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Integrating palliative care in the surgical and trauma intensive care unit: A report from the Improving Palliative Care in the Intensive Care Unit (IPAL-ICU) Project Advisory Board and the Center to Advance Palliative Care

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Abstract

Objective—Although successful models for palliative care delivery and quality improvement in the intensive care unit have been described, their applicability in surgical intensive care unit settings has not been fully addressed. We undertook to define specific challenges, strategies, and solutions for integration of palliative care in the surgical intensive care unit.

Data Sources—We searched the MEDLINE database from inception to May 2011 for all English language articles using the term “surgical palliative care” or the terms “surgical critical care,” “surgical ICU,” “surgeon,” “trauma” or “transplant,” and “palliative care” or “end-of-life care” and hand-searched our personal files for additional articles. Based on review of these articles and the experiences of our interdisciplinary expert Advisory Board, we prepared this report.

Data Extraction and Synthesis—We critically reviewed the existing literature on delivery of palliative care in the surgical intensive care unit setting focusing on challenges, strategies, models, and interventions to promote effective integration of palliative care for patients receiving surgical critical care and their families.

Conclusions—Characteristics of patients with surgical disease and practices, attitudes, and interactions of different disciplines on the surgical critical care team present distinctive issues for intensive care unit palliative care integration and improvement. Physicians, nurses, and other team members in surgery, critical care and palliative care (if available) should be engaged collaboratively to identify challenges and develop strategies. “Consultative,” “integrative,” and combined models can be used to improve intensive care unit palliative care, although optimal use of trigger criteria for palliative care consultation has not yet been demonstrated. Important components of an improvement effort include attention to efficient work systems and practical tools and to attitudinal factors and “culture” in the unit and institution. Approaches that emphasize

delivery of palliative care together with surgical critical care hold promise to better integrate palliative care into the surgical intensive care unit.

Keywords

end-of-life care; ICU palliative care; surgeon attitude; surgical intensive care; surgical outcome; surgical palliative care

The importance of integrating palliative care with intensive care is increasingly recognized (1–3). In the intensive care unit (ICU), palliative care includes attention to symptom distress, communication about goals of care in relation to prognosis and patient preferences, transitional planning, and family support (4, 5). Successful models for palliative care delivery and quality improvement in the ICU setting are described in the literature including previous monographs from the Improving Palliative Care in the ICU (IPAL-ICU) Project (6, 7). However, the applicability of these models in surgical ICU settings has not been fully addressed.

Each ICU has an intrinsic and specific “culture” created by its history, structure, policies, and processes of care and by the attitudes and interactions of different disciplines on the critical care team. Thus, even within a group of ICUs of the same general type such as medical ICUs or surgical ICUs, there are variations influencing care of critically ill patients and their families (8). At the same time, characteristics of patients with surgical disease, of the practice of surgical critical care, and of surgeons appear to define a common set of challenges for the integration of palliative care in the surgical ICU. In this article, we discuss these challenges and strategies to facilitate effective palliative care for adult patients receiving surgical critical care and their families. Our discussion is based on a review of relevant literature in the MEDLINE database searched from inception to July 2011 for all English language articles using the term “surgical palliative care” or the terms “surgical critical care,” “surgical ICU,” “surgeon,” “trauma” or “transplant,” and “palliative care” or “end-of-life” care; on articles in our personal files; and on the experiences of our interdisciplinary expert Advisory Board.

Surgical Critical Illness

Most patients are admitted to the surgical ICU after an acute illness or injury that requires emergency surgery or after an elective surgery for a chronic or potentially life-limiting condition. Surgical critical illness often involves a systemic inflammatory response syndrome or sepsis associated with postoperative complications (9). Overall, mortality in surgical ICUs is generally held to be lower than in medical ICUs (10), but this depends on the types of surgery performed in a given institution. In certain surgical units such as cardiothoracic and cardiovascular ICUs, mortality rates may be very low. Still, death is part of routine practice in most surgical ICUs (SICUs). For patients staying in the SICU for at least 7 days, the mortality rate exceeds 35% (11, 12). Among older patients, who comprise an increasing proportion of those receiving surgical critical care, both hospital mortality and early postdischarge mortality can be higher (13). Survivors of a prolonged ICU stay may leave the acute ICU setting with chronic critical illness and prolonged dependence on mechanical ventilation and other life-sustaining therapies (14, 15). For these patients, the burden of symptom suffering is substantial and the need for total custodial care on hospital discharge is nearly certain (16).

Death in the SICU often follows one of two trajectories. The vast majority of deaths occur after a prolonged hospital course complicated by multiple organ failure with alternating periods of improvement and deterioration (9, 11). Patients on this course may move back

and forth between the surgical floor and ICU (12, 17). Initially, these patients are often indistinguishable from those who ultimately survive with increasing clarification of their eventual outcome coming only after an extended time of prognostic uncertainty. Trauma patients, particularly those with neurologic injury, tend to follow a more rapid downhill and predictable course, many succumbing to brain death or hemorrhage soon after admission (18, 19).

Patients, families, and surgical caregivers are often hopeful for recovery. Such optimism is characteristic, for example, in cardiac or liver transplantation ICUs. The potential for transplant surgery, however remote, may foster favorable expectations even when the underlying disease is extremely advanced and otherwise fatal, and these expectations may persist even after an unsuccessful transplantation with multiple postoperative complications (20). With trauma, emotional adjustment to a clear but devastating prognosis often fails to keep pace with illness progression, especially if the patient is young and was previously in excellent health. High expectations for recovery can create a special challenge for establishment of realistic and appropriate goals of care, and evidence suggests that delayed or inadequate discussion of prognosis makes the problem more difficult (21). Differing perceptions about discussion of prognosis emerged clearly in a recent survey eliciting views from >100 clinicians including ICU nurses, nurse practitioners, intensive care physicians, and surgeons in three surgical ICUs in a single institution (22). Whereas the vast majority of respondents who were surgeons expressed satisfaction with their own communication about prognosis, <25% of intensive care physicians and 3% of ICU nurses were satisfied with the surgeons' communication. Differing perceptions of the prognosis, combined with the belief that surgical intervention will improve the patient's condition, can make it more difficult to define a realistic prognosis, goals of treatment, and plans in the event of therapeutic failure.

Organization of the SICU

Whereas medical ICUs have increasingly adopted a "closed model" of care in which the intensivist is the primary provider, SICUs are more likely to continue using an "open model" in which the surgeon retains primary care responsibility throughout the critical illness. Surgical intensivists contribute importantly to daily critical care, but in the open ICU, they generally do not determine the overall goals of care, deferring to the primary surgeon. Thus, in our experience, surgical critical care is continuing at the bedside, delivered by the ICU nurse, intensive care physicians, and other consultants, often in the absence of the healthcare professional who has the ultimate authority over all major decisions, the attending surgeon. In addition, in open ICUs, patient care rounds may not take place on a regular schedule nor involve the full interdisciplinary team, and protocols for communication about the care plan are less likely to be established or observed. Instead, surgical teams may visit at varying times and communicate independently with other providers and/or with patients and families. Thus, the organizational structure of many SICUs is poorly adapted to achieve a coordinated, interdisciplinary approach and foster consistent and effective communication by clinicians with patients and families. In addition, whereas centralization and standardization in the closed ICU model can facilitate change of care processes to improve palliative care quality, varying practices by multiple primary physicians in the open ICU may represent a barrier to systematic, unit-wide improvement efforts.

The 'Rescue Mission'

All ICUs focus on reversing critical illness. Qualitative research suggests, however, that the "rescue mission" plays a more dominant role in SICU settings, sometimes delaying or precluding attention to other important objectives (23). The emphasis on cure seems to be strongly influenced by surgeons themselves, who tend to form what has been described as a

“covenantal” relationship with the patient that is different from nonsurgical physician–patient relationships (23, 24). This covenant is an intense bond that imposes on the surgeon a sense of obligation to protect the patient during the surgery and its aftermath, even against complications that are expected or related to the underlying disease or chronic comorbid conditions. Reciprocally, the patient is viewed by the surgeon as committed to undertake and endure all sequelae, including a protracted and complicated course with uncertain prospects for return to an acceptable quality of life (24). The surgeon has an exaggerated sense of accountability for the patient’s outcome. Thus, as the patient begins to die, the surgeon experiences not only grief but shame, which is reflected in and intensified by the discussion of adverse surgical outcomes in morbidity and mortality conferences. Surgeons are trained to take personal responsibility for these outcomes, accepting them both privately and publicly as their own failures. As Buchman (25), a surgeon, has written, “the scheduled sessions in which ritualized confession and external humiliation are expected...[mask] deeper feelings of unworthiness linked to patients’ complications ...” He goes on to observe: “The surgeon is ideally trained to organize and sustain the rescue attempt ... but is poorly positioned to abort the rescue attempt when it has failed.” Increasing use of surgical morbidity and mortality as indicators of healthcare quality serves to reinforce the surgeon’s sense of personal failure. Public reporting of these statistics, which can have significant professional and organizational consequences, may discourage or delay prioritization of palliative goals of care.

The “life-saving” ethos of surgery has tended to perpetuate among many surgeons a view of palliative care and intensive care as mutually exclusive approaches to treatment of the critically ill. In this view, palliative care is seen as a sequel to and a symbol of the failure of surgical and critical care treatments to prolong life (25). Recent statements by societies representing surgical professionals and/or critical care professionals embrace a newer model in which palliative care is provided together with other therapies for all critically ill patients, regardless of prognosis (1–3, 26). The older view, however, is still highly prevalent, particularly in SICU settings, where it serves as an ongoing challenge for earlier integration of palliative care.

In general, surgeons prefer to have individual control over patient care rather than shared responsibility (27). The attending surgeon takes “ownership” of the patient, sometimes to the exclusion of useful input from other clinicians. Within the typical surgical team, authority is exercised hierarchically and, for all major decisionmaking, concentrated at the top. Approval by the attending surgeon is required for any deviation from standardized postoperative care pathways. Communication and collaboration with other disciplines may be limited, particularly if the surgeon perceives a threat to control of the plan of care, yet optimal management of the patient with a surgical critical illness involves an interdisciplinary effort with contributions from the intensive care physicians, consultants from other specialties, and nursing and social work staff. For a patient who is deteriorating despite maximal intensive care, these contributions are especially important, and their coordination is essential for establishing and implementing goals of care that are appropriate in relation to the patient’s prognosis and preferences. Thus, improvement of palliative care in SICU settings requires attention and sensitivity to the surgeon’s perspective and to strategies for strengthening relationships between attending surgeons and other members of the interdisciplinary team.

Education of Surgeons in Palliative Care: The Missing or ‘Hidden’ Curriculum

In 1998, the American College of Surgeons published a statement of “Principles Guiding Care at the End of Life” identifying palliative care as a priority for the field. This landmark

document was followed by creation of a Palliative Care Task Force, which highlighted the need for improved education of surgeons at all levels of training (28). The American Board of Surgery included basic knowledge and skills in palliative care among requirements for certification and supported the National Palliative Care Residency Education Project to recruit surgical residency programs to participate in this curricular reform initiative (29). However, the development of a curriculum for teaching palliative care to surgical residents by organizations responsible for surgical education was delayed. Even today, many surgical training programs lack such a curriculum or have not achieved consistent and effective implementation of palliative care education. In a survey published in 2007 of both junior and senior surgery residents at a major academic medical center, <10% of respondents reported receiving adequate training in palliative care, whereas 100% believed that such training was valuable for surgeons and should be provided during the residency (30). A report published in 2010 of an intervention implementing a palliative care curriculum for postgraduate year 2 surgical residents at another large, academic center noted that chief surgical residents comprising the control group lacked any formal training in palliative care other than a single, 1-hr lecture on general principles of pain management (31). Because it was not even available until recently, most attending surgeons, to whom trainees look for knowledge and skills, have never received such training, although they may have acquired varying levels of proficiency through clinical practice. If surgical faculty not only lack this expertise but fail to acknowledge its relevance or importance, they may actually undermine the effectiveness of palliative care education by conveying a “hidden curriculum” in which the educational content of palliative care is devalued. Like other clinicians, surgeons at any level who lack knowledge and skills in palliative care may tend to avoid or delay tasks for which the expertise is needed. Thus, professional education and training represent an important challenge for optimal integration of palliative care in many SICU settings.

Strategies for Improving Palliative Care in the SICU

In a previous monograph (7), four essential steps for organizing a palliative care improvement initiative in any intensive care setting were outlined: 1) convene an interdisciplinary workgroup to plan and lead the effort; 2) assess needs and resources for improving palliative care in the particular ICU; 3) develop an action plan focusing on work processes and tools to facilitate performance improvement; and 4) engage the team to create a culture supporting high-quality palliative care. We have also previously described three main models for an improvement initiative (6): the “consultative model,” which focuses on increasing the involvement and effectiveness of palliative care consultants in the ICU, particularly for those patients or families identified as at highest risk for poor outcomes; 2) the “integrative model,” which seeks to embed palliative care principles and interventions into daily practice by the ICU team for all patients and families facing critical illness; and 3) a combined model incorporating features of the other two models. Subsequently, we highlight specific issues that may arise in application of these approaches in the SICU. Domains and measures for evaluation of an ICU palliative care improvement effort have been addressed in detail elsewhere (5, 32).

Project Workgroup

Representation of all relevant disciplines on the Project Workgroup is essential not only to ensure that their expertise is contributed and their concerns are expressed, but also to engage them from the beginning in a way that strengthens and sustains support as the project proceeds. Given the “open” care model of many SICUs, and the distinctive views of surgeons and intensivists (23, 27), a senior physician in each of these groups ideally should participate. The ICU’s physician director is a key Workgroup member, but if no physician has formal administrative authority in the ICU, a surgeon who admits a high volume of patients to the ICU, and a specialist in critical care medicine who has interacted successfully

with surgical teams as well as with the nursing staff, educators, and other professional team members, would be appropriate. In addition, participation by a hospital leader is especially important in the SICU setting to identify the project as an institutional priority, promote collaboration among other participants around shared goals, and facilitate implementation of new policies and protocols on a unit- or institution-wide level. Depending on the institutional culture, senior nursing leadership is important for optimal interdisciplinary collaboration. As previously discussed (33), success of any effort to improve the quality of ICU care, including palliative care, depends on active involvement and empowerment of critical care nurses. Thus, the nursing director of the ICU is also an essential member in helping to provide operational support and allocation of necessary resources, and other nurses in key roles such as quality monitoring, education, and case management will be valuable additions to the Workgroup. A nurse practitioner on a surgical team can help bridge the gap between surgeons who spend most of their time in the operating room and ICU clinicians who must grapple with moment-to-moment palliative care issues in the SICU. Involvement of palliative care specialists, if available in the institution, will also be valuable. A general list of other potential participants is set forth elsewhere (7). Evidence on organizational change indicates that a Workgroup should meet no less frequently than every other week, at least during the first 6 months of an improvement initiative (34).

Choosing a Model to Structure the Improvement Effort

As we have previously reviewed in more detail (6), selection of an appropriate model for an ICU palliative care initiative requires consideration of available resources, attitudes of key stakeholders, the ICU's organizational structure, and patterns of local practice in the ICU and hospital. Advantages of the "consultative model" include input from an interdisciplinary team of specialists with expertise that is often lacking in the SICU, continuity of care across cycles of surgical critical illness, and facilitation of transfer of patients to more appropriate care settings. This model is appealing to high-volume surgical hospitals and surgeons because it can serve to improve throughput from the emergency department, operating rooms, and the SICU. On the other hand, surgeons may be reluctant to involve palliative care specialists, perceiving them as a symbol of the failure of disease-directed surgical treatment or a source of pressure to limit intensive care therapies that the surgeon prefers to continue. Application of the "integrative model" in a SICU has the advantage of clearly signaling the importance of palliative care as a core component of high-quality intensive care (regardless of prognosis) and has the potential to move clinicians away from the dichotomous view of surgical vs. palliative care. It will also prompt education of ICU clinicians and surgeons in basic palliative care skills and knowledge and improve this care for a broader range of patients and families rather than a select group seen by consulting specialists. The integrative model may be the only feasible approach if the institution currently lacks a palliative care specialist or if the resources of the specialty service are too limited to support the initiative. However, the integrative model also has disadvantages, including dependence on a high level of commitment from all ICU staff and significant improvements in palliative care knowledge and skills among ICU clinicians. Given that each model has important advantages and disadvantages, a combined approach incorporating elements of both models (assuming the availability of a palliative care specialist or team) may be most successful for the SICU as well as for other types of ICUs, but stronger evidence to inform this decision is awaited.

Using Triggers for Palliative Care Case-Finding in the SICU

A series of reports has described successful use of "trigger criteria" to implement the consultative model in medical ICU settings (35, 36). In the absence of such criteria, referral for palliative care consultation is dependent on decisionmaking by individual primary physicians—in the SICU, typically the attending surgeon—whose perspectives and past

experiences establish different thresholds for seeking specialty input. The referral process may then be inconsistent and inefficient, resulting in a compromise in quality of care for patients with unmet palliative needs. With specific triggers, screening can be conducted proactively and systematically to increase the timeliness, consistency, and frequency of referrals for appropriate patients and families. However, optimal use of this approach in the SICU has not yet been demonstrated. Guidelines identifying critically ill surgical patients who would benefit from palliative care consultation were developed through a modified Delphi technique by a consensus panel of surgical palliative care experts, including surgical intensivists and palliative care specialists (37). These guidelines set forth ten “trigger criteria,” including multiorgan system failure, expectation of death in the SICU, length of SICU stay >1 month, and more than three admissions to the SICU during the index hospitalization (37). In a retrospective study based on review of medical records before and after an initiative implementing, the ten criteria to trigger palliative care consultation in the semiclosed SICU of a tertiary referral/level I trauma center, the proportion of patients meeting these criteria was small (approximately 5%) (38). The protocol did not require referral for these patients but only notification of the attending physician and SICU fellow, who retained responsibility for the decision on whether to refer to palliative care. The intervention did not significantly change the number of palliative care consultations, the time from trigger to consultation, or the rate of consultation for SICU patients dying in the hospital. It is possible that use of a revised set of criteria encompassing a greater proportion of patients with surgical critical illness might be more effective in expanding access of surgical patients to palliative care services. Criteria could also address other domains of palliative care such as symptom management that were not addressed by the consensus panel (38). Alternatively, triggers may be more successful in SICUs if the criteria are not applied generally but rather are specific to certain diseases (e.g., cancer treated with gastrectomy or esophagectomy), surgical services (e.g., cardiovascular, transplant, trauma), or complications (e.g., prolonged respiratory failure). It may also be helpful to incorporate the triggers in a policy that mandates referral for patients meeting criteria rather than deferring to the discretion of individual primary surgeons or intensivists, but it would then be especially important to include members of these groups in the process of developing the criteria. In some surgical populations, the risk of hospital or 1-yr mortality or of long-term functional dependence is so high that referral for palliative care consultation may always be appropriate (39). Triggers can be used to mandate one or more ICU palliative care processes (e.g., an interdisciplinary family meeting), rather than a palliative care consultation, but this would require expertise among the SICU staff.

Recently, the Center to Advance Palliative Care (<http://www.capc.org>) published consensus criteria for screening of a general population of hospitalized patients to identify those with unmet palliative care needs (40). These criteria are intended for assessments by clinicians providing day-to-day care in any hospital venue using two checklists (one for admission assessment and a second for daily assessment throughout the hospitalization) as part of a systematic process. This approach is consistent with the identification by surgeons’ academic and professional organizations of basic palliative skills as primary surgical competencies and with the shortfall of palliative medicine subspecialists. The Center to Advance Palliative Care consensus report contemplates that the published criteria will need adaptation in local contexts to take account of the typical patient population, the structure of care, and attitudes of the clinicians.

Successful Use of the Integrative Model to Improve Palliative Care in Trauma and SICUs

The trauma ICU presents some of the most difficult challenges for integration of palliative care. Here, aggressive resuscitation is an automatic response. Patients may be young, they and their families are often unprepared for a catastrophic illness, outcomes are uncertain,

and clinicians concentrate heavily, sometimes single-mindedly, on cure-oriented care, yet the mortality rate for critically injured patients averages 10% to 20%, whereas survivors may face serious and permanent disabilities. Recognition of these risks has motivated innovation by trauma surgeons themselves, together with colleagues in other disciplines, in the development of approaches to improve ICU palliative care (21, 37, 41). One such approach is the multifaceted, interdisciplinary intervention reported by Mosenthal and Murphy to integrate palliative care into standard ICU care (21, 41). At ICU admission (within 24 hrs), patients and families were assessed with respect to prognosis, treatment preferences, and symptom needs. A team comprising an advanced practice nurse, bereavement counselors, and a pastor, who were integrated into the ICU team, provided bereavement and psychosocial support. By 72 hrs after admission to the ICU, a member of the interdisciplinary team facilitated a family meeting led by the surgical intensivist and nurse addressing prognosis and goals of care. For dying patients whose care was focused exclusively on comfort, ICU clinicians implemented a palliative care order set and guidelines for ventilator withdrawal. Finally, surgical morbidity and mortality conferences incorporated peer review of palliative care performance. In a pre- and postcomparison, ICU mortality remained stable after this intervention. Rates of entry of do-not-resuscitate directives were similar, and limitation of life-supporting therapies was less frequent after the intervention, but both occurred significantly earlier, and the intervention was associated with shorter length of stay in the ICU and hospital for patients who died. In addition, auditing of discussions on ICU rounds revealed that symptom management and goals of care were discussed more frequently after implementation of the intervention. This interdisciplinary model was also successful in reducing days of nonbeneficial life support in patients undergoing liver transplantation and surgical oncology patients in the SICU (unpublished data).

The developers of this intervention have discussed factors that seemed to facilitate its implementation and impact and others that served as barriers (41). Among facilitators, they highlighted the integration of palliative care into existing structures and processes such as conducting assessments during bedside and teaching rounds and incorporating symptom management and communication in daily problem lists and chart documentation. Another facilitator was the involvement of multiple disciplines on the intervention team, including family counselors, advance practice nurses, and pastoral care. These clinicians provided expertise in communication skills and bereavement support and functioned as educators and role models for the ICU team, joining rounds on a daily basis. Other facilitating factors included the “closed” care model of the specific ICU, allowing unit-wide changes in care processes, and the unit’s open policy for family visiting, enhancing opportunities for clinician–family communication. Most importantly, this intervention, which was delivered together with all appropriate intensive care therapies, encompassed all patients in the ICU regardless of prognosis, enhancing acceptability to surgeons, intensivists, and nurses as well as patients and families. Barriers included frequent turnover of faculty and resident surgical teams (as a result of scheduled rotations and other factors) making standardization and continuity more difficult and time constraints on completion of palliative care tasks for the significant minority of patients who died or left the ICU alive within <3 days. These factors should be considered in determining and optimizing the applicability of a similar intervention in other trauma and SICUs.

Focusing on Work Systems

We have emphasized system design, work processes, and practical tools in action planning and implementation, because they have been key components in many successful improvement efforts in the ICU and elsewhere (42–44). Evidence from the specific setting of the SICU shows the applicability of this approach for improving palliative care as well as

other aspects of care for patients with surgical critical illness (44, 45). For example, a study by Byrnes et al (44) reported on implementation in a tertiary, academic hospital's 24-bed surgical/burn/trauma ICU of a mandatory checklist to improve compliance with a range of evidence-based ICU practices. Along with protocols for identification of infection, glycemic control, respiratory care, sedation, nutrition, and other aspects of surgical critical care, this checklist included review of "end-of-life issues" including plans for family meetings and orders addressing the appropriate level of care. Evaluation using audits of ICU rounds and analysis of data from the Project IMPACT ICU database revealed that, compared with a baseline period when the checklist was available but optional, mandatory use of the checklist enhanced both discussion and implementation of best practices for ICU care. Additional studies have reported successful use of checklist tools (including various elements) in other trauma and surgical ICU settings, strengthening the evidence that routine reminders can improve awareness and practice by clinicians and indicating that these tools are becoming a regular part of intensive care practice. However, as emphasized by Pronovost, checklists alone are insufficient (42). High-quality care also depends on a conducive culture in the ICU, mutual respect among members of each discipline providing care, and strong interdisciplinary teamwork to achieve shared goals (46). Thus, activities to strengthen support for palliative care improvement and relationships within the care team must accompany implementation of new work systems and tools.

Cultural/Attitudinal Change

Some surgeons remain reluctant to address palliative care needs of patients and families, even in the context of critical illness and injury. Responsibility for addressing these needs may be deferred to the intensivist, another consulting physician, nurse, social worker, or chaplain. This may reflect insufficient recognition that palliative care and surgical critical care are mutually enhancing rather than mutually exclusive approaches. At the same time, recognition is increasing that palliative care is part of the surgical tradition and a professional responsibility for surgeons (28, 47, 48). As Dunn and Milch (48) have written, "Despite the psychological disquietude surgeons may experience in their encounters with advanced, incurable illness, they may be heartened by recollection of surgery's past great accomplishments in its response to the problems of human suffering It is no accident that many eloquent surgical voices in palliative and hospice care have had experience with burns and trauma. This is where we began our evolutionary journey as surgeons, a journey in which our capacity to respond promptly and effectively to acknowledged suffering preceded all that we have accomplished since." For surgeons, intensive burn care is an understandable and compelling model of palliative care integration; goals include both comfort and restorative care, which are delivered concurrently (47).

The American Board of Surgery was among the ten specialty boards cosponsoring recognition of Hospice and Palliative Medicine as a subspecialty by the American Board of Medical Specialties in 2006; thus, surgeons may now become certified as subspecialists in this field. The Accreditation Council for Graduate Medical Education includes communication skills, systems-based practice, and professionalism among core competencies required for surgeons and other physicians, which are all key elements of palliative care. To ensure these competencies, surgical educators developed palliative care curricula specifically for surgeons (30, 49), including modules for communication skills training and an Objective Structured Clinical Examination evaluating performance of a family conference in the SICU (49, 50). A Surgical Palliative Care Task Force was formed within the Division of Education of the American College of Surgeons to promote integration of palliative care precepts and techniques into surgical practice and education. This group, which includes leading experts in palliative care in SICU settings, has published a series of instructive monographs in surgical journals and a comprehensive volume for

surgical trainees entitled “Surgical Palliative Care: A Residents’ Guide” available on the Task Force’s section of the American College of Surgery Web site. (<http://www.facs.org/palliativecare>). The American Trauma Society has published a manual on communication and support techniques for use with families of trauma patients (51). Very recently, an entire volume of the Surgical Clinics of North America has been devoted to the topic of surgical palliative care, including several articles that are specifically relevant to care of patients with surgical critical illness and their families. These developments, activities, and materials are slowly diffusing into the field.

CONCLUSION

For the present, cultural and attitudinal change in the surgical ICU may be promoted by several strategies. One is to call attention to efforts by surgeons themselves such as those of the American College of Surgeons’ Surgical Palliative Care Task Force. Surgeons listen closely to other surgeons. It is also important to emphasize that palliative care can and will be provided together with, not instead of, an aggressive care plan including the use of all appropriate surgical intensive care therapies. To convey this message credibly and effectively, specialists in palliative care and in critical care need to be respectful and supportive of goals of care that are established by primary surgical physicians with patients and their families. There are already data that high-quality palliative care in the ICU does not increase ICU or hospital mortality (21, 35, 52). In fact, recent data suggest that early integration of palliative care with disease-directed care of patients with serious illness may, in some diseases, prolong life (53, 54). These data should be reviewed with surgical professionals. In addition, other members of the care team who work with surgeons in the ICU should be educated about surgeons’ perspectives on palliative care and the psychological, personal, and practical factors that shape it. The value of the surgeon’s profound commitment to achieving the best possible outcome for his or her patient and loved ones should be recognized as well. The collaboration of palliative care specialists and critical care staff with surgeons is essential to enhance palliative care. In an open discussion involving the full interdisciplinary team, surgeons as well as others can be given an opportunity to voice their concerns about integrating palliative care more fully in the ICU and contribute to development of strategies for this purpose.

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Table 1**Common barriers for integrating palliative care in the surgical intensive care unit**

Use of open ICU care model	Impedes redesign and standardization of ICU systems, care processes, and protocols to optimize palliative care
Clinician attitudinal factors including	Limits and delays attention to goals other than resuscitation and restoration of health
Surgeons' exaggerated sense of responsibility for patient outcomes	
Perceived "covenantal" relationship between surgeon and patient	
View of ICU and palliative care as sequential and mutually exclusive	
Lack of knowledge and skills in palliative care within primary care team	Discourages delivery of palliative care and diminishes quality of care given at primary level; may overload palliative care consultation service
Unrealistic expectations (patients, families, clinicians) for surgery and surgical critical care	Complicates discussion of appropriate goals of care

ICU, intensive care unit.

Table 2**Key steps toward successful integration of palliative care in the surgical intensive care unit**

Project Workgroup	Involve surgeons and surgical intensivists along with other disciplines and hospital leadership to plan and implement the improvement effort
Model for palliative care integration	Use elements of both “consultative” and integrative” models to accommodate local needs and resources
Needs assessment	Identify priority domains of palliative care (e.g., communication with families about goals of care, pain and symptom management) in which surgeons and surgical intensive care unit staff need assistance and support; Focus initial efforts on one such domain
Systems approach	Focus on design of efficient work systems, processes, and tools, with special attention to implementation challenges in “open” surgical intensive care units
Teamwork/culture	Engage representatives of all disciplines on team in regular meetings to brainstorm about barriers and strategies and review successes and ongoing opportunities for improvement; include discussion of attitudinal issues underlying reluctance to integrate palliative care
Education	Present evidence supporting investment of effort in palliative care improvement; raise awareness of palliative care educational efforts by academic and professional surgical organizations; support training of surgeons, surgical intensivists, and nurses in core palliative care competencies including communication skills