse (p < .0005). They also noted that nurses worried more than the physicians about patient suffering and were frustrated with the lack of response to patient suffering by the physician. The nurses in this sample wanted less aggressive treatment and wanted the physicians to understand the stress and emotional aspect of providing care during this experience.

In both of these studies about DNR orders, there is evidence that conflict and confusion occur between nurses and physicians. Without communication and collaboration, this will only continue to occur. Ongoing education and respect for the other viewpoints are needed.

What is also clear is that not only do nurses want more active involvement in communication about end-of-life decisions, they have an ethical obligation to provide information and support to patients and families. The American Nurses Association code of ethics states that “clients should be as fully informed as possible in the planning and implementation of their own health care” (49, p 2). Thus, according to Kennard et al. (38), “nurses have an ethical responsibility to discuss end-of-life decisions with their patients, to guide them about possible outcomes, to help them through their decision-making process, and to facilitate discussions between the patient, family and physician” (p 216). How this ethical mandate is played out in practice will be determined by the commitment of the entire health team to improving communication and collaboration.

Effects of Good Communication and Collaboration on Outcomes

Improving communication and collaboration is not a new concept and has been studied in the ICU during recent years. Assessing the outcomes of good communication and collaboration for patients, their families, and for clinicians is one way to measure the success of the process.

One study examined the effects of interdisciplinary collaboration on patient outcomes in the ICU (9), and four other studies investigated interventions on improving communication and collaboration between the nurses and physicians in the ICU (8, 10, 12, 50). Most of these studies were descriptive, but they provide evidence that collaborative practice improves satisfaction and care.

Baggs et al. (9) studied the relationship between the amount of collaboration of the nurse and physician in making a patient care decision and the effect of this collabor-
The particular decision in their study was not an end-of-life decision but, rather, a decision to transfer a patient out of the ICU to less intense care. However, their findings are certainly relevant to this end-of-life discussion. They interviewed 56 nurses and 31 medical residents from a large medical university regarding the decisions being made on 286 consecutive patients. They found a decrease in interdisciplinary collaboration as reported by nurses significantly predicted negative patient outcome ($p = .02$). The more collaboration noted by the nurse, the less the predicted risk of negative outcome for the patient (5%). When there was no collaboration, the predicted risk of a negative outcome was higher (16%). Satisfaction was also improved with increased collaboration, although more so for nurses ($r = .67$) than residents ($r = .26$) ($p < .001$). The authors concluded that actively involving nurses in end-of-life care decision making will improve patient outcomes and increase nurse satisfaction.

As evidenced by previous research (9, 34, 51), a lack of collaboration and communication can have negative consequences that affect outcomes of patients, their family members, and ICU clinicians. For patients, that can mean that their goals and preferences are not met. For family members, it can lead to a lack of knowledge and understanding of treatments and plans, lack of trust of clinicians, and suffering from distressing symptoms such as guilt, anxiety, and depression (34, 52). For clinicians, this can lead to stress, anger, frustration, and dissatisfaction with their profession (49).

Clearly, there is ample enough evidence to support implementing actions to improve collaborative communication between physicians and the nurses in ICUs who care for patients at the end of life. In addition, integrated care and support of patients and family members during these times are in need of improvement. However, effective communication and collaboration do not come naturally to most ICU clinicians. These are skills and techniques that need practice, commitment, and honing, just like any other intervention ICU clinicians perform. From a review of the literature on interventions to improve collaborative communication between physicians and nurses in the area of end-of-life care in the ICU, four specific interventions have been shown to be effective, feasible, and easy to incorporate into most ICU situations.

## Improving End-of-Life Care in ICUs Through Communication and Collaboration: A Practical Approach

Although not all studies reviewed here specifically addressed collaboration around end-of-life issues, their findings may be even more pertinent for end-of-life care because of the complexity of the situation in that area. Boyle and Kochinda (10) tested an intervention with seven nurse leaders and three physician leaders in two ICUs (one tertiary and one community) intended to improve collaborative communication. This core group of leaders went through a specialized training that incorporated: leadership, communication, coordination, problem solving, conflict management, and team-oriented culture (see teaching modules in Table 3). They collected data at baseline, immediately after the intervention, and again in 6 months to assess durability of the intervention. The main goal of training the core group of leaders was that, if effective, the results would infiltrate down to the rest of the staff.

They found that the collaboration scores of the leadership group increased after the intervention, from 56.67 to 75.33 on a scale of 0 to 100 ($p = .02$). The leadership group reported they were more satisfied with their communication skills ($p = .017$) and leadership skills ($p = .048$). The staff rated that collaborative communication on their units significantly increased after the intervention ($p = .013$). They also thought that problem solving ($p < .001$) and nursing leadership ($p = .009$) skills improved. The authors pointed out that this intervention was not only effective in improving leadership and communication skills but was also rated by the leadership group to be both feasible and useful.

Lilly et al. (50) studied the effects of an intensive communication intervention on the outcomes, goals, length of stay, and transition time to palliative care for dying patients in the ICU. Using a before-and-after design, they compared a group of medical ICU patients who received standard family meetings (pre-intervention group, $n = 134$) to a group that received an intensive communication intervention (intervention group, $n = 396$). They used a proactive, multidisciplinary meeting consisting of a physician leader, nurse, chaplain, and social worker. During these formal weekly meetings with the family member and patient, if able, they discussed a specific plan of care (Table 4) and measured clinical “milestones.” They found that there was a decrease in provider non-consensus from 65 cases to four cases and in family nonconsensus from 177 cases to 16 cases ($p < .001$). They also found that length of patient ICU stay decreased from 4 days to 3 days. The intervention did not affect their overall mortality rate in the ICU. The authors attributed these outcomes to care being given to those most likely to benefit; those for whom the milestones were not being met made the transition to comfort and palliative care sooner.

In their 4-yr follow-up study, Lilly et al. (8) examined the same variables to assess the durability and lasting effects of their intensive communication intervention. They evaluated 2,361 patients during the course of the 4 yrs and had findings that corroborated their previous study. The length of stay remained at 3 days, mortality decreased, and patient and family member satisfaction increased to 93–100%. The authors noted that an extra benefit was that nurses and physicians viewed the patient plan of care as more of a process rather than an event. They also developed a meeting note template that was provided to members who

### Table 3. Collaborative communication intervention

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<tr>
<th>Six Core Modules</th>
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<td>Core communication skills</td>
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<tr>
<td>Guiding conflict resolution</td>
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<td>Helping others adapt to change</td>
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<td>Teams</td>
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<tr>
<td>Trust</td>
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<td>Leadership</td>
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Data from Boyle and Kochinda (10).

### Table 4. Proactive process of communication

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<th>Guidelines for Multidisciplinary Team and Family Meetings</th>
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<tr>
<td>Review the medical facts and discuss treatment options</td>
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<tr>
<td>Discuss the patient/family’s point of view on death, dying, treatment, loss of function</td>
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<tr>
<td>Agree on a plan of care</td>
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<tr>
<td>Agree on criteria used to measure success or failure of the plan of care</td>
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Data from Lilly et al (50).
could not attend the formal meetings. This provided consistency of information given to the patient and family members. In short, this intervention improved consensus between the healthcare staff and family members, decreased length of stay, and allowed dying patients earlier access to palliative care.

A quality improvement study by Ahrens et al. (53) examined the effects of an attending physician leader (medical director) and clinical nurse specialist team in improving communication for patients and family members at the end of life. The outcomes that they compared between an intervention and control group were length of ICU stay, cost, and mortality. Group 1 received standard care, and group 2 received the intervention. The intervention consisted of daily medical updates by the medical director to patients and family members. It included guidelines and medical advice to patients’ family members on care planning. After families received this information, the clinical nurse specialist would be available to provide information, support, and clarification to the family members. They found that, for the intervention group, mean length of ICU stay decreased from 9.5 days to 6.1 days \( (p = .009) \); ICU mortality was reduced from 93% to 74%; and costs were reduced from $9,551 to $4,293 \( (p = .006) \). In this study, the attending physician leader stressed to all the house staff and interns, residents, and fellows that the clinical nurse specialist must be included in the conferences. This study describes a successful communication/collaboration intervention. It implied that the physician needs support from other healthcare professionals such as the nursing staff because end-of-life decisions are too complex for any one person to make.

Prunovost et al. (12) evaluated the effectiveness of communication during daily rounds in the ICU and a method to improve communication, the use of a daily goals worksheet (Table 5). The aim of this worksheet is to keep the discussion and plan of care focused on the patient, not the provider. Before the intervention, they measured the level of understanding of the staff (nurses and physicians) regarding the goals of patient care and how to achieve those goals. At pre-intervention, only 10% understood the goals of patient care or the tasks that needed to be accomplished. After the intervention, 95% understood these goals and tasks. The length of patient ICU stay decreased 50%, from 2.2 days to 1.1 days. The authors and the staff found these daily goal forms to be practical, easy to use, and helpful in communicating with each other and family members. Their intervention helped staff organize their workload and clarify long- and short-term goals. It is easy to use, adaptable to meet varying ICU cultures and needs, can be modified to include palliative care, and does not need to be part of the medical record. It is currently being used in >50 hospitals (12).

### Communication and Collaboration in the ICU: Choosing and Implementing an Intervention

As demonstrated by results of these interventions, communication and collaboration and end-of-life care can be improved in ICUs. Specifically, with specialized training and targeting of leadership and communication skills, collaboration scores and communication and leadership skills improve (10). With an intensive communication intervention, there was an increased consensus among providers and families, and care was more appropriate (8, 47). A daily goals worksheet improved understanding of patient care goals while decreasing ICU length of stay (12).

### Communication and Collaboration in the ICU: Evaluating Interventions

Future outcomes research can test the effects of an interdisciplinary communication intervention on patient and family goals and satisfaction (51). A very clear need that surfaced from extensive descriptive research and from an international consensus conference in critical care (5) is for nurses to be included more in clinical decision making and in communication of treatment goals and plans to patients and their family members. The increased inclusion would be predicated on education initiatives to improve the communication.

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**Table 5. Daily goals form**

<table>
<thead>
<tr>
<th>Room No.</th>
<th>Date:</th>
<th>Attending Physician’s Initials: __</th>
<th>Nurse’s Initials: __</th>
<th>Attending Physician’s Initials: __</th>
<th>Nurse’s Initials: __</th>
</tr>
</thead>
</table>

What needs to be accomplished for the patient to be discharged from the ICU?
- Pain management/sedation
- Cardiac status/volume status
- Pulmonary status/ventilation needs
- Mobilization
- Infection control issues/cultures/drug levels
- Gastrointestinal/nutrition
- Medication changes
- Tests/procedures
- Labs/chest radiographs
- Family communication
- Consultations
- Catheters/tubes
- Palliative care needs

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*Reproduced with permission from Pronovost et al. (12); initial as goals are reviewed.*

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**Table 6. Key points**

All intensive care unit professionals need greater support and better end-of-life education (23, 24). Understanding and respect for perspectives and burdens felt by other caregivers could lead to shared decision making (22). Increased collaboration and communication can result in more appropriate care (23) and increased physician/nurse satisfaction (11, 42). Need for time and space for professional conversations and reflection about care (37). Use of joint grand rounds, patient care seminars, and interprofessional dialogues can increase understanding and desire to have interdisciplinary end-of-life care (38). Have staff measured on level of satisfaction with team members to evaluate effectiveness of collaborative practice (42). Families’ knowledge about role of each caregiver can lead to increased family satisfaction (23, 34). Nurses value their role in end-of-life decision making and want to be included (9, 38, 39, 41, 42, 44).
skills of nurses and other members of the professional team. The effectiveness of increased nurse preparation and involvement in these important steps of end-of-life care in ICUs, including withdrawal of life support (52, 53), can then be tested in clinical trials that include caregiver, patient, and family outcomes. Quality indicators for such research have been identified and can serve as targets for the clinical trials (54–57). Action research can target changes in organizational cultures regarding end-of-life practices by developing and testing systems that will support better communication and collaboration and the emotional needs of physicians and nurses who provide this type of care (Table 6).

Conclusions

Although some of the roles and responsibilities of nurse and physician colleagues in end-of-life care in ICUs are unique to the respective disciplines, there can be considerable integration of caring interventions. Existing evidence suggests that, when communication is clear and constructive and collaboration of nurse and physician colleagues in end-of-life care in ICUs are unique to the respective disciplines, there can be considerable integration of caring interventions. Existing evidence suggests that, when communication is clear and constructive and practice is truly collaborative, the end-of-life care provided to ICU patients and families by satisfied and engaged professionals will improve markedly.

REFERENCES


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