

Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of Critical Care Medicine Task Force 2004–2005

Judy E. Davidson, RN, FCCM; Karen Powers, MD; Kamyar M. Hedayat, MD; Mark Tieszen, MD, FCCM; Alexander A. Kon, MD, FCCM; Eric Shepard, MD, FCCM; Vicki Spuhler, RN, MS, CCRN; I. David Todres, MD, FCCM; Mitchell Levy, MD, FCCM; Juliana Barr, MD, FCCM; Raj Ghandi, MD, FCCM; Gregory Hirsch, MD; Deborah Armstrong, PharmD, FCCM

Objective: To develop clinical practice guidelines for the support of the patient and family in the adult, pediatric, or neonatal patient-centered ICU.

Participants: A multidisciplinary task force of experts in critical care practice was convened from the membership of the American College of Critical Care Medicine (ACCM) and the Society of Critical Care Medicine (SCCM) to include representation from adult, pediatric, and neonatal intensive care units.

Evidence: The task force members reviewed the published literature. The Cochrane library, Cinahl, and MedLine were queried for articles published between 1980 and 2003. Studies were scored according to Cochrane methodology. Where evidence did not exist or was of a low level, consensus was derived from expert opinion.

Consensus Process: The topic was divided into subheadings: decision making, family coping, staff stress related to family interactions, cultural support, spiritual/religious support, family visitation, family presence on rounds, family presence at resuscitation, family environment of care, and palliative care. Each section was led by one task force member. Each section draft was reviewed by the group and debated until consensus was achieved. The draft document was reviewed by a committee of the Board of Regents of the ACCM. After steering committee approval, the draft was approved by the SCCM Council and was again subjected to peer review by this journal.

Conclusions: More than 300 related studies were reviewed. However, the level of evidence in most cases is at Cochrane level 4 or 5, indicating the need for further research. Forty-three recommendations are presented that include, but are not limited to, endorsement of a shared decision-making model, early and repeated care conferencing to reduce family stress and improve consistency in communication, honoring culturally appropriate requests for truth-telling and informed refusal, spiritual support, staff education and debriefing to minimize the impact of family interactions on staff health, family presence at both rounds and resuscitation, open flexible visitation, way-finding and family-friendly signage, and family support before, during, and after a death. (Crit Care Med 2007; 35:605–622)

KEY WORDS: family; family support; family presence; resuscitation; rounds; patient centered care; communication; intensive care unit; coping; stress; post traumatic stress disorder; palliative care; cultural; spiritual; religious; decision making; nursing; visiting; family needs; adult; pediatric; neonatal; environment; professional-family relations; multidisciplinary care teams; terminally ill patients; terminal care; critical care nursing; right to die; family-centered care; attitude to death; patient care team; bereavement; family relations; intensive care nursing; pastoral care; patient education; holistic care; grief

In 2001, the Institute of Medicine strongly recommended that healthcare delivery systems become patient-centered rather than clinician- or disease-centered, with treat-

ment recommendations and decision-making tailored to patients' preferences and beliefs (1). In the Institute of Medicine's patient-centered model, a) patients and families are kept informed and ac-

tively involved in medical decision-making and self-management; b) patient care is coordinated and integrated across groups of healthcare providers; c) healthcare delivery systems provide for the

These guidelines were developed by a task force assembled by the American College of Critical Care Medicine (ACCM) of the Society of Critical Care Medicine (SCCM) and have been reviewed by the Society's Council. These guidelines reflect the official opinion of the SCCM and should not be construed to reflect the views of the specialty boards or any other professional medical organization.

Ms. Davidson was the task force chairperson; Dr. Armstrong was the liaison with the American College of Critical Care Medicine.

The American College of Critical Care Medicine (ACCM), which honors individuals for their achievements and contributions to multiprofessional critical care medicine, is the consultative body of the Society of Critical Care Medicine (SCCM) that possesses recognized expertise in the practice of critical care. The College has developed administrative guidelines and clinical practice parameters for the critical care practitioner. New guidelines and practice parameters are continually developed, and current ones are systematically reviewed and revised.

Dr. Levy has received honoraria and research support from Eli Lilly and Edwards Lifesciences. He also received research support from Philips Medical Systems, Chiron, and Biosite. The remaining authors have not disclosed any potential conflicts of interest.

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DOI: 10.1097/01.CCM.0000254067.14607.EB

physical comfort and emotional support of patients and family members; d) healthcare providers have a clear understanding of patients' concepts of illness and their cultural beliefs; and e) healthcare providers understand and apply principles of disease prevention and behavioral change appropriate for diverse populations.

Several studies have demonstrated that patient-centered care is associated with better clinical outcomes (2–5). Nowhere is the need for patient-centered care greater than in the intensive care unit (ICU), where patient and family involvement can profoundly influence clinical decision making and patient outcomes. Because critically ill patients are often unable to communicate with healthcare providers or participate in care decisions, responsibility often falls to others to function as surrogate decision makers. Surrogates may be immediate family members (as defined by the patient or by legal precedent) or others named in Durable Power of Attorney for Health Care documents.

Patients and families are expressing a desire for a larger role in healthcare decision making and are asking providers to do a better job of responding to patient and family needs (6–8). Despite these concerns, families and other surrogates often feel uninformed and disenfranchised from clinical decision making and day-to-day care of loved ones in the ICU (9, 10). For the patient-centered care model to be realized fully in the ICU, family members and surrogate decision makers must become active partners in multiprofessional decision making and care. These individuals often have firsthand insight into patients' preferences and can make important contributions to care decisions, particularly when patients are unable to advocate for themselves.

To date, there are no published guidelines defining standards for incorporating families into decision making and care for ICU patients. The following guidelines, developed in response to the request of the American College of Critical Care Medicine (ACCM) of the Society of Critical Care Medicine (SCCM), attempt to define evidence-based best practices for support of families in the delivery of patient-centered care in the ICU. The guidelines are organized under the following subheadings:

Decision Making
Family Coping

Staff Stress Related to Family Interactions
Cultural Support of the Family
Spiritual/Religious Support
Family Visitation
Family Environment of Care
Family Presence on Rounds
Family Presence at Resuscitation
Palliative Care

Methodology

These guidelines were developed following an extensive literature review. The search was conducted through the Cochrane library, Cinahl, and MedLine for articles published between 1980 and 2003 related to the entirety of the topic of family-centered care. Additional searches were conducted using keywords associated with the previously listed subheadings. For the topics of family visitation, family environment of care, family presence on rounds, and family witnessed resuscitation, the search years were narrowed due to a clear shift in focus and philosophy in the late 1990s. Articles published in 2004 and 2005 were added after the initial search. The review encompassed adult, pediatric, and neonatal literature.

Search results were loaded by subheading to a task force e-room of the Society of Critical Care Medicine. Authors were assigned a subheading and instructed to retain for further analysis any articles containing metrics (including survey research) or notable publications of consensus.

Cochrane methodology was used to evaluate each article's level of evidence and to grade the recommendations (Table 1). Most of the research reviewed was Cochrane level 4 or 5 (case series, expert opinion, or survey research). Each section of the guidelines concludes with recommendations. Unless otherwise noted, recommendations apply equally to care in adult, pediatric, and neonatal environments.

For the section on palliative care, the task force reviewed the *Clinical Practice Guidelines for Quality Care*, released in 2004 by the National Consensus Project for Quality Palliative Care (11). Although the National Consensus Project guidelines pertain to both patient and family care, they are also applicable to family support. The SCCM endorses the recommendations of the National Consensus Project in their entirety.

For the purposes of this document, the definition of family published by the National Consensus Project for Quality Palliative Care is adopted: "Family is defined by the patient or in the case of minors or those without decision making capacity by their surrogates. In this context the family may be related or unrelated to the patient. They are individuals who provide support and with whom the patient has a significant relationship" (11).

Decision Making

In the past, two primary models of medical decision making have existed: the patient autonomy model and the paternalistic model (12, 13). In the first, responsibility for medical decisions rests with the patient or an appropriate surrogate. In the second, physicians have authority for medical decision making.

During times of crisis, the autonomy model may place an undue burden on families and can be viewed as a form of abandonment (14). In the interests of patient autonomy, physicians may ask family members, who are in a heightened emotional state, to understand complex medical conditions, accept prognostic uncertainty, weigh various complex treatment options, and then take sole responsibility for end-of-life decision making and withdrawal of life support, often with limited information and coping tools.

The literature indicates that patients and their surrogates need more decision-making help from the ICU team than the patient autonomy model allows (15). A new model, known as shared decision making, has been introduced over the past several years (16, 17). In shared decision making, a genuine partnership is formed among the ICU team, patients, and their loved ones. Through this partnership, patients' preferences can be identified, the anxiety of families can be lessened, and physicians can have appropriate input into decisions. A recent multiple-society-sponsored international consensus conference on end-of-life care concluded that shared decision making should be viewed as the primary model for making medical decisions in the ICU (18).

Recent data suggest that families in both North America and Europe favor the shared decision-making model (18–23). Cultural attitudes of the patient and family need to be addressed and respected

Table 1. Cochrane methodology: Levels of evidence and grades of recommendations, November 23, 1999

Grade of Recommendation	Level of Evidence	Therapy/Prevention, Etiology/Harm	Prognosis	Diagnosis
A	1a	SR (with homogeneity ^d) of RCTs	SR (with homogeneity) of inception cohort studies, or a CPG validated on a test set	SR (with homogeneity) of level 1 diagnostic studies, or a CPG validated on a test set
	1b	Individual RCT (with narrow confidence interval)	Individual inception cohort study with ≥80% follow-up	Independent blind comparison of an appropriate spectrum of consecutive patients, all of whom have undergone both the diagnostic test and the reference standard
B	1c	All or none ^e	All or none case series ^d	Absolute SpPins and SnNouts
	2a	SR (with homogeneity) of cohort studies	SR (with homogeneity) of either retrospective cohort studies or untreated control groups in RCTs	SR (with homogeneity) of level ≥2 diagnostic studies
	2b	Individual cohort study (including low-quality RCTs; e.g., <80% follow-up)	Retrospective cohort study or follow-up of untreated control patients in an RCT, or CPG not validated in a test set	Any of the following: 1. Independent blind or objective comparison 2. Study performed in a set of nonconsecutive patients, or confined to a narrow spectrum of study individuals (or both) all of whom have undergone both the diagnostic test and the reference standard 3. A diagnostic CPG not validated in a test set
	2c	“Outcomes” research	“Outcomes” research	
	3a	SR (with homogeneity) of case-control studies		
	3b	Individual case-control study		Independent blind comparison of an appropriate spectrum, but the reference standard was not applied to all study patients
C	4	Case-series (and poor-quality cohort and case-control studies ^e)	Case-series (and poor-quality prognostic cohort studies ^f)	Any of the following: ● Reference standard was unobjective, unblinded, or not ● Independent ● Positive and negative tests were verified using separate reference standards ● Study was performed in an inappropriate spectrum of patients
D	5	Expert opinion without explicit critical appraisal, or based on physiology, bench research, or “first principles”	Expert opinion without explicit critical appraisal, or based on physiology, bench research, or “first principles”	Expert opinion without explicit critical appraisal, or based on physiology, bench research, or “first principles”

SR, systematic review; RCT, randomized controlled trial; CPG, Clinical Prediction Guide; SpPins, diagnostic finding whose specificity is so high that a positive result rules *in* the diagnosis; SnNout, diagnostic finding whose sensitivity is so high that a negative result rules *out* the diagnosis.

^aBy homogeneity we mean a systematic review that is free of worrisome variations (heterogeneity) in the directions and degrees of results between individual studies. Not all systematic reviews with statistically significant heterogeneity need be worrisome, and not all worrisome heterogeneity need be statistically significant. Studies displaying a worrisome heterogeneity should be tagged with a “-” at the end of their designated level. ^cMet when all patients died before the prescription became available, but some now survive it, or when some patients died before the prescription became available, but none now die on its. ^dMet when there are no reports of anyone with this condition ever avoiding (all) or suffering from (none) a particular outcome (such as death). ^eBy poor-quality cohort study we mean one that failed to clearly define comparison groups and/or failed to measure exposures and outcomes in the same (preferably blinded), objective way in both exposed and nonexposed individuals and/or failed to identify or appropriately control known confounders and/or failed to carry out a sufficiently long and complete follow-up of patients. By poor-quality case-control study we mean one that failed to clearly define comparison groups and/or failed to measure exposures and outcomes in the same blinded, objective way in both cases and controls and/or failed to identify or appropriately control known confounders. ^fBy poor-quality prognostic cohort study we mean one in which sampling was biased in favor of patients who already had the target outcome, or the measurement of outcomes was accomplished in <80% of study patients, or outcomes were determined in an unblinded, nonobjective way, or there was no correction for confounding factors.

when using the model (see Cultural Support of the Family).

Shared decision making requires regular meetings between ICU team members as well as meetings between the ICU

team and family (19). The authors of this document concur that good communication skills, conflict management skills, and meeting facilitation skills are needed for the shared decision-making model to

be effective; training in these skills should become a standard component of medical education and should be widely available for all ICU caregivers. One intervention study in a neonatal intensive

care unit (NICU) found that meetings between healthcare professionals and parents using the shared decision-making model produced fewer decision-making conflicts, created fewer unrealistic parental expectations, and improved collaboration between providers and family members. The model also helped parents gain a more accurate understanding of their child's medical condition (24).

Health information privacy regulations regarding the choice and number of family members involved in discussions are considered while acting in the best interest of the patient. During a family meeting, once all stakeholders are present, family members should be asked open-ended questions about what they understand about their loved one's condition, how they are coping, and what they fear (25). Once family members have spoken, care providers should repeat what they have heard. Reflective iteration allows family members to correct any misunderstandings; it also fosters trust in the healthcare team and the decision-making process.

After all family members have spoken and verified that practitioners have heard them correctly, practitioners should provide clear and honest information regarding prognosis (20, 26–38) and then allow ample opportunity for questions. The goal is to enable families to clarify the decisions they face and practitioners to understand the values and experiences of family members.

In the case of an incompetent patient who was previously competent, it may be helpful to ask, "If your loved one were able to speak for herself, what do you think she would want us to do for her?" Such a question helps family members frame the question from the patient's perspective (25).

When decisions must be made, it is best to strive for consensus. Respect and acknowledge what each decision maker brings to the table. Together, all present should determine the best course of action (25). When all stakeholders have expressed their opinions and feel that they have been heard, they are generally willing to support the group decision, even when it runs counter to their own views.

Recommendation 1: Decision making in the ICU is based on a partnership between the patient, his or her appointed surrogate, and the multiprofessional team. Grade of Recommendation: B

Recommendation 2: Practitioners fully disclose the patient's current status and prognosis to designated surrogates and clearly explain all reasonable management options. Grade of Recommendation: B (see recommendations 3 and 4 in the Cultural Support of the Family section)

Recommendation 3: ICU caregivers strive to understand the level of life-sustaining therapies desired by patients, either directly from those patients or via their surrogates. Grade of Recommendation: D

Recommendation 4: Family meetings with the multiprofessional team begin within 24–48 hrs after ICU admission and are repeated as dictated by the condition of the patient with input from all pertinent members of the multiprofessional team. Grade of Recommendation: B (see also Staff Stress Related to Family Interactions section)

Recommendation 5: ICU caregivers receive training in communication, conflict management, and meeting facilitation skills. Grade of Recommendation: C

Family Coping

Having a loved one in an ICU is stressful for family members. The literature identifies a variety of stress factors, as well as factors that do *not* correlate with family stress or anxiety. For example, surveys that looked at cultural differences in stress levels found none (39–43).

The use of mechanical ventilation was not found to be predictive of stress or anxiety for family members; objective acuity scores remained constant whether or not the patient was on a ventilator (44–47). Stress levels do not seem to lessen with longer ICU stays (48).

Families of ICU patients have a variety of needs: Stress levels rise when these are not met. High on the list is the need to maintain hope; to have questions answered honestly, in terms families can understand; to be notified promptly of any changes in the patient's status; and to be allowed to visit the patient anytime. Families also require assurance that their loved one is receiving quality care (49–63). The definition of hope may extend past the absence of death and include hope for a pain-free and dignified death or hope for more time or quality time together. Environmental amenities were found to be low on the list of family needs

(60, 64). The transfer from the ICU to the floor induces stress on the patient and family. Written information provided to families may ease the transition out of the ICU (65). Computerized education services such as access to the SCCM-endorsed www.icu-usa.com may help meet some family needs for information (66).

Families find it frustrating and confusing to deal with a host of healthcare providers in the ICU. Family dissatisfaction increases if more than two ICU physicians care for the patient or if the patient has a different nurse from one day to the next (67, 68). Nurses need more training in assessing stress levels and anticipating family needs. In studies to determine whether family needs were being met, nurses were generally only about 50% accurate in predicting family needs (49, 50, 52, 69–71).

Factors associated with the highest stress for parents of neonatal and pediatric patients include disruption of normal interactions with the child, changes in the child's behavior or emotions, parents' inability to comfort the child, having a child undergo painful procedures, and changes in the child's appearance (72–76). Parents experience stress long after their children are discharged. Two pediatric studies found that parents' stress-related symptoms persist as long as 6 months postdischarge. A neonatal study showed that mothers of high-risk, very low birth weight infants experienced psychological distress even when the child reached 2 years of age (77–79).

Children of ICU patients also experience anxiety. One study showed that children of ICU patients fear their parent's death and that these fears lessen when children were allowed to visit (80).

High levels of anxiety and depression in family members may affect their ability to make end-of-life decisions (81). The use of problem-focused coping strategies and social supports lowers stress for family members (82, 83), although formal support groups seem to be more effective for parents of children in intensive care than for families of adult patients.

Two interventional studies evaluating families of adult patients showed no statistical difference in stress reduction in family members who attended a support group (84, 85). A third study showed a 50% reduction in state anxiety (anxiety caused by an experience) for family members who attended a support group (compared with a control group) (86). Another

small pediatric study showed that parental anxiety was reduced if parents were allowed to observe and be with their child while undergoing procedures (87).

Parent education can be very helpful in minimizing the stress of a pediatric intensive care unit (PICU) or NICU admission. In a randomized interventional pilot study, parents received written and audiotaped information about infant and child behavior while in the ICU, parent-child interactions, and therapy. Compared with the control group, study parents had less stress, fewer depressive symptoms, and better bonding and interactions with their child (88, 89). Other forms of parent support have also been shown to reduce stress and improve parent-infant interactions, including individualized and formalized family-based interventions, training in coping strategies and stress management techniques, pairing of parents of current NICU or PICU patients with parents of former patients, and journal writing (90–95).

It is now known that families of critically ill patients of all ages may develop anxiety, depression, and posttraumatic stress syndrome (96–105). One intervention study has shown that prospective diaries with review and follow-up may improve communication and goal setting and provide comfort (96). In a study of parents of children in the PICU, no relationship was found between incidence of posttraumatic stress disorder in the parent and severity of illness (100). Although none of the literature reviewed spoke to the issue of family involvement in care, the authors agree by consensus that liberal inclusion into care for those who desire it should be allowed. (See also Family Presence on Rounds and Family Environment of Care and Family Visitation.)

Recommendation 1: ICU staff receive training in how to assess family needs and family members' stress and anxiety levels. Grade of Recommendation: C

Recommendation 2: Nursing and physician staff assigned to each patient are as consistent as possible. Family members receive regular updates in language they can understand, but the number of health professionals who provide information is kept to a minimum. Grade of Recommendation: C

Recommendation 3: Families are encouraged to provide as much care as the patient's condition will allow and

they are comfortable providing. Grade of Recommendation: D

Recommendation 4: Family members are provided with ample information in a variety of formats on emotional needs in the ICU and methods appropriate to comfort and assist in care. Grade of Recommendation: C

Recommendation 5: Family support is provided by the multiprofessional team, including social workers, clergy, nursing, medicine, and parent support groups. Grade of Recommendation: C

Staff Stress Related to Family Interactions

The literature reviewed for these guidelines included articles representing the perspectives of physicians, nurses, support staff, and families. Survey results, qualitative grounded theory, and opinion pieces described how particular institutions handled staff stress (106–153).

Poor communication is a major source of stress for staff. One study showed that nursing stress increases when nurses do not have enough information about a case to answer questions from the family and also when communication is poor between the physician and the family (152).

In a patient-centered environment, multiprofessional care is the norm. With many people involved in and concerned about the patient's care, it is important to establish clear lines of communication, both among various members of the healthcare team and between the team and the family.

Educating families on how the ICU works with respect to visiting hours, when rounds occur, and when and how the physician can be reached can also reduce friction. It is useful to identify a family spokesperson and the family member who will be making decisions on the patient's behalf as soon as a patient is admitted to the ICU.

Routine communication from the ICU physician, both with family representatives and with the healthcare team, is indicated to clarify treatment goals and duties of various team members. Family representatives should be introduced to the care team, and the roles played by each team member should be clearly explained.

The healthcare team includes the ICU physician, consulting physicians (includ-

ing the primary care physician, if available), nurses, social worker, chaplain, and appropriate additional ancillary staff. For example, a respiratory therapist should be included in discussions with the family regarding ventilated patients. Involvement of clergy can help the staff understand different cultures and belief systems and thus prevent or relieve stress. A broadly inclusive multiprofessional team allows healthcare providers to take an organized approach to achieving common goals, which may also prevent or eliminate stress (152).

Well-planned routine care conferences are important to provide objective information, to share opinions, and to reach consensus on common goals. These conferences may be held for the purpose of providing status reports or for making a treatment decision. All team members should be invited to discuss the case from their perspective, which educates each member of the team. Collaborative care planning may resolve or defuse conflicts between the family and the team or within the team, thereby reducing staff stress (121, 126, 127, 148).

In addition to care conferences, ICU staff members need the opportunity to decompress and confront feelings about patients and their outcomes. An unexpected adverse event or medical error may trigger the need for a staff debriefing, and the resuscitation team may require routine debriefings. A survey of pediatric nurses found that stress increases when the decision to continue treatment is against the nurse's own values or when a nurse feels powerless to effect a change (150). Nurses in such a position need an opportunity to work through these conflicts. The American Association of Critical-Care Nurses has published a white paper on moral distress that describes how to handle these situations (153).

One study demonstrated that stress increases when staff expectations for a good death are not met. Factors associated with perceptions of a good death include good rapport and support among team members, good communication, timely anticipation of symptoms and adequate time to prepare for the patient's death, and good relationships with the patient and family (148). Training in grief counseling may be useful for nursing staff; lack of counseling skills has been identified as a stress factor for nurses (152). Even when death is perceived as a good death, the death of a patient may be extremely unsettling. The routine use of

support groups has not been seen as effective in reducing staff stress (151). However, timely debriefing after a critical incident may be helpful, and the services of trained personnel such as psychologists, medical social workers, palliative care clinicians, or hospice grief counselors may be very beneficial. (See also Family Presence at Resuscitation.)

Recommendation 1: The multiprofessional team is kept informed of treatment goals so that the messages given to the family are consistent, thereby reducing friction between team members and between the team and family. Grade of Recommendation: C

Recommendation 2: A mechanism is created whereby all staff members may request a debriefing to voice concerns with the treatment plan, decompress, vent feelings, or grieve. Grade of Recommendation: C

Cultural Support of the Family

Culture is a pattern of learned beliefs, shared values, and behavior; it includes language, styles of communication, practices, customs, and views on roles and relationships. The concept goes beyond race, ethnic background, and country of origin (154). Over the past 2 decades, >600 citations have documented disparities in access to care and health status between members of the dominant culture and members of racial and ethnic minority groups in the United States (155–157).

Among the factors that may affect disparities are lack of trust in the healthcare system and patients' spiritual and cultural beliefs (158). For example, in a study of a Chinese community in Toronto, respondents rejected advance directives because they believed that negative outcomes can result from negative thoughts (159). A recent study showed important differences between African Americans and Caucasians regarding advance care planning and end-of-life decision making. Caucasians were more likely to discuss withdrawal of life support and other treatment options from the perspective of a desire not to prolong the dying process. In contrast, treatment decisions for African Americans were more likely to be based on the desire to prolong life (160). Differences in healthcare proxy completion rates across Caucasian, African American, and Hispanic

elderly populations appear related to reversible barriers such as lack of knowledge and perceived irrelevance of advance directives (161).

An effective relationship between healthcare providers and their patients and families has five key components: personal self-awareness, knowledge of the patient's and family's cultural beliefs, cultural assessment, dynamics of difference, and effective communication (162).

Studies have demonstrated that communication between healthcare provider and patient may be affected by race. Although patients are more likely to be satisfied by a visit to a healthcare provider of the same race (163), race concordance may not always be achievable. Knowing this, providers can be trained in interpersonal interpretation: that is, to look beneath the surface when communicating with someone from another culture, to listen actively, and to seek out the real meaning underlying a patient's statements (164).

Interpreter choice is important when dealing with patients who speak a different language. Children and family members should not be placed in the difficult and sometimes embarrassing situation of interpreting, as this may compromise the patient's confidentiality. The complex medical issues that arise in the ICU environment require a trained interpreter to communicate effectively. Availability of professional interpretive services is regulated by the Joint Commission on Accreditation of Healthcare Organizations and many state agencies (165). It has been found that it may be helpful to have a preliminary meeting with the medical interpreter, who is viewed as a member of the multiprofessional team (166).

Ethical principles applied to end-of-life care, such as autonomy, nonmaleficence, beneficence, and truth telling, should accommodate varying cultural perspectives. North American ICU medicine was founded on the basis of Western biomedical values and assumptions about the beginning and end of life, including the acceptance of brain death as death. These are not universally accepted criteria (167).

Similarly, American bioethics are based on Western philosophical principles that place a high value on individual autonomy (168). Patient autonomy is meaningful only if one has access to timely information about one's clinical condition and prognosis. Yet some families consider it detrimental to tell the

patient the truth (169). Many cultures, including Asian, Mexican, Middle Eastern, and African American (170), view the individual not as an autonomous entity but as part of a network of family and social relationships. In some cultures, family members are expected to bear the bad news of terminal illness; the patient's receipt of such news is believed to hasten death. Being frank with people from these cultures can create mistrust or hostility that may not be ameliorated for the duration of care (170). Respecting the request of the patient to direct information to an adult child or spouse, informed refusal, is advocated.

This professional society has emphasized family-centered, culturally sensitive, and relevant ICU care (171). Difficulty arises when the values of the care provider are in conflict with those of the family. For example, this may occur when a family member requests that pain medication not be given (172).

Although it is important for both the ICU staff and the patient to feel that their moral principles are not violated, balancing conflicting principles can be challenging. Kagawa-Singer and Blackhall (170) suggested a three-fold method to determine the patient's desire for disclosure and how much clinical information to disclose:

Indirect discussion: "Some patients in your situation would rather have the doctor discuss details of their care with their family. What do you prefer?"

Discussing a hypothetical case: "Some people who have your condition have found it helpful to consider several options for their care including . . ."

Watching for nonverbal cues such as facial expressions and body position to assess the impact of the discussion on the patient.

This method may be used to discern cultural differences in recommended age of assent, consent lineage, and requests for informed refusal of information. Whenever allowable by law, cultural preferences are honored. When the difference in cultural values causes moral distress, an ethics consult is advised.

Recommendation 1: On request or when conflict arises due to cultural differences in values, when there is a choice of providers, the provider's culture is matched to the patient's. Grade of Recommendation: C

Recommendation 2: Healthcare professionals receive education to provide culturally competent care. Grade of Recommendation: C

Recommendation 3: The patient's desire to be told the truth about his or her clinical situation is determined by a routine assessment. Grade of Recommendation: D

Recommendation 4: For patients who are actively engaged in decision making about their care, their desire for truth takes precedence over that of their family when there is a conflict. Grade of Recommendation: D

Recommendation 5: When requesting assent for procedures, cultural norms are considered and respected whenever possible. Grade of Recommendation: D

Recommendation 6: If a patient makes an "informed refusal" of information, the request is respected. Subsequent information about the patient's illness and its prognosis is delivered in a culturally relevant and appropriate manner as indicated by the patient. The outcome of such discussions is documented in the patient's medical record. Grade of Recommendation: D

Spiritual and Religious Support

Opinion pieces, historical reviews, and instrument design and validation studies were reviewed but excluded as references. Four broad categories of articles informed these guidelines: healthcare provider surveys, patient surveys, outcome studies, and meta-analyses of the impact of spirituality and religion on health. These studies primarily involved patients outside intensive care units and indicate the need for ICU-specific studies. The following discussion first reviews findings related to practitioners and then reviews findings on patients' needs and preferences for spiritual and religious support.

Practitioner Attitudes and Practices.

Most studies surveyed family practice and internal medicine physicians; some included nurses, social workers, and physical therapists. Researchers asked practitioners to rank their level of religiosity, how actively they examine matters of faith in their patient histories, and whether they would pray with patients if requested. Although studies from the 1960s and 1970s indicate a level of agnosticism or atheism among physicians higher than that of the general public,

recent studies indicate a level of religiosity closer to that of the general public.

Most physicians do not conduct spiritual histories, nor do they feel comfortable praying with their patients unless requested to do so; even then, a substantial number feel uncomfortable with such a proposal. The more religious the physician, the greater the probability that he or she would pray for or with a hospitalized or dying patient (173). Even physicians with a relatively high self-reported level of spiritual awareness tend to refer patients to a chaplain rather than address spiritual concerns themselves (174). Even though religiosity among physicians is increasing, the discomfort of physicians with addressing matters of faith may stem from the fact that physicians tend to have a lower degree of spirituality than their patients (175–177).

Academic pediatric attending physicians and residents surveyed in a single-site urban setting appeared to be more willing to inquire into family spiritual and religious dynamics than physicians caring for adults. Residents felt it was more appropriate to pray with patients than did their attending physicians. The degree of self-ranked religiosity or spirituality correlated with the belief that faith plays a role in healing and enhances the clinical relationship. Regardless of their own views, >90% of pediatricians felt it appropriate to discuss religion or spirituality during severe illness and crises (178).

In one study it was found that nurses held a positive view of religion's impact on health. More than 90% felt that belief in religion is an effective therapy, and the majority were willing to consider praying with their patients. Barriers to teaching about religion, health, and complementary practices included lack of evidence of efficacy and inadequate teaching skills (179).

Physical therapists acknowledge the importance of religion and spirituality in the lives of their patients but also report they lack the skills to address these issues (180).

A national survey indicated that, among all healthcare practitioners, social workers were the most comfortable approaching patients about religion, spirituality, and end-of-life issues and also had the skills to do so (181), even though social workers and mental healthcare workers self-report as less religious or spiritual than their patients (177). Impediments to patient interaction were related to incompatible personal beliefs, cross-cultural issues, lack of familiarity

with non-Judeo-Christian traditions, and conflicting values on controversial issues such as assisted suicide and euthanasia.

Patient Attitudes and Needs Related to Spirituality and Religion. The impact of religious and spiritual beliefs on patients' healthcare decisions has not been examined extensively in the medical literature. Studies reviewed for this discussion, although limited in number, were heterogeneous, including AIDS patients, cancer patients, inpatients, and outpatients. Studies indicate that the older the patient and the more infirm with a chronic illness, the greater the level of self-perceived religiosity or spirituality. In clinic-based studies, approximately 50% of patients tend to consider themselves religious or spiritual (181, 182). In contrast, among mental health outpatients and residents of nursing homes, ≥90% consider themselves to be religious or spiritual (183, 184).

Age and declining health have an inverse relationship on the use of religious or spiritual resources to cope and maintain a positive outlook (185–187). This also held true for families of sick children in a single-center site (188). Numerous studies confirmed that the sicker the patient, the greater the likelihood that he or she would want the physician to inquire into the impact of spiritual beliefs on healthcare issues and, in some instances (in particular as death approaches), to pray for or with the patient.

A survey by MacKenzie et al. (184) suggested that in this highly religious and spiritual population, patients believed in prayer and divine intervention to promote health, while also accepting medicine and physicians' care. In a survey of outpatients with stable health issues, only 45% said that spirituality or religion influences healthcare decision making. Most, regardless of self-ranked spirituality or religiosity, would welcome physician inquiry about matters of faith if worded in a way patients did not regard as intrusive (189).

Religion or spirituality had a positive impact on AIDS patients' perspective on life and death and was correlated with greater willingness to discuss resuscitation status (188). Two barriers to discussing resuscitation status were fear of death and guilt associated with the illness.

Whereas a majority of patients wanted physicians to be aware of their religious views, patients' desire for healthcare workers to pray for or with them varied. The sicker the patient, and the less intru-

sive the inquiry, the more patients wanted their physician to inquire about their religious views or pray with them (182). This held true in a study of hospice patients as well: patients wanted physicians to be aware of the role of spirituality in their lives but did not want their physicians to be preachy or judgmental (190). An inpatient study suggested that a uniform majority of patients wanted nurses to inquire respectfully into patient spirituality and pray with them (191). A parish-based model of nursing visits, which incorporated a holistic view of patient concerns, including religion and spirituality, was well received by patients in a rural region of the southeastern United States (192).

These authors concur that all members of the interdisciplinary team need to recognize the impact of spirituality on the patient/family ICU experience, especially with regard to matters of faith at the end of life. Failure to have appropriately trained personnel explore these issues may create barriers to a meaningful discussion of resuscitation status or the possibility of hospice care. The chaplaincy service carries the lead position in providing spiritual assessment and care, but all team members have a role in incorporating spiritually appropriate care to those patients and families who have disclosed preferences.

Training ICU clinicians to incorporate spiritual care of the patient and family into clinical practice is an important step in addressing the goal of caring for the whole person (193). Training may include how to assess spirituality, how to use findings from the spiritual assessment in the plan of care, and participating in prayer with the patient on request. Training is provided either in the clinical setting or as part of formalized academic course work. Regional concentrations of various cultural and religious groups should be considered when designing and providing training.

Recommendation 1: Spiritual needs of the patient are assessed by the healthcare team, and findings that affect health and healing incorporated into the plan of care. Grade of Recommendation: C

Recommendation 2: Physicians will review reports of ancillary team members such as chaplains, social workers, and nurses to integrate their perspectives into patient care. Chaplains and social workers are trained to explore

spiritual issues and can provide intensivists with valuable insights into the patient's condition. Grade of Recommendation: D

Recommendation 3: Nurses and doctors receive training in awareness of spiritual and religious issues so that they may properly assess patients and make use of findings in the plan of care written by social workers and chaplains. Grade of Recommendation: C

Recommendation 4: If a patient requests that a healthcare provider pray with him or her, and the healthcare worker agrees to and feels comfortable with it, the request is honored and considered to be part of the spectrum of holistic intensive care. Grade of Recommendation: D

Family Visitation

With healthcare consumers more knowledgeable about their health, available care, and their healthcare rights, demand for access to hospitalized loved ones is increasing. As the healthcare industry strives for a more "family friendly" environment of care, great efforts have been made to evaluate the needs of patients and families as well as attitudes and behaviors of nurses and other members of the healthcare team (194–209).

Flexible (open) visitation policies and regular reports on patient status answer some of the significant needs of families with loved ones in the critical care unit. Nurses' attitudes toward visitation are inconsistent (195, 199, 202, 204, 210, 211). Some nurses allow more liberal family visitation privileges than the unit policy (210) dictates, whereas others reduce family visiting time based on patient anxiety. Still others base family visiting on the nursing schedule, restricting visits when the unit is busy (199). Many nurses expressed a belief that patients need visitors; others felt the room was simply too small to allow for visitation and patient care at the same time (195, 211). In a study completed in Scotland (202), pediatric RNs perceived themselves as family friendly but were very resistant to allowing parents in the unit.

Nurses' attitudes notwithstanding, the preponderance of the literature supports greater flexibility in ICU visitation policies. Descriptive studies of the physiologic effects of visiting on mental status, intracranial pressure, heart rate, and ec-

topic rationale for restricting visiting. In fact, in seven of 24 patients with neurologic injuries, family visits produced a significant positive effect, measured by decrease in intracranial pressure. One ethnographic study has demonstrated that family visiting may help the nurse to "get to know" the patient and that family may be helpful in contributing to the care of the patient (217).

Several interventional studies used satisfaction data to document the effects of changes in visitation policies. Three studies examined an increase in time allowed for visitation (215, 218, 219), and two focused on patient-controlled visitation (219, 220). In four studies both visitors and nursing staff reported increased satisfaction, although families expressed a need for greater flexibility and more access to their loved ones (218, 219, 221, 222). Increasing patient control over visiting correlated with greater patient satisfaction but also with requests by the family for increased access (220, 223).

Several studies were based in pediatric or neonatal environments. Two assessed the behavior of siblings of newborns (224, 225). One study compared two ICUs, one allowing sibling visitation and one prohibiting it (224). The data suggest that sibling visitation is not likely to be harmful and might be beneficial to the patient and the family. The other study found that children who were allowed to visit showed less negative behavior and more knowledge about their critically ill sibling than children who were not allowed to visit (225). Two studies supported the value of participating in a sibling education program before visitation (221, 226). References showed no increase in neonatal infection rates due to sibling visits (227, 228).

Many people have strong attachments to their pets. There is no evidence that pets that are clean and properly immunized should be restricted from the ICU environment (229–232). Animal-assisted therapy is a goal-directed intervention in which an animal is incorporated as an integral part of clinical treatment. Animal-assisted therapy is delivered or directed by a healthcare professional who demonstrates expertise in the clinical applications of human-animal interactions (233). Animal-assisted activities are delivered by a professional, paraprofessional, or volunteer and provide motivational and recreational benefits (233).

Recommendation 1: Open visitation in the adult intensive care environment allows flexibility for patients and families and is determined on a case-by-case basis. Grade of Recommendation: B

Recommendation 2: The patient, family, and nurse determine the visitation schedule collectively; the schedule takes into account the best interest of the patient. Grade of Recommendation: C

Recommendation 3: Visitation in the PICU and NICU is open to parents and guardians 24 hrs a day. Grade of Recommendation: C

Recommendation 4: After participation in a previsit education process, visitation by siblings in the PICU and NICU is allowed with parental approval. Grade of Recommendation: C

Recommendation 5: Caution is taken with sibling visits to immunocompromised infants; with physician approval, sibling visits should be considered. Grade of Recommendation: D

Recommendation 6: Pets that are clean and properly immunized are not restricted from visiting the ICU. Guidelines are created to provide animal-assisted therapy and animal-assisted activities for patients. Grade of Recommendation: B

Family Environment of Care

The articles reviewed for these guidelines included a summary by Roger Ulrich et al. (234) of 600 peer-reviewed studies conducted since 1968. The bulk of the studies reviewed to produce that document pertained to research performed on patient (not family) outcomes. In addition, the architectural literature describes, color, lighting, ventilation systems, and floor coverings as having the potential to affect patient outcomes (235–251). As visitation policies become more flexible in the patient-centered ICU, the environment of care has a growing impact on families. Further studies are indicated to validate that the research findings related to impact of color, lighting, noise, music, laughter, arrangement of furniture, view, and artwork are generalizable to family (vs. patient) biopsychosocial well-being.

Ulrich et al. identified >120 studies linking infection rates to the built environment. Transmission of infection to patients generally occurs through two routes: airborne and direct contact. The

design of the physical environment affects both transmission routes. The Joint Commission on Accreditation of Health-care Organizations, the American Institute of Architects, and the American Society of Heating, Refrigerating and Air-conditioning Engineers (252–254) all provide guidelines for ventilation systems and facilities design approaches to reducing infection as well as for enhancing patient and family privacy and comfort (252–257).

The Health Insurance Portability and Accountability Act created new incentives for redesigning patient care areas to enhance privacy. With increased family access to the critical care environment through open visiting, privacy becomes a family issue as well. Several articles examine the Health Insurance Portability and Accountability Act's impact on the structure of new facilities (236, 240, 241, 258, 259). A study by Barlas et al. (260) suggested that lack of privacy can affect patient safety. The study found that walls separating patient rooms, rather than curtains, provide more privacy and encourage patient to speak more directly about important personal information. Private rooms are also more conducive to family involvement in patient care. Private rooms decrease patient visibility. Measures to maintain patient safety while enhancing privacy are indicated (261).

Patient, family, and caregiver safety is the focus of several articles encouraging the use of "green," ergonomically efficient furniture to reduce back stress, fatigue, and other injuries in the hospital environment (262–266). Evidence indicates that social interactions increase when lounges, day rooms, and waiting rooms are provided with furniture arranged in small flexible groupings (267–269). Facilities design can reduce noise, which Johnson (270, 271) in 2001 demonstrated has a negative impact on patient outcomes. Noise decreases oxygen saturation and respiratory rates, interferes with sleep, and also elevates blood pressure and heart rate (272–279). World Health Organization guidelines for acceptable background noise levels are 35 dB, not to exceed 40 dB. Background noise levels in hospitals are typically 45–68 dB, with peaks frequently exceeding 85–90 dB (234). Hospital noise comes from two primary sources: equipment and environmental surfaces. Hospital floors, ceilings, and walls are typically hard surfaces that reflect sound and thus

contribute greatly to unacceptable levels of background noise (234).

Since the days of Florence Nightingale, who strongly believed in natural light as adjunct to the hygienic environment, light has been known to have an impact on patient outcomes. In 1996 Beauchemin and Hays (280) found that patients hospitalized for severe depression reduced their stays by an average of 3.67 days if assigned to a sunny rather than a dark room. A randomized prospective study by Walch et al. (281) in 2004 found that patients exposed to increased sunlight reported less stress and pain; they also required 22% less analgesic medication per hour, reducing pain medication costs by 20%.

Several articles provide the business case for incorporating environment of care guidelines and recommendations into the design of new facilities and the redesign of older facilities (244, 257, 262, 282–286). For example, as hospital facilities become more complex, poor way-finding systems can be extremely costly, in terms of both patient and family satisfaction and hard dollars. A 1990 study by Zimring (287) at a major regional 604-bed tertiary-care hospital reported that an ineffective way-finding system cost the main hospital about \$220,000 per year, or \$448 per bed; about 4,500 annual staff hours were required just to provide directions. Nelson-Schulman (288) in 1983–1984 found that patients who had the benefit of a well-designed information system on reaching the admitting area, such as a welcome sign, hospital information booklet, patient letter, and orientation aids, were more self-reliant, made fewer demands on staff, and reported higher rates of satisfaction with the hospital.

As more is learned about the effects of the environment of care on patients and families, efforts will increase to include families in the design process for new hospital facilities. New facilities not only will be more comforting to patients and families but also will be more energy efficient and more ergonomic and will provide for greater patient/family control of the environment.

Recommendation 1: Improve patient confidentiality, privacy, and social support by building ICUs with single-bed rooms that include space for family. Grade of Recommendation: B

Recommendation 2: Develop signs and way-finding systems to reduce

stress on patients, families, and visitors. Grade of Recommendation: B
Recommendation 3: Replicate patient research regarding the effect of furniture arrangement, natural lighting, access to nature, positive distractions (music, laughter, art), and reduced noise levels on the biopsychosocial health of family members visiting in the ICU. Grade of Recommendation: D

Family Presence on Rounds

One randomized study demonstrated that parents prefer to be present on daily pediatric oncology rounds, on the grounds that inclusion affords them a better opportunity to obtain information. Although parents felt that rounds were generally upsetting to children, the children themselves did not support this belief (289). Another randomized study showed a trend toward increased patient satisfaction and improved physician-patient communication when patients on a medical ward were included in rounds, although the trend was not statistically significant (290).

One cohort study demonstrated that 94% of patients on a medical ward viewed their participation in rounds as a positive experience and felt that it should continue. The majority (66%) stated that participation in rounds improved communication with healthcare providers (291). Another cohort study demonstrated that 85% of patients on a medical ward preferred to be present on rounds (292).

One opinion publication reported both pro and con opinions on parental presence on rounds in a NICU (293). Pros included improving respectful information to parents, family sharing of patient condition/likes/dislikes with the healthcare team, efficiency of time spent with parents, and decreased parental anxiety. Cons included perception of not having enough time to answer parental questions during rounds, confidentiality, and crowding. Three letters to the editor argued in favor of including patients on medical ward rounds (294–296), one argued against inclusion of patients (297), and one discussed both the pros and cons of patient inclusion (298).

Recognizing that the topic of family presence in rounds is the least studied of any section within this document, these authors concur that family participation in rounds is beneficial. In our collective

experience the burden imposed by the challenges related to privacy and teaching of the resident teams is outweighed by the greater benefit of improving bidirectional communication between families and the healthcare team.

Recommendation 1: Parents or guardians of children in the ICU are given the opportunity to participate in rounds. Grade of Recommendation: B (randomized controlled trial was done on general medical patients and not ICU patients)

Recommendation 2: Whenever possible, adult patients or surrogate decision makers are given the opportunity to participate in rounds. Grade of Recommendation: B

Recommendation 3: Pediatric patients in the ICU are given the opportunity to participate in rounds with parental permission. Grade of Recommendation: D

Recommendation 4: Patients and family members who participate in rounds are given the opportunity to ask questions to clarify information discussed on rounds. Grade of Recommendation: D

Family Presence at Resuscitation

In family presence at resuscitation (FPR), a limited number of family members, usually one, are present in the resuscitation room during CPR or other resuscitation procedures. The literature reviewed for these guidelines included one systematic review (299), one randomized controlled trial dealing with family stress (300), research-based studies (301, 302), family and staff surveys (303–315), and a variety of review articles, descriptive reports, and expert opinions.

Most of the literature deals with sudden death and trauma resuscitation in the emergency department and focuses on adult patients, although the literature indicates that FPR is common in the pediatric arena. Because almost all of the data regarding FPR come from the emergency department, further ICU-specific research is needed (300).

Families today are exercising their right to be present during resuscitation the same way they once did to have fathers present in the delivery room (302). Seventy-five percent or more of families surveyed wanted the option of being

present in the resuscitation room. A similar percentage of patients, asked if they wanted their family present, answered yes (315). Of families who experienced FPR, $\geq 75\%$ felt that the experience was positive and helped in their grieving process and said they would repeat the experience (306, 310, 313, 316–318); $\geq 60\%$ felt that their presence helped their dying relative (306, 310, 319).

A randomized trial of emergency department resuscitations reported by Robinson et al. (300) offered FPR in 13 cases and did not offer it in 12 cases. In the group receiving the offer, two families declined. Ten deaths occurred in this group, and eight families participated in follow-up psychological testing 3 and 9 months after the deaths. In the control group, three families asked to witness the resuscitation and were allowed to do so despite the study design. There were 12 deaths in the control group, and ten families participated in follow-up testing at 3 and 9 months. The witnesses in the experimental group scored better in five of the eight psychological tests performed ($p = .73$). The authors concluded that the witnesses experienced no more stress than the control group and showed a trend to better adjustment to their loss than the control group. The study was terminated early because staff was convinced FPR was significantly beneficial and should not be withheld.

Several organizations have made formal statements in support of FPR, including the Emergency Nurses Association (320) and the American Heart Association, whose 2005 guidelines for cardiopulmonary resuscitation advocate FPR (321); the American Association of Critical-Care Nurses (322); and the American Academy of Pediatrics (323).

Survey data indicate that healthcare professionals vary in their opinions of FPR; nurses tend to support it and physicians to oppose it. McClenathan et al. (303) found that approximately 60% of nurses support FPR, compared with 30% of physicians. These findings were consistent with other surveys. Other pertinent findings in these surveys were that experienced physicians and nurses were more likely to support FPR than inexperienced staff. Staff, especially physicians, were more likely to support FPR if families were not present during invasive procedures (303, 304–309, 311–319, 323, 324). Bassler et al. (302) used a pre- and post-test design to show that nurses' acceptance of FPR could be increased with an

educational intervention. In a survey of emergency department pediatric practitioners, residents were less likely to support FPR than nurses or attending staff (323). In a study of hospital nurses and Emergency Nurses Association members, nurses with higher education and specialty certification were more likely to promote FPR (325).

A number of objections to FPR have been raised. One is that family presence subjects the resuscitation team and subjects staff to extra stress that may adversely affect performance (305–306, 312, 316, 326, 327). Staff stress does occur during resuscitation efforts; Boyd and White (301) showed that 22% of staff study participants (25 of 114 questionnaires) showed symptoms that could be classified as an acute stress reaction. Nonetheless, staff felt that FPR was a positive experience, that the presence of family members increased professionalism, that more attention was given to the patient's dignity and need for pain management, and that the presence of family reduced the black humor common in resuscitation situations (306). The literature, including Foote Hospital's report of 9 years of experience with FPR (317), does not report any interference with resuscitation by family members (306), nor does it indicate that resuscitation procedures are prolonged by family presence.

Some opponents of FPR fear that FPR increases stress on families during an already difficult time. Families, however, are not concerned about stress levels (300, 306, 310, 313, 317, 319, 328).

Families involved in FPR report that their fears of resuscitation were much worse than the procedure they actually witnessed (300). Still, opponents of FPR worry about an increase in lawsuits if families misunderstand resuscitation procedures or interpret them as abuse. A survey of the American Association for the Surgery of Trauma showed that for many trauma surgeons, fear of lawsuits is reason enough to exclude family members (305). Experts in medical malpractice feel that FPR, by strengthening the bond between staff and family, actually decreases the likelihood of legal action (329). To date there have been no medical malpractice suits involving families who either were allowed to witness resuscitation or were excluded from presence at resuscitation.

Any institutional FPR program will have to address physician objections to be successful. A well-designed, carefully

structured protocol is advocated. The patient's confidentiality must be ensured, and the patient's wishes, if known, should be followed regarding FPR. The protocol should designate a specially trained staff member to offer the family the option of entering the resuscitation room with permission of the staff. This liaison should explain beforehand what the family may see, stay with the family in the resuscitation room, escort the family out of the room when requested by the family or when an invasive procedure is needed, and support the family after the resuscitation is over, whatever the outcome (319). A study of 984 ICU and emergency department nurses reported that few hospitals have policies in place for FPR, but most hospitals have allowed families to be present and have had families request to be present (330).

Recommendation 1: Institutions develop a structured process to allow the presence of family members during cardiopulmonary resuscitation of their loved one that includes a staff debriefing. Grade of Recommendation: C

Recommendation 2: The resuscitation team includes a member designated and trained to support the family during family witnessed resuscitation. Grade of Recommendation: D

Recommendation 3: Resuscitation team and ICU training includes information regarding the process and rationale for FPR. Grade of Recommendation: D

Palliative Care

Articles selected for review covered palliative care delivery in the hospital setting, palliative care education, and family perceptions of critical care delivery. Articles on palliative care for cancer and hospice patients were not included. Articles reviewed consisted mostly of case reports, surveys, and expert opinion. As family support represents only one aspect of palliative care, there were no controlled trials of interventions related specifically to family support.

The *Clinical Practice Guidelines for Quality Care*, released in 2004 by the National Consensus Project for Quality Palliative Care, were also reviewed, and the project's recommendations are endorsed in their entirety. Although the National Consensus Project guidelines focus primarily on the patient, they are also

applicable to family support. Several of the project's recommendations are abstracted with permission.

Palliative care is medical care focused on the relief of suffering and support for the best possible quality of life for patients and families facing life-threatening illness. Palliative care is delivered by a multiprofessional team including physicians, nurses, social workers, chaplains, nursing assistants, and other health professionals (331). Palliative care services can be led either by the primary medical team or by a dedicated palliative care service. Key aspects of palliative care include symptom control, psychosocial and spiritual care, a personalized management plan that maximizes patient-determined quality of life, and family-oriented care that extends throughout the hospitalization through discharge or bereavement

Families often perceive that their loved ones suffer during the management of critical illness (332–337). Consequently, the delivery of palliative care to patients in the ICU is an important component of family support. Under today's paradigm, palliative care coexists with aggressive critical care and should begin with the diagnosis of serious illness (330).

Families experience a wide range of unmet needs that are standard components of palliative care (336). Several surveys highlight family perceptions of inadequate relief of loved ones' pain and suffering and communication problems with the healthcare team. According to a survey of bereaved family members, 52% of families felt that the patient did not receive emotional support, 20% felt that the patient was not treated with respect, 38% felt a lack of emotional support for the family, and 50% received insufficient information about what to expect while the patient was dying (337).

There is a striking lack of content on end-of-life and palliative care in medical specialty texts. A review of 50 textbooks in internal medicine, neurology, oncology, infectious diseases/AIDS, and surgery revealed end-of-life content to be absent in 50–72% of the texts (338). A survey of 3,227 oncologists revealed that only 10% had received palliative care courses in medical school and only 33% during residency or fellowship. Ninety percent responded that they learned by trial and error to provide care to terminally ill patients (339). Given the paucity of ICU specific data on this topic, the

following recommendations are made as consensus statements by these authors.

Recommendation 1: Assessments are made of the family's understanding of the illness and its consequences, symptoms, side effects, functional impairment, and treatments and of the family's ability to cope with the illness and its consequences. Family education should be based on the assessment findings. Grade of Recommendation: D

Recommendation 2: The family is educated about the signs and symptoms of approaching death in a developmentally and culturally appropriate manner. Grade of Recommendation: D

Recommendation 3: As appropriate, the family is informed about and offered referral to hospice palliative care and other community-based health-care resources. Grade of Recommendation: D

Recommendation 4: Bereavement services and follow-up care are made available to the family after the death of a patient. Grade of Recommendation: D

Recommendation 5: Training in the elements of palliative care is a formal component of critical care education. Grade of Recommendation: C

CONCLUSION

Throughout history, families have played a crucial role in the care of injured or critically ill members. The technology and training required to care for critically ill patients have had the unfortunate consequence of limiting family participation in healthcare decision making and the care of their loved ones. The psychosocial needs of critically ill patients who often cannot communicate effectively are often overlooked. This in turn compromises the delivery of patient-centered care in the ICU.

To correct this problem we must acknowledge the important role that family members and other healthcare surrogates play in patient care and embrace their participation. As advocated in the Institute of Medicine patient-centered care model, this guideline includes recommendations related to informing families, maintaining active involvement in decision making, coordinating care across disciplines, providing the physical comfort and emotional support of families, and providing culturally sensitive

care in accordance with the patient's goals (1). These guidelines are an initial attempt to make practical recommendations to healthcare providers based on current literature.

Historically, unilateral decision-making models, based on either patient autonomy or physician paternalism, have been preferred in the ICU. Care that is truly patient-centered requires a new paradigm: shared decision making. Since family members and other health care surrogates often serve as the spokespeople for their loved ones in the ICU, they must be included in decision making. Frequent communication through periodic multiprofessional care conferences is indicated. Communication needs to be culturally sensitive, using terms that the family can understand. Shared decision making may decrease family stress and help families to cope. Improved communication may also increase the utilization of advanced directives. Better trained ICU staff, open visitation policies, and accurate and timely multiple-professional communication among ICU healthcare providers can decrease stress and anxiety for both staff and families.

Family involvement and support are facilitated by an ICU environment that includes waiting rooms that are close to patient rooms and that include family-friendly amenities, such as a means to communicate readily with both healthcare providers and the outside world.

Allowing families to be present during cardiopulmonary resuscitation may help families to cope with the death of a loved one in the ICU. Prayer and adherence to cultural traditions also help many patients and families to cope with illness, death, and dying and should be encouraged and respected in the ICU. In addition to formal spiritual counseling by a chaplaincy service, educated members of the ICU staff may help to accommodate the spiritual traditions and cultural needs of patients and families. Symptom management and family involvement in palliative care processes are also advocated to improve care in the ICU.

Including and embracing the family as an integral part of the multiple-professional ICU team are essential for the timely restoration of health or optimization of the dying process for critically ill patients. Support for the psychological and spiritual health of the family is an essential component of patient-centered care for the critically ill.

REFERENCES

1. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC, National Academies Press, 2001
2. Lewin SA, Skea ZC, Entwistle V, et al: Interventions for providers to promote a patient-centered approach in clinical consultations. *Cochrane Database Syst Rev* 2001; (4):CD003267
3. Pollack MM, Koch MA: Association of outcomes with organizational characteristics of neonatal intensive care units. *Crit Care Med* 2003; 31:1620-1629
4. Roter DL, Hall JA, Kern DE, et al: Improving physicians' interviewing skills and reducing patients' emotional distress. A randomized clinical trial. *Arch Intern Med* 1995; 155:1877-1884
5. Stewart M, Brown JB, Donner A, et al: The impact of patient-centered care on outcomes. *J Fam Pract* 2000; 49:796-804
6. Benbassat J, Pilpel D, Tidhar M: Patients' preferences for participation in clinical decision making: A review of published surveys. *Behav Med* 1998; 24:81-88
7. Frosch DL, Kaplan RM: Shared decision making in clinical medicine: Past research and future directions. *Am J Prev Med* 1999; 17:285-294
8. Gerteis M, Edgman-Levitan S, Walker JD, et al: What patients really want. *Health Manage Q* 1993; 15:2-6
9. A controlled trial to improve care for seriously ill hospitalized patients. The study to understand prognoses and preferences for outcomes and risks of treatments (SUPPORT). The SUPPORT Principal Investigators. *JAMA* 1995; 274:1591-1598
10. Heyland DK, Rocker GM, Dodek PM, et al: Family satisfaction with care in the intensive care unit: Results of a multiple center study. *Crit Care Med* 2002; 30:1413-1418
11. National Consensus Project for Quality Palliative Care: Clinical Practice Guidelines for Quality Palliative Care. *J Palliat Med* 2004; 7:611-627
12. Cook D: Patient autonomy versus parentalism. *Crit Care Med* 2001; 29(2 Suppl): N24-N25
13. Gatterer E: Report on the protection of the human rights and dignity of the terminally ill or dying (Council of Europe). *Biomed Ethics* 1999; 4:4-11
14. Danis M, Mutran E, Garrett JM, et al: A prospective study of the impact of patient preferences on life-sustaining treatment and hospital cost. *Crit Care Med* 1996; 24: 1811-1817
15. Goold SD, Williams B, Arnold RM: Conflicts regarding decisions to limit treatment: A differential diagnosis. *JAMA* 2000; 283: 909-914
16. Epstein RM, Alper BS, Quill TE: Communicating evidence for participatory decision making. *JAMA* 2004; 291:2359-2366
17. Volk RJ, Cass AR, Spann SJ: A randomized

- controlled trial of shared decision making for prostate cancer screening. *Arch Fam Med* 1999; 8:333-340
18. Fried TR, Bradley EH, Towle VR, et al: Understanding the treatment preferences of seriously ill patients. *N Engl J Med* 2002; 346:1061-1066
 19. Carlet J, Thijs LG, Antonelli M, et al: Challenges in end-of-life care in the ICU. Statement of the 5th International Consensus Conference in Critical Care: Brussels, Belgium, April 2003. *Intensive Care Med* 2004; 30:770-784
 20. Degner LF, Sloan JA: Decision making during serious illness: What role do patients really want to play? *J Clin Epidemiol* 1992; 45:941-950
 21. Heyland DK, Cook DJ, Rocker GM, et al: Decision-making in the ICU: Perspectives of the substitute decision-maker. *Intensive Care Med* 2003; 29:75-82
 22. Heyland DK, Tranmer J, O'Callaghan CJ, et al: The seriously ill hospitalized patient: Preferred role in end-of-life decision making? *J Crit Care* 2003; 18:3-10
 23. Sjøkvist P, Nilstun T, Svantesson M, et al: Withdrawal of life support—Who should decide? Differences in attitudes among the general public, nurses and physicians. *Intensive Care Med* 1999; 25:949-954
 24. Penticuff JH, Arheart KL: Effectiveness of an intervention to improve parent-professional collaboration in neonatal intensive care. *J Perinat Neonat Nurs* 2005; 19: 187-202
 25. Lo B: Resolving Ethical Dilemmas: A Guide for Clinicians. Second Edition. Philadelphia, Lippincott Williams & Wilkins, 2000
 26. Beisecker AE: Aging and the desire for information and input in medical decisions: Patient consumerism in medical encounters. *Gerontologist* 1988; 28:330-335
 27. Blendon RJ, Szalay US, Knox RA: Should physicians aid their patients in dying? The public perspective. *JAMA* 1992; 267: 2658-2662
 28. Cassileth BR, Zupkis RV, Sutton-Smith K, et al: Information and participation preferences among cancer patients. *Ann Intern Med* 1980; 92:832-836
 29. Ende J, Kazis L, Ash A, et al: Measuring patients' desire for autonomy: Decision making and information-seeking preferences among medical patients. *J Gen Intern Med* 1989; 4:23-30
 30. Faden RR, Becker C, Lewis S, et al: Disclosure of information to patients in medical care. *Med Care* 1981; 19:718-733
 31. Lidz CW, Meisel A, Osterweis M, et al: Barriers to informed consent. *Ann Intern Med* 1983; 99:539-543
 32. Mark JS, Spiro H: Informed consent for colonoscopy. A prospective study. *Arch Intern Med* 1990; 150:777-780
 33. Miller SM, Brody DS, Summerton J: Styles of coping with threat: Implications for health. *J Pers Soc Psychol* 1988; 54: 142-148
 34. Nease RF Jr, Brooks WB: Patient desire for information and decision making in health care decisions: The Autonomy Preference Index and the Health Opinion Survey. *J Gen Intern Med* 1995; 10:593-600
 35. Strull WM, Lo B, Charles G: Do patients want to participate in medical decision making? *JAMA* 1984; 252:2990-2994
 36. Sutherland HJ, Llewellyn-Thomas HA, Lockwood GA, et al: Cancer patients: their desire for information and participation in treatment decisions. *J R Soc Med* 1989; 82: 260-263
 37. Thompson SC, Pitts JS, Schwankovsky L: Preferences for involvement in medical decision-making: situational and demographic influences. *Patient Educ Couns* 1993; 22:133-140
 38. Vertinsky IB, Thompson WA, Uyeno D: Measuring consumer desire for participation in clinical decision making. *Health Serv Res* 1974; 9:121-134
 39. De Jong MJ, Beatty DS: Family perceptions of support interventions in the intensive care unit. *Dimens Crit Care Nurs* 2000; 19:40-47
 40. Doering LV, Moser DK, Dracup K: Correlates of anxiety, hostility, depression, and psychosocial adjustment in parents of NICU infants. *Neonatal Network—Journal of Neonatal Nursing* 2000; 19:15-23
 41. Rukholm EE, Bailey PH, and Coutu-Wakulczyk G: Family needs and anxiety in ICU: cultural differences in Northeastern Ontario. *Can J Nurs Res* 1991; 23:67-80
 42. Waters CM: Professional nursing support for culturally diverse family members of critically ill adults. *Res Nurs Health* 1999; 22:107-117
 43. Wilson SM, Miles MS: Spirituality in African-American mothers coping with a seriously ill infant. *J Soc Pediatr Nurs* 2001; 6:116-122
 44. Youngblut JM, Shiao SY: Characteristics of a child's critical illness and parents' reactions: Preliminary report of a pilot study [published correction appears in *Am J Crit Care* 1993; 2:101]. *Am J Crit Care* 1992; 1:80-84
 45. Haines C, Perger C, Nagy S: A comparison of the stressors experienced by parents of intubated and non-intubated children. *J Adv Nurs* 1995; 21:350-355
 46. Spear ML, Leef K, Epps S, et al: Family reactions during infants' hospitalization in the neonatal intensive care unit. *Am J Perinatol* 2002; 19:205-213
 47. Tomlinson PS, Kirschbaum M, Harbaugh B, et al: The influence of illness severity and family resources on maternal uncertainty during critical pediatric hospitalization. *Am J Crit Care* 1996; 5:140-146
 48. Davis-Martin S: Perceived needs of families of long-term critical care patients: A brief report. *Heart Lung* 1994; 23:515-518
 49. Jacono J, Hicks G, Antonioni C, et al: Comparison of perceived needs of family members between registered nurses and family members of critically ill patients in intensive care and neonatal intensive care units. *Heart Lung* 1990; 19:72-78
 50. O'Malley P, Favaloro R, Anderson B, et al: Critical care nurse perceptions of family needs. *Heart Lung* 1991; 20:189-201
 51. Koller PA: Family needs and coping strategies during illness crisis. *AACN Clin Issues Crit Care Nurs* 1991; 2:338-345
 52. Scott LD: Perceived needs of parents of critically ill children. *J Soc Pediatr Nurs* 1998; 3:4-12
 53. Delva D, Vanoost S, Bijttebier P, et al: Needs and feelings of anxiety of relatives of patients hospitalized in intensive care units: Implications for social work. *Soc Work Health Care* 2002; 35:21-40
 54. Fiser DH, Stanford G, Dorman DJ: Services for parental stress reduction in a pediatric ICU. *Crit Care Med* 1984; 12:504-507
 55. Foss KR, Tenholder MF: Expectations and needs of persons with family members in an intensive care unit as opposed to a general ward. *South Med J* 1993; 86:380-384
 56. Johnson PA, Nelson GL, Brunnquell DJ: Parent and nurse perceptions of parent stressors in the pediatric intensive care unit. *Children's Health Care* 1988; 17(2): 98-105
 57. Kirschbaum MS: Needs of parents of critically ill children. *DCCN - Dimensions of Critical Care Nursing* 1990; 9(6):344-52
 58. Miles MS, and Carter MC: Coping strategies used by parents during their child's hospitalization in an intensive care unit. *Child Health Care* 1985; 14:14-21
 59. Miles MS, Funk SG, Kasper MA: The neonatal intensive care unit environment: Sources of stress for parents. *AACN Clin Issues Crit Care Nurs* 1991; 2:346-354
 60. Price DM, Forrester DA, Murphy PA, et al: Critical care family needs in an urban teaching medical center. *Heart Lung* 1991; 20:183-188
 61. Rukholm E, Bailey P, Coutu-Wakulczyk G, et al: Needs and anxiety levels in relatives of intensive care unit patients. *J Adv Nurs* 1991; 16:920-928
 62. Tomlinson PS, Swiggum P, Harbaugh BL: Identification of nurse-family intervention sites to decrease health-related family boundary ambiguity in PICU. *Issues Compr Pediatr Nurs* 1999; 22:27-47
 63. Warren NA: Perceived needs of the family members in the critical care waiting room. *Crit Care Nurs Q* 1993; 16:56-63
 64. Mendonca D, Warren NA: Perceived and unmet needs of critical care family members. *Crit Care Nurs Q* 1998; 21:58-67
 65. Paul F, Hendry C, Cabrelli L: Meeting patient and relatives' information needs upon transfer from an intensive care unit: The development and evaluation of an information booklet. *J Clin Nurs* 2004; 13:396-405
 66. Online Multimedia. Available at: <http://www.icu-usa.com>. Accessed August 21, 2006
 67. Johnson D, Wilson M, Cavanaugh B, et al:

- Measuring the ability to meet family needs in an intensive care unit. *Crit Care Med* 1998; 26:266–271
68. Azoulay E, Pochard F, Chevret S, et al: Meeting the needs of intensive care unit patient families: a multicenter study. *Am J Respir Crit Care Med* 2001; 163:135–139
 69. Kleinpell RM, Powers MJ: Needs of family members of intensive care unit patients. *Appl Nurs Res* 1992; 5:2–8
 70. Murphy PA, Forrester DA, Price DM, et al: Empathy of intensive care nurses and critical care family needs assessment. *Heart Lung* 1992; 21:25–30
 71. Forrester DA, Murphy PA, Price DM, et al: Critical care family needs: Nurse-family member confederate pairs. *Heart Lung* 1990; 19:655–661
 72. Bell PL: Adolescent mothers' perceptions of the neonatal intensive care unit environment. *J Perinat Neonatal Nurs* 1997; 11:77–84
 73. Eberly TW, Miles MS, Carter MC, et al: Parental stress after the unexpected admission of a child to the intensive care unit. *Crit Care Q* 1985; 8:57–65
 74. Miles MS, Carter MC, Hennessey J, et al: Testing a theoretical model: Correlates of parental stress responses in the pediatric intensive care unit. *Matern Child Nurs J* 1989; 18:207–219
 75. Miles MS, Carter MC, Riddle I, et al: The pediatric intensive care unit environment as a source of stress for parents. *Matern Child Nurs J* 1989; 18:199–206
 76. Youngblut JM, Jay SS: Emergent admission to the pediatric intensive care unit: Parental concerns. *AACN Clin Issues Crit Care Nurs* 1991; 2:329–337
 77. Board R, Ryan-Wenger N: Long-term effects of pediatric intensive care unit hospitalization on families with young children. *Heart Lung* 2002; 31:53–66
 78. Board R, Ryan-Wenger N: Stressors and stress symptoms of mothers with children in the PICU. *Jo Pediatr Nurs* 2003; 18:195–202
 79. Singer LT, Salvator A, Guo S, et al: Maternal psychological distress and parenting stress after the birth of a very low-birth-weight infant. *JAMA* 1999; 281:799–805
 80. Craft MJ, Cohen MZ, Titler M, et al: Experiences in children of critically ill parents: A time of emotional disruption and need for support. *Crit Care Nurs Q* 1993; 16:64–71
 81. Pochard F, Azoulay E, Chevret S: Symptoms of anxiety and depression in family members of intensive care unit patients: Ethical hypothesis regarding decision-making capacity. *Crit Care Med* 2001; 29:1893–2026
 82. LaMontagne LL, Hepworth JT, Johnson BD, et al: Psychophysiological responses of parents to pediatric critical care stress. *Clin Nurs Res* 1994; 3:104–118
 83. McHaffie HE: Social support in the neonatal intensive care unit. *J Adv Nurs* 1992; 17:279–287
 84. Daly K, Kleinpell RM, Lawinger S, et al: The effect of two nursing interventions on families of ICU patients. *Clin Nurs Res* 1994; 3:414–422
 85. Sabo KA, Kraay C, Rudy E, et al: ICU family support group sessions: Family members' perceived benefits. *Appl Nurs Res* 1989; 2:82–89
 86. Halm MA: Effects of support groups on anxiety of family members during critical illness. *Heart Lung* 1990; 19:62–71
 87. Powers KS, Rubenstein JS: Family presence during invasive procedures in the pediatric intensive care unit: A prospective study. *Arch Pediatr Adolesc Med* 1999; 153:955–958
 88. Melyn BM, Alpert-Gillis L, Feinstein NF, et al: Improving cognitive development of low-birth-weight premature infants with the COPE program: A pilot study of the benefit of early NICU intervention with mothers. *Res Nurs Health* 2001; 24:373–389
 89. Melyn BM, Alpert-Gillis LJ, Hensel PB, et al: Helping mothers cope with a critically ill child: a pilot test of the COPE intervention. *Res Nurs Health* 1997; 20:3–14
 90. Cobiella CW, Mabe PA, Forehand RL: A comparison of two stress-reduction treatments for mothers of neonates hospitalized in a neonatal intensive care unit. *Child Health Care* 1990; 19:93–100
 91. Dillard RG, Auerbach KG, Showalter AH: A parents' program in the intensive care nursery: Its relationship to maternal attitudes and expectations. *Soc Work Health Care* 1980; 5:245–251
 92. Macnab AJ, Beckett LY, Park CC, et al: Journal writing as a social support strategy for parents of premature infants: A pilot study. *Patient Educ Couns* 1998; 33:149–159
 93. Meyer EC, Coll CT, Lester BM, et al: Family-based intervention improves maternal psychological well-being and feeding interaction of preterm infants. *Pediatrics* 1994; 93:241–246
 94. Perrault C, Coates AL, Collinge J, et al: Family support system in newborn medicine: Does it work? Follow-up study of infants at risk. *Jo Pediatr* 1986; 108:1025–1030
 95. Preyde M, Ardal F: Effectiveness of a parent "buddy" program for mothers of very preterm infants in a neonatal intensive care unit. *CMAJ* 2003; 168:969–973
 96. Combe D: The use of patient diaries in an intensive care unit. *Nurs Crit Care* 2005; 10:31–34
 97. Young E, Eddleston J, Ingleby S: Returning home after intensive care: A comparison of symptoms of anxiety and depression in ICU and elective cardiac surgery patients and their relatives. *Intensive Care Med* 2005; 31:86–91
 98. Azoulay E, Pochard F, Kentish-Barnes N, et al: Risk of post-traumatic stress symptoms in family members of intensive care patients. *Am J Respir Crit Care Med* 2005; 171:987–994
 99. Rukholm E, Bailey P, Coutu-Wakulczyk C, et al: Needs and anxiety levels in relatives of intensive care unit patients. *J Adv Nursing* 1991; 14:920–928
 100. Balluffi A, Kassam-Adams N, Kazak A, et al: Traumatic stress in parents of children admitted to the pediatric intensive care unit. *Pediatr Crit Care Med* 2004; 5:547–553
 101. Angus DC: Charting (and publishing) the boundaries of critical illness. *Am J Respir Crit Care Med* 2005; 171:938–939
 102. Hughes F, Bryan K, Robbins I: Relatives' experiences of critical care. *Nurs Crit Care* 2005; 10:23–30
 103. Jones C, Skirrow P, Griffiths RD, et al: Post-traumatic stress disorder-related symptoms in relatives of patients following intensive care. *Intensive Care Med* 2004; 30:456–460
 104. Melyn BM, Alpert-Gillis L, Feinstein NF, et al: Creating opportunities for parent empowerment: Program effects on the mental health/coping outcomes of critically ill young children and their mothers. *Pediatrics* 2004; 113:597–607
 105. Playfor SD: Evaluating the effects of critical illness in children and their parents. *J Paediatr Child Health* 1998; 34:339–343
 106. Baggs JG, Mick DJ: Collaboration: A tool addressing ethical issues for elderly patients near the end of life in intensive care units. *J Gerontol Nurs* 2000; 41–47
 107. Rushton CH, Brooks-Brunn JA: Environments that support ethical practice. *New Horiz* 1997; 5:20–29
 108. Prendergast TJ: Resolving conflicts surrounding end-of-life care. *New Horiz* 1997; 5:62–71
 109. Murphy DJ, Barbour E: GUIDe (Guidelines for the use of intensive care in Denver): A community effort to define futile and inappropriate care. *New Horiz* 1994; 2:326–331
 110. Hanson LC, Davis M, Garrett J: What is wrong with end-of-life care? Opinions of bereaved family members. *J Am Geriatr Soc* 1997; 45:1339–1344
 111. Llenore E, Ogle KR: Nurse-patient communication in the intensive care unit: A review of the literature. *Aust Crit Care* 1999; 12:142–145
 112. Burr G: Unfinished business: Interviewing family members of critically ill patients. *Nurs Inq* 1996; 3:172–177
 113. Coyle M: Meeting the needs of the family: The role of the specialist nurse in the management of brain death. *Intensive Crit Care Nurs* 2000; 16:45–50
 114. Offord RJ: Should relatives of patients with cardiac arrest be invited to be present during cardiopulmonary resuscitation? *Intensive Crit Care Nurs* 1998; 14:288–293
 115. Lisserman I: Maintaining confidentiality and information-giving in intensive care. *Nurs Crit Care* 2000; 5:187–193
 116. Leske JS: The impact of critical injury as described by a spouse. *Clin Nursing Res* 1992; 1:385–401
 117. Andrew CM: Optimizing the human experience: Nursing the families of people who die

- in intensive care. *Intensive Crit Care Nurs* 1997; 3:59–65
118. Perkins HS, Bauer RL, Hzuda HP, et al: Impact of legal liability, family wishes, and other "external factors" on physicians' life support decisions. *AJM* 1990; 89:185–194
 119. Hohenleitner R: Critical care nurses' role in code status discussion. *Dimens Crit Care Nurs* 2002; 21:140–143
 120. Fins JJ, Solomon MZ: Communication in intensive care settings: The challenge of futility disputes. *Crit Care Med* 2001; 29:N10–N15
 121. Truog RD, Cist AFM, Brackett SE, et al: Recommendations for end-of-life care in the intensive care unit: The ethics committee of the society of critical care medicine. *Crit Care Med* 2001; 29:2332–2348
 122. Azoulay E, Chevret S, Leleu G, et al: Half the families of intensive care unit patients experience inadequate communication with physicians. *Crit Care Med* 2000; 28:3044–3049
 123. Collopy KS: Advanced practice nurses guiding families through systems. *Crit Care Nurse* 1999; 19:80–85
 124. Gillman J: Religious perspectives on organ donation. *Crit Care Nurs Q* 1999; 22:19–29
 125. Advice P.R.N. ICU visitors: Waiting room hostilities. *Nursing* 2003; 33:14 (CINAHL 2003092991)
 126. Levy M: End of life care in the intensive care unit: Can we do better? *Crit Care Med* 2001; 29:N56–N61
 127. Curtis JR, Patrick DL, Shannon SE, et al: The family conference as a focus to improve communication about end-of-life care in the intensive care unit: Opportunities for improvement. *Crit Care Med* 2001; 29:N26–N33
 128. Kirchhoff KT, Beckstrand RL: Critical care nurses' perceptions of obstacles and helpful behaviors in providing end-of-life care to dying patients. *Am J Crit Care* 2000; 9:96–105
 129. Brandenburg M, Gifford J: Developing a multidisciplinary brochure to teach patients and families about life-sustaining treatments. *Dimens Crit Care Nurs* 1997; 16:328–333
 130. Chelsea CA, Stannard D: Breakdown in the nursing care of families in the ICU. *Am J Crit Care* 1997; 6:64–71
 131. Warren NA: Critical care family members' satisfaction with bereavement experiences. *Crit Care Nurs Q* 2002; 5:54–60
 132. Ledbetter-Stone M: Family Intervention Strategies when dealing with futility of treatment issues: A case study. *Crit Care Nurs Q* 1999; 22:45–50
 133. Gonzales R: Conflicting demands between functional and legal family units. *Dimens Crit Care Nurs* 1997; 16:96–100
 134. Lark J, Gatti C: Compliance with advance directives: Nursing's view. *Crit Care Nurs Q* 1999; 22:65–71
 135. Vincent JL: Cultural differences in end-of-life care. *Crit Care Med* 2001; 29:N52–N55
 136. Ackerman AD: Retention of critical care staff. *Crit Care Med* 1993; 21:S394–S395
 137. Cray L: A collaborative project: Initiating a family intervention program in a medical intensive care unit. *Focus Crit Care* 1989; 16:213–218
 138. Schlump-Urquhart SR: Families experiencing a traumatic accident: Implications and nursing management. *AACN Clin Issues* 1990; 1:522–534
 139. Wooley N: Crisis theory: A paradigm of effective intervention with families of critically ill people. *J Adv Nursing* 1990; 15:1402–1408
 140. Adomat R, Killingworth A: Care of the critically ill patient: The impact of stress on the use of touch in intensive therapy units. *J Adv Nursing* 1994; 19:912–922
 141. Karlawish JHT: Shared decision making in critical care: A clinical reality and an ethical necessity. *Am J of Crit Care* 1996; 5:391–396
 142. Buchanan SF, Desrochers JM, Henry DB, et al: A mediation/medical advisory panel model for resolving disputes about end-of-life care. *J Clin Ethics* 2002; 13:188–202
 143. Miller DK, Coe RM, Hyers TM: Achieving consensus on withdrawing or withholding care for critically ill patients. *J Gen Intern Med* 1992; 7:475–480
 144. Rukholm EE, Bailey PH, Coutu-Wakulczyk G: Anxiety and family needs of the relatives of cardiac medical-surgical ICU patients. *CJCN* 1992; 2:15–22
 145. Waters CM: Professional nursing support for culturally diverse family members of critically ill adults. *Res Nurs Health* 1999; 22:107–117
 146. Kupferschmid BJ, Briones TL, Dawson C, et al: Families: A link or a liability?" *AACN Clin Issues* 1991; 2:252–257
 147. Hickey M: What are the needs of families of critically ill patients? A review of the literature since 1976. *Heart Lung* 1990; 19:401–415
 148. Kristjanson L, McPhee I, Pickstock S, et al: Palliative care nurse' perceptions of good and bad deaths and care expectations: A qualitative analysis. *Int J Palliat Nurs* 2001; 7:129–139
 149. Barnes K: Staff stress in the children's hospice: Causes, effects and coping strategies. *Int J Palliat Nurs* 2001; 7:248–254
 150. Perkin R, Young T, Freier M, et al: Stress and distress in pediatric nurses: Lessons from baby K. *Am J of Crit Care* 1997; 6:225–232
 151. Tyson J, Lasky R, Weiner M, et al: Effect of nursing-staff support groups on the quality of newborn intensive care. *Crit Care Med* 1984; 12:901–906
 152. Yam B, Rossiter JC, Cheung K: Caring for dying infants: Experiences of neonatal intensive care nurses in Hong Kong. *J Clin Nurs* 2001; 10:651–659
 153. Position statement on moral distress. Available at: <http://www.aacn.org/Position statement on moral distress>. Accessed November 14, 2006
 154. Betancourt JR: Cultural competence—Marginal or mainstream movement? *N Engl J Med* 2004; 351:953–955
 155. Groman R, Ginsburg J: Racial and ethnic disparities in health care: A position paper of the American College of Physicians. *Ann Intern Med* 2004; 141:226–232
 156. Petersen LA, Wright SM, Peterson ED, et al: Impact of race on cardiac care and outcomes in veterans with acute myocardial infarction. *Med Care* 2002; 40(1 Suppl):186–196
 157. Schneider EC, Zaslavsky AM, Epstein AM: Racial disparities in the quality of care for enrollees in medicare managed care. *JAMA* 2002; 287:1288–1294
 158. Boulware LE, Ratner LE, Cooper LA, et al: Understanding disparities in donor behavior: Race and gender differences in willingness to donate blood and cadaveric organs. *Med Care* 2002; 40:85–95
 159. Bowman KW, Singer PA: Chinese seniors' perspectives on end-of-life decisions. *Soc Sci Med* 2001; 53:455–464
 160. Hopp FP, Duffy SA: Racial variations in end-of-life care. *J Am Geriatr Soc* 2000; 48:658–63
 161. Morrison RS, Zayas LH, Mulvihill M, et al: Barriers to completion of health care proxies: An examination of ethnic differences. *Arch Intern Med* 1998; 158:2493–2497
 162. Bigby J: Beyond culture: Strategies for caring for patients from diverse racial, ethnic and cultural groups. In: Cross-Cultural Medicine. Bigby J (Ed). Philadelphia, American College of Physicians, 2003
 163. Cooper LA, Roter DL, Johnson RL, et al: Patient-centered communication, ratings of care, and concordance of patient and physician race. *Ann Intern Med* 2003; 139:907–915
 164. Kaplan SH, Greenfield S: The Patient's role in reducing disparities. *Ann Intern Med* 2004; 141:222–223
 165. Joint Commission on the Accreditation of Healthcare Organizations, Hospital Accreditation Standards: Accreditation Policies, Standards, Elements of Performance. Carbrook Terrace, Joint Commission Resources. 2006. Available at: <http://www.jointcommission.org>. Accessed November 14, 2006
 166. Norris WM, Wenrich MD, Nielsen EL, et al: Communication about end-of-life care between language-discordant patients and clinicians: Insights from medical interpreters. *J Palliat Med* 8:1016–1024
 167. Bowman KW, Richard SA: Cultural considerations for Canadians in the diagnosis of brain death. *Can J Anaesth* 2004; 51:273–275
 168. Fox R: The evolution of American bioethics: A sociological perspective. In: Social science perspectives on medical ethics. Weisz G (Ed). Philadelphia, University of Pennsylvania Press, 1990, 201–220

169. Davis A: Ethics and ethnicity: End-of-life decisions in four ethnic groups of cancer patients. *Med Law* 1996; 15:429–432
170. Kagawa-Singer M, Blackhall LJ: Negotiating cross-cultural issues at the end of life: "You got to go where he lives." *JAMA* 2001; 286:2993–3001
171. Thompson BT, Cox PN, Antonelli M, et al: Challenges in end-of-life care in the ICU: Statement of the 5th International Consensus Conference in Critical Care: Brussels, Belgium, April 2003: Executive summary. *Crit Care Med* 2004; 32:1781–1784
172. Macklin R: Ethical relativism in a multicultural society. *Kennedy Inst Ethics J* 1998; 8:1–22
173. Monroe MH, Bynum D, Susi B, et al: Primary care physician preferences regarding spiritual behavior in medical practice. *Arch Intern Med* 2003; 163:2751–2756
174. Ellis MR, Vinson DC, Ewigman B: Addressing spiritual concerns of patients: Family physicians' attitudes and practices. *J Fam Pract* 1999; 48:105–109
175. Gallup G: The Gallup Poll: Public Opinion 1993. Wilmington, DE, Scholarly Resources, 1994
176. Maugans TA, Wadland WC: Religion and family medicine: A survey of physicians and patients. *J Fam Pract* 1991; 32:210–213
177. Sheridan J, Bullis R: Practitioners personal and professional attitudes and behaviors toward religion and spirituality: Issues for education and practice. *J Social Work Educ* 1992; 28:190–203
178. Siegel B, Tenenbaum AJ, Jamanka A, et al: Faculty and resident attitudes about spirituality and religion in the provision of pediatric health care. *Ambul Pediatr* 2002; 2:5–10
179. Halcon LL, Chlan LL, Kreitzer MJ, et al: Complementary therapies and healing practices: Faculty/student beliefs and attitudes and the implications for nursing education. *J Prof Nurs* 2003; 19:387–397
180. Highfield ME, Osterhues D: Spiritual care rights and quality of care: Perspectives of physical therapy students. *J Healthc Qual* 2003; 25:12–15
181. Wesley C, Tunney K, Duncan E: Educational needs of hospice social workers: Spiritual assessment and interventions with diverse populations. *Am J Hosp Palliat Care* 2004; 21:40–46
182. MacLean CD, Susi B, Phifer N, et al: Patient preference for physician discussion and practice of spirituality. *J Gen Intern Med* 2003; 18:38–43
183. Corrigan P, McCorkle B, Schell B, et al: Religion and spirituality in the lives of people with serious mental illness. *Community Ment Health J* 2003; 39:487–499
184. Mackenzie ER, Rajagopal DE, Meibohm M, et al: Spiritual support and psychological well-being: Older adults' perceptions of the religion and health connection. *Altern Ther Health Med* 2000; 6:37–45
185. Beery TA, Baas LS, Fowler C, et al: Spirituality in persons with heart failure. *J Holist Nurs* 2002; 20:5–25
186. Martin JC, Sachse DS: Spirituality characteristics of women following renal transplantation. *Nephrol Nurs J* 2002; 29:577–581
187. Savage LS, Canody C: Life with a left ventricular assist device: The patient's perspective. *Am J Crit Care* 1999; 8:340–343
188. Kloosterhouse V, Ames BD: Families' use of religion/spirituality as a psychosocial resource. *Holist Nurs Pract* 2002; 16:61–76
189. Ehman JW, Ott BB, Short TH, et al: Do patients want physicians to inquire about their spiritual or religious beliefs if they become gravely ill? *Arch Intern Med* 1999; 159:1803–1806
190. Hart A Jr, Kohlwees RJ, Deyo R, et al: Hospice patients' attitudes regarding spiritual discussions with their doctors. *Am J Hosp Palliat Care* 2003; 20:135–139
191. Taylor EJ: Nurses caring for the spirit: Patients with cancer and family caregiver expectations. *Oncol Nurs Forum* 2003; 30:585–590
192. Wallace DC, Tuck I, Boland CS, et al: Client perceptions of parish nursing. *Public Health Nurs* 2002; 19:128–135
193. Todres ID, Catlin EA, Thiel MM: The intensivist in a spiritual care training program adapted for clinicians. *Crit Care Med* 2005; 33:2733–2736
194. Azoulay E, Pochar F, Chevret S, et al: Meeting the needs of intensive care unit patient families: A multicenter study. *Am J Respir Crit Care Med* 2001; 163:135–139
195. Clark AP, Carter PA: Why do nurses see families as "trouble?" *Clin Nurse Spec* 2002; 16:40–41
196. Clarke C, Harrison D: The needs of children visiting on adult intensive care units: A review of the literature and recommendations for practice. *J Adv Nurs* 2001; 34:61–68
197. Gonzalez CE, Carroll DL, Elliott JS, et al: Visiting preferences of patients in the intensive care unit and in a complex care medical unit. *Am J Crit Care* 2004; 13:194–198
198. Grandstrom DM: Families in critical care: What do they really want? *Focus Crit Care* 1990; 17:9–10
199. Gurley MJ: Determining ICU visiting hours. *Medsurg Nurs* 1995; 4:40–43
200. Heyland DK, Rocker GM, Dodek PM, et al: Family satisfaction with care in the intensive care unit: Results of a multiple center study. *Crit Care Med* 2002; 30:1413–1418
201. Jamerson PA, Scheibmeir M, Bott MJ, et al: The experiences of families with a relative in the intensive care unit. *Heart Lung* 1996; 25:467–474
202. Maxton FJ: Old habits die hard: Changing paediatric nurses' perceptions of families in ICU. *Intensive Crit Care Nurs* 1997; 13:145–150
203. Meyer EC, Kennally KF, Zika-Beres E, et al: Attitudes about sibling visitation in the neonatal intensive care unit. *Arch Pediatr Adolesc Med* 1996; 150:1021–1026
204. O'Malley P, Favaloro R, Anderson B, et al: Critical care nurse perceptions of family needs. *Heart Lung* 1991; 20:189–201
205. Plowright CI: Needs of visitors in the intensive care unit. *Br J Nurs* 1995; 4:1081–1083
206. Price DM, Forrester DA, Murphy PA, et al: Critical care family needs in an urban teaching medical center. *Heart Lung* 1991; 20:183–188
207. Simpson T: Critical care patients' perceptions of visits. *Heart Lung* 1991; 20:681–688
208. Tughan L: Visiting in the PICU: A study of the perceptions of patients, parents, and staff members. *Crit Care Nurs Q* 1992; 15:57–68
209. Ward K: Perceived needs of parents of critically ill infants in a neonatal intensive care unit (NICU). *Pediatr Nurs* 2001; 27:281–286
210. Carlson B, Riegel B, Thomason T: Visitation: policy versus practice. *Dimens Crit Care Nurs* 1998; 17:40–47
211. Griffin T: Facing challenges to family-centered care. I: Conflicts over visitation. *Pediatr Nurs* 2003; 29:135–137
212. Bay EJ, Kupferschmidt B, Opperwall BJ, et al: Effect of the family visit on the patient's mental status. *Focus Crit Care* 1988; 15:11–16
213. Hepworth JT, Hendrickson SG, Lopez J: Time series analysis of physiological response during ICU visitation. *West J Nurs Res* 1994; 16:704–717
214. Kleman M, Bickert A, Karpinski A, et al: Physiologic responses of coronary care patients to visiting. *J Cardiovasc Nurs* 1993; 7:52–62
215. Krapohl GL: Visiting hours in the adult intensive care unit: Using research to develop a system that works. *Dimens Crit Care Nurs* 1995; 14:245–258
216. Simpson T, Shaver J: Cardiovascular responses to family visits in coronary care unit patients. *Heart Lung* 1990; 19:344–351
217. Williams CM: The identification of family members' contribution to patients' care in the intensive care unit: A naturalistic inquiry. *Nurs Crit Care* 2005; 10:6–14
218. Moore KA, Coker K, Du Buisson AB, et al: Implementing potentially better practices for improving family-centered care in neonatal intensive care units: Successes and challenges. *Pediatrics* (2003); 111:450–460
219. Ramsey P, Cathelyn J, Gugliotta B, et al: Visitor and nurse satisfaction with a visitation policy change in critical care units. *Dimens Crit Care Nurs* 1999; 18:42–48
220. Lazure LL: Strategies to increase patient control of visiting. *Dimens Crit Care Nurs* 1997; 16:11–19
221. Doll-Speck L, Miller B, Rohrs K: Sibling education: Implementing a program for the NICU. *Neonatal Netw* 1993; 12:49–52
222. Roland P, Russell J, Richards KC, et al: Visitation in critical care: Processes and outcomes of a performance improvement initiative. *J Nurs Care Qual* 2001; 15:18–26

223. Lazure LL, Baun MM: Increasing patient control of family visiting in the coronary care unit. *Am J Crit Care* 1995; 4:157-164
224. Newman CB, McSweeney M. A descriptive study of sibling visitation in the NICU. *Neonatal Netw* 1990; 9:27-31
225. Oehler JM, Vileisis RA: Effect of early sibling visitation in an intensive care nursery. *J Dev Behav Pediatr* 1990; 11:7-12
226. Montgomery LA, Kleiber C, Nicholson A, et al: A research-based sibling visitation program for the neonatal ICU. *Crit Care Nurse* 1997; 17:29-35, 38-40
227. Hamrick WB, Reilly L: A comparison of infection rates in a newborn intensive care unit before and after adoption of open visitation. *Neonatal Netw* 1992; 11:15-18
228. Solheim K, Spellacy C: Sibling visitation: effects on newborn infection rates. *J Obstet Gynecol Neonatal Nurs* 1988; 17:43-48
229. Cullen L, Titler M, Drahozal R: Family and pet visitation in the critical care unit. 1999; 19:84-87
230. Giuliano KK, Bloniasz E, Bell J: Implementation of a pet visitation program in critical care. *Crit Care Nurse* 1999; 19:43-50
231. Hamner JB: Visitation policies in the ICU: A time for change. *Crit Care Nurse* 1990; 10: 48-53
232. Hawlwy K, Cates M: Paws for comfort. *Nursing* 1998; 28:57
233. Delta Society. Available at: <http://www.deltasociety.org>. Accessed December 15, 2006
234. Ulrich R, Quan X, Zimring C, et al: The role of the physical environment in the hospital of the 21st century: A once-in-a-lifetime opportunity. Report to the Center for Health Design for the Designing the 21st Century Hospital Project, September 2004. Available at: www.rwjf.org/files/publications/roleofthephysicalenvironment.pdf. Accessed December 16, 2006
235. Burmahl B: Color schemers. *Health Facil Manage* 1998; 11: 4-31
236. Dubbs D: Sound effects: Design and operations solutions to hospital noise. *Health Facil Manage* 2002; 17:14-18
237. Fong, DB: Illuminating thoughts. Devising lighting strategies for clinical spaces. *Health Facil Manage* 2003; 16:24-28
238. Fong D, Losnegard J: Lighting prescriptions, balancing clinical and aesthetic needs in hospital spaces. *Health Facil Manage* 2004; 17:19-23
239. Long R: Healing by design. *Health Facil Manage* 2001; 14:20-22
240. Murphy E: The patient room of the future. *Nurs Manage* 2000; 31:38-39
241. Pangrazio JM: Room with a view. *Health Facil Manage* 2003; 16:30-32
242. Rollins JA: Evidence-based hospital design improves health care outcomes for patients, families, and staff. *Pediatr Nurs* 2004; 30: 338-339
243. Sadler B: Designing with health in mind. *Mod Healthc* 2004; 34:28
244. Sandrick KA: Higher goal: Evidence-based design raises the bar for new construction. *Health Facil Manage* 2002; 16:16-21
245. Sellers K: In step with carpeting. *Health Facil Manage* 2000; 13:30-33
246. Serghis D: Keeping patient in the pink. *Aust Nurs J* 1998; 6:28-30
247. Shinkman R: They've gotta have art. *Mod Healthc* 1997; 27:106-110
248. Bilchik GS: A better place to heal. *Health Forum J* 2002; 45:10-15
249. Spackman MD: Custom interiors: Implementing healing design concepts in a small, rural hospital. *Health Facil Manage* 2002; 15:20-24
250. Trent L: The human touch. *Health Facil Manage* 1999; 12:30-33
251. Trent L: Color. *Health Facil Manage* 1996; 9:58-61
252. Hermans RD, Seth AK: Book it! An overview of ASHRAE's design manual for hospitals and clinics. *Health Facil Manage* 2004; 17: 32-36
253. O'Dell G: 2004 AHA environmental assessment. American Hospital Association. *Hosp Health Network* 2004; 78:47-49, 51-54, 57, 57
254. Woodin D: Sneak preview: A look at the 2001 edition of AIA's guidelines. *Health Facil Manage* 2001; 14:20-23
255. Carpmann J, Grant M: Wayfinding woes. *Health Facil Manage* 2002; 15:22-25
256. Hodgson K: Bundling up. Advice on integrating hospital security systems. *Health Facil Manage* 2004; 17:14-17
257. Reiling J: Facility design focused on patient safety. *Front Health Serv Manage* 2002; 21: 41-46
258. Dubbs D: Privacy please. *Health Facil Manage* 2003; 16:20-24
259. Scalise D: Shhh, quiet please. *Health Hospit Netw* 2004; 78:16-17
260. Barlas D, SAMA AE, Ward MF, et al: Comparison of the auditory and visual privacy of emergency department treatment areas with curtains versus those with solid walls. *Ann Emerg Med* 38:135-139
261. Brown P, Taqino LT: Designing and delivering neonatal care in single rooms. *J Perinat Neonatal Nurs* 15:68-83
262. Bell G: Inside information: Developing a master plan for hospital interiors. *Health Facil Manage* 2004; 26-30
263. Dubbs D: Back talk: Ergonomic furnishings help relieve strain for patients and providers. *Health Facil Manage* 2003; 32-35
264. Dubbs D: Green furnishing. *Health Facil Manage* 2004; 26-29
265. McKinley D, Zimmer C: Clean care. Improving the environment of care with "green" initiatives. *Health Facil Manage* 2004; 41-44
266. Romano M: Turning green: Healthcare works to catch up with other industries in environmentally sensitive design and construction. *Mod Healthc* 2004; 34:29-31
267. Peterson RF, Knapp TJ, Rosen JC, et al: The effects of furniture arrangement on the behavior of geriatric patients. *Behav Ther* 1977; 8:464-467
268. Holahan C: Seating patterns and patient behavior in an experimental dayroom. *J Abnorm Psychol* 1972; 80:115-124
269. Baldwin S: Effects of furniture arrangement on the atmosphere of wards in maximum-security hospital. *Hosp Community Psychiatry* 1993; 36:525-528
270. Johnson AN: Neonatal response to control of noise inside the incubator. *Pediatr Nurs* 2001; 27:600-605
271. Johnson AN: Adapting the neonatal intensive care environment to decrease noise. *J Perinat Neonatal Nurs* 2003; 17:280-288
272. Baker CF: Sensory overload and noise in the ICU: Sources of environmental stress. *CCQ* 1984; 6:66-80
273. Gast PL, Baker CF: The CCU patient: Anxiety and annoyance to noise. *Crit Care Nurs Q* 1989; 12:39-54
274. Baker CF: Discomfort to environmental noise: Heart rate responses of SICU patients. *Crit Care Nurs Q* 1992; 15:75-90
275. Baker CF: Annoyance to ICU noise: A model of patient discomfort. *Crit Care Nurs Q* 1993; 16:83-90
276. Baker MA, Holding MA: The effects of noise and speech on cognitive task performance. *J Gen Psychol* 1993; 120:339-355
277. Balogh D, Kittinger E, Benzer A, et al: Noise in the ICU. *Intensive Care Med* 1993; 19: 343-346
278. Falk SA, Woods NF: Hospital noise-levels and potential health hazards. *New Engl J Med* 1973; 289:774-781
279. Freedman NS, Kotzer N, Schwab RJ: Patient perception of sleep quality and etiology of sleep disruption in the intensive care unit. *Am J Respir Crit Care Med* 1999; 159: 1155-1162
280. Beauchemin KM, Hays P: Sunny hospital rooms expedite recovery from severe and refractory depressions. *J Affect Disord* 1996; 40:49-51
281. Walch JM, Rabin BS, Dav R, et al: The effect of sunlight on postoperative analgesic medication use: A prospective study of patients undergoing spinal surgery. *Psychosom Med* 2005; 67:156-163
282. Berry L, Parker D, Coile RC Jr, et al: The business case for building better buildings. *Healthc Financ Manage* 2004; 58:76-86
283. Creamer J, Gaynor S, Verdin J, et al: Building a 21st century facility. *Nurs Manage* 1999; 30:28-32
284. Hejna WJ: Five critical strategies for achieving operational efficiency. *J Health care Manage* 2004; 49:289-292
285. Hoskins J: What really drives better outcomes? *Front Health Serv Manage* 2004; 21:35-39
286. Rich DR: First strategy, then the bricks. *J Healthc Manage* 2004; 49:3
287. Zimring C: The Costs of Confusion: Non-Monetary and Monetary Costs of Emory University Hospital Wayfinding System. Georgia Institute of Technology, Atlanta, 1990
288. Nelson-Schulman Y: Information and envi-

- ronmental stress: Report of hospital intervention. *J Environ Syst* 13:303–316
289. Lewis C, Knopf D, Chastain-Lorber K, et al: Patient, parent, and physician perspectives on pediatric oncology rounds. *J Pediatr* 1988; 112:378–384
 290. Lehmann LS, Brancati FL, Chen MC, et al: The effect of bedside case presentations on patients' perceptions of their medical care. *N Engl J Med* 1997; 336:1150–1155
 291. Linfors EW, Neelon FA: Sounding boards. The case of bedside rounds. *N Engl J Med* 1980; 303:1230–1233
 292. Wang-Cheng RM, Barnas GP, Sigmann P, et al: Bedside case presentations: Why patients like them but learners don't. *J Gen Intern Med* 1989; 4:284–287
 293. Kassity N, Lockridge T: Should parents participate in patient rounds in the NICU? *MCN Am J Matern Child Nurs* 1999; 24: 64–65
 294. Bellet PS: Bedside presentations and patients' perceptions of their medical care. *N Engl J Med* 1997; 337:714–715; author reply 715–716
 295. LaCombe MA: On bedside teaching. *Ann Intern Med* 1997; 126:217–220
 296. Thibault GE: Bedside rounds revisited. *N Engl J Med* 1997; 336:1174–1175
 297. Glass AR: Bedside presentations and patients' perceptions of their medical care. *N Engl J Med* 1997; 337:715; author reply 715–716
 298. Ruffy R: Bedside presentations and patients' perceptions of their medical care. *N Engl J Med* 1997; 337:714; author reply 715–716
 299. Boudreaux ED, Francis JL, Loyacano T: Family presence during invasive procedures and resuscitations in the emergency department. *Ann Emerg Med* 2002; 40:193–205
 300. Robinson SM, Mackenzie-Ross S, Campbell Hewson GL, et al: Psychological effect of witnessed resuscitation on bereaved relatives. *Lancet* 1998; 352:614–617
 301. Boyd R, White S: Does witnessed CPR alter perceived stress in accident and emergency staff? *Eur J Emerg Med* 2000; 7:51–53
 302. Bassler PC: Impact of education on nurses' beliefs regarding family presence in resuscitation room. *J Nurs Staff Dev* 1999; 15: 126–131
 303. McClenathan BM, Torrington KG, Uyehara CF, et al: Family member presence during CPR: A survey. *Chest* 2002; 122:2204–2211
 304. O'Brien MM, Creamer KM, Hill EE, et al: Tolerance of family presence during ped CPR: A snapshot. *Pediatr Emerg Care* 2002; 18:409–413
 305. Helmer SD, Smith RS, Dort JM, et al: Family presence during trauma resuscitation. *J Trauma* 2000; 48:1015–1022
 306. Myers TA, Eichhorn DJ, Guzzetta CE: Family presence during invasive procedures and resuscitation. *Am J Nursing* 2000; 100: 32–43
 307. Sacchetti A, Carraccio C, Leva E, et al: Acceptance of family member presence during pediatric resuscitation in the emergency department. *Pediatr Emerg Care* 2000; 16: 85–87
 308. Boie ET, Moore GP, Brummett C, et al: Do parents want to be present during invasive procedures performed on their children in the emergency department? *Ann Emerg Med* 1999; 34:70–74
 309. Barratt F, Wallis CN: Relatives in the resuscitation room: Their point of view. *J Accid Emerg Med* 1998; 15:109–111
 310. Meyers TA, Eichhorn DJ, Guzzetta E: Do families want to be present during CPR? A retrospective study. *J Emerg Nurs* 1998; 24:400–405
 311. Mitchell MH, Lynch MB: Should relatives be allowed in the resuscitation room? *J Accid Emerg Med* 1997; 14:366–370
 312. Davidson JE: Family presence at resuscitation: What if? *Crit Care Med* 2006; 34: 3041–3042
 313. Doyle CJ, Post H, Burney RE: Family participation in resuscitation: An option. *Ann Emerg Med* 1987; 16:673–675
 314. Davidson JE: Family presence at resuscitation: What if? *Crit Care Med* 2006; 34: 3041–3042
 315. Benjamin M, Holger J, Carr M: Personal preferences regarding family member presence during resuscitation. *Acad Emerg Med* 2004; 11:750–753
 316. Jarvis AS: Parental presence during resuscitation: Attitudes of staff on a PICU. *Intensive Crit Care Nurs* 1998; 14:3–7
 317. Hanson C, Strawser D: Family presence during cardiopulmonary resuscitation. *J Emerg Nurs* 1992; 18:104–106
 318. Meyers TA, Eichhorn DJ, Guzzetta CE, et al: Research: Do families want to be present during CPR? *Top Emerg Med* 2004; 26: 61–73
 319. Eichhorn DJ, Meyers TA, Mitchell TG: Opening the doors family presence during resuscitation. *J Cardiovasc Nurs* 1996; 10: 59–70
 320. Emergency Nursing Association. Position Statement. 2001. Available at: <http://www.acep.org/webportal/PatientsConsumers/critissues/FamilyPresence/default.htm>. Accessed November 14, 2006
 321. AHA. AHA 2005 CPR guidelines. *Circulation* 2005; 112s:166550
 322. AACN. AACN Practice Alert: Family presence during CPR and invasive procedures. Available at: [http://www.aacn.org/AACN/practiceAlert.nsf/Files/Family%20Presence%20During%20CPR%20and%20Invasive%20Procedures/\\$file/AACN.PracticeAlert.Family%20Presence.10-4-04.pdf](http://www.aacn.org/AACN/practiceAlert.nsf/Files/Family%20Presence%20During%20CPR%20and%20Invasive%20Procedures/$file/AACN.PracticeAlert.Family%20Presence.10-4-04.pdf). Accessed November 14, 2006
 323. American Academy of Pediatrics. Available at: <http://www.aap.org/visit/NationalConsensus.pdf>. Accessed November 14, 2006
 324. Fein JA, Ganesh J, Alpern ER: Medical staff attitudes toward family presence during pediatric procedures. *Pediatr Emerg Care* 2004; 20:224–227
 325. Ellison S: Nurses' attitudes toward family presence during resuscitative efforts and invasive procedures. *J Emerg Nurs* 2003; 29: 515–521
 326. Osuagwu CC: ED codes: Keep the family out. *J Emerg Nurs* 1991; 17:363–364
 327. Ong ME, Chan YH, Strither De, et al: Asian medical staff attitudes toward witnessed resuscitation. *Resuscitation* 2004; 60:45–50
 328. Belanger MA, Reed S: A rural community hospital's experience with family witnessed resuscitation. *J Emerg Nurs* 1997; 23: 238–239
 329. Brown JR: Letting the family in during a code: Legally it makes good sense. *Nursing* 1989; 19:46
 330. Maclean SL, Guzzetta CE, White C, et al: Family presence during cardiopulmonary resuscitation and invasive procedures: Practices of critical care and emergency nurses. *Am J Crit Care* 2003; 12:246–257
 331. Teno JM, Casey VA, Welch LC, et al: Family perspectives on end-of-life care at the last place of care. *JAMA* 2004; 29:88–93
 332. Patrick DL, Bushnell DM, Rothman M, et al: Evaluating the quality of dying and death. *J Pain Symptom Manage* 2001; 22:717–726
 333. Bryce CL, Loewenstein G, Arnold RM, et al: Quality of death: Assessing the importance placed on end-of-life treatment in the ICU. *Med Care* 2004; 42:406
 334. Elshamy MR, Whedon MB: Symptoms and care during the last 48 hours of life. Quality of life—A nursing challenge. 1997; 5:49–57
 335. Faber-Langendoen K, Lancken PN: Dying patients in the intensive care unit: Forgoing treatment, maintaining care. *Ann Intern Med* 2001; 133:886
 336. Billings JA: Recent advances, palliative care. *BMJ* 2000; 321:555–558
 337. Teno JM, Clarridge BR, Casey V, et al: Family perspectives on end-of-life care at the last place of care. *JAMA* 2004; 291:88–93
 338. Rabow MW, Hardy GE, Fair GM, et al: An evaluation of the end-of-life care content in 50 textbooks from multiple specialties. *JAMA* 2000; 283:771–778
 339. Rabow MW, Hauser JM, Adams J: Supporting family caregivers at the end of life: "They don't know what they don't know." *JAMA* 2004; 291:483–491