ACS TQIP PALLIATIVE CARE BEST PRACTICES GUIDELINES

Released October 2017







AMERICAN COLLEGE OF SURGEONS Inspiring Quality: Highest Standards, Better Outcomes



530 - NonDOH

Table of Contents

Introduction
Interdisciplinary Palliative Care Team
Essential Components of Palliative Care
Breaking Bad News
Palliative Care Assessment
Goals of Care Conversation
End-of-Life Care
Special Considerations for Geriatric Patients
Special Considerations for Pediatric Patients
Special Considerations for Spinal Cord Injury
Special Considerations for Traumatic Brain Injury
Supporting the Health Care Team
Clinical Documentation
Performance Improvement Initiatives
Implementation Guidelines
Glossary of Terms Relevant to Palliative Care
Acronyms
Appendices



INTRODUCTION

Key Messages

- Best practice palliative care is delivered in parallel with life-sustaining trauma care, throughout the continuum from injury through recovery.
- The unit of care is the patient and family.
- Core trauma palliative care can and should be provided by trauma center teams even if palliative care consultation is not available.
- Optimal palliative care requires an interdisciplinary team of physicians, nurses, and psychosocial and rehabilitation providers.
- Optimal care requires trauma physicians and nurses to have basic competencies in primary palliative care, pain and symptom management, and end-of-life care.

Palliative care is a philosophy of care focused on improving the quality of life for patients with serious illness and their families. While commonly thought to be important only for those at or near the end of life, palliative care provides significant benefit across the entire spectrum of illness and injury, regardless of prognosis. The unit of care is the patient and family, and attention to their physical, emotional, spiritual, and psychosocial well-being is the hallmark of the specialty. Palliative care is delivered concurrently and integrated with other curative or life-sustaining therapies.

The importance of integrating palliative care for patients across the continuum of trauma care is now recognized. Evidence is increasing that delivery of palliative care in parallel to trauma care improves the quality of care for both patients and their families. Evidence also exists to support palliative care guidelines for the best practice in trauma centers. Providing palliative care alongside trauma care decreases length of stay, cost, and the intensity of non-beneficial care at the end of life without a change in mortality rate. It improves quality of care, pain and symptom management, and patient and family outcomes across a wide range of conditions. In addition, the delivery of high-quality palliative care increases hospice utilization and reduces the utilization of long-term care beds and/or facilities for patients with poor functional outcomes.

Best practice palliative care in the trauma center can be accomplished through "primary" or "generalist" palliative care delivered by the interdisciplinary team of trauma care providers, including, but not limited to, trauma surgeons, emergency medicine physicians, nurses, therapists, and social workers. These providers have the expertise on the prognosis and needs of patients with sudden injury. They already practice many aspects of palliative care, including the identification of a health care proxy, advance care planning, communication around prognosis and goals of care, pain and symptom management, and emotional and informational support for families. A minority of patients and families will require more advanced or "specialist" palliative care provided by board-certified specialists for complex pain



and symptom management, difficult communication and decision-making around end of life, and complicated grief and bereavement. Consultative access to this group of individuals is useful, but the best practices in palliative care are well within the reach of all trauma centers.

These guidelines focus on the practices related to the delivery of *primary* palliative care for trauma patients and their families with some direction about when specialist input might be of value. Specialist palliative care is, by definition, care delivered by an interdisciplinary team, including a boardcertified physician, nurse, social worker or psychosocial expert, and might also include a chaplain. While not all trauma centers have board-certified providers in palliative care, these guidelines provide a framework to embed the most essential aspects of palliative care into the trauma setting. Palliative care is appropriate at any age, and it can be provided as the main goal of care or along with curative treatment. The focus of these guidelines is twofold: performance of a palliative care assessment and triage of patients for appropriate level of care, and management of the trauma patient near the end of life.

Important Note

The intent of the ACS TQIP Best Practices Guidelines is to provide health care professionals with evidence-based recommendations regarding care of the trauma patient. The Best Practices Guidelines do not include all potential options for prevention, diagnosis, and treatment and are not intended

as a substitute for the provider's clinical judgment and experience. The responsible provider must make all treatment decisions based upon his or her independent judgment and the patient's individual clinical presentation. The American College of Surgeons (ACS) and any entities endorsing the Guidelines shall not be liable for any direct, indirect, special, incidental, or consequential damages related to the use of the information contained herein. The ACS may modify the Trauma Quality Improvement Program (TQIP) Best Practices Guidelines at any time without notice.

References

- 1. American College of Surgeons. Letter of Commitment to Institute of Medicine, March 2015.
- 2. Aslakson RA, et al. The changing role of palliative care in the intensive care unit. *Crit Care Med.* 2014;42(11):2418-2528.
- 3. Bakitas M, Lyons KD, Hegel MT, et al. Effects of palliative care intervention on clinical outcomes in patients with advanced cancer: The Project ENABLE II randomized controlled trial. *JAMA*. 2009;302(7):741-749.
- Carson SS, et al. Effect of palliative care-led meetings for families of patients with chronic critical illness: a randomized clinical trial. JAMA. 2016;316(1):51-62
- Institute of Medicine. Dying in America: Improving quality and honoring individual preferences near the end of life. Washington, DC: National Academies Press; 2015.
- 6. Kelley AS, Morrison RS. Palliative care for the seriously ill. *NEJM*. 2015;373(8):747-755.
- 7. Kupensky D, et al. Palliative medicine consultation reduces length of stay, improves symptom management and clarifies advance directives in the geriatric trauma population. *J* of Trauma Nursing. 2015;22(5):261-265.
- 8. Mosenthal A, Murphy PA, Barker LK, Lavery R, Retano A, Livingston DH. Changing the culture around end-of-life care in the trauma intensive care unit. *J Trauma*. 2008;64(6):1587-1593.



- 9. National Consensus Project for Quality Palliative Care. Clinical practice guidelines for quality palliative care, 3rd ed. 2013. Available at: http://www.nationalconsensusproject.org. Accessed April 18, 2017.
- 10. Smith S, et al. Evidence on the cost effectiveness of palliative care: A literature review. *Palliat Med*. 2014;28(2):130-150.
- Temel J, Greer J, Muzikansky A, et al. Early palliative care for patients with metastatic non-small cell lung cancer. *NEJM*. 2010;363:733-742.
- 12. Toevs CC. Palliative medicine in the surgical intensive care unit and trauma. *Surg Clin North Am*. 2011;91(2):325-331.
- Weissman DE, Jessick T, McDonagh A, Feuling S. Improving generalist palliative care for hospitalized seriously ill patients. Palliative Care Network of Wisconsin. 2015. Available at: www.mypcnow.org. Accessed April 18, 2017.

INTERDISCIPLINARY PALLIATIVE CARE TEAM

Key Messages

- Teamwork across many fields is an essential component of effective, patient-centered palliative care.
- Investment of leadership and key stakeholders is needed for the program to be successful.
- Ongoing education for all staff in palliative care communication skills is important to enabling them to provide high-quality palliative care.
- Shared decision-making between patients and providers and within provider teams is essential.

 Organizational support structures such as debriefing and peer review are essential in this highly stressful arena of end-oflife care among the injured.

Leadership of the team providing palliative care services is critical and is typically within the domain of any physician team leader. The trauma medical director does not need to be the leader, but the director's strong backing is key to a successful program. The principle responsibilities of the physician leader are to: (1) build commitment and confidence in the program, (2) ensure that palliative care precepts are carried out, and (3) fully participate in the process.

Basic palliative care is well within the domains of every trauma center, and the team often consists only of a physician leader and nursing and/or social work support. This is especially true of the initial contact with the family. As care progresses and depending upon the needs of the patient and the resources of the medical center, the extended team might include social workers, chaplains, case managers, pharmacists, palliative care and bereavement specialists, behavioral health providers, and various therapists. A palliative care team is, by nature, interdisciplinary because the patients and families with complex needs require expertise in each area. While each professional and specialty come with differing approaches and philosophies, an effective team weaves these approaches into sound



patient-centric care to correspond to the needs of the patient and family. An effective interdisciplinary team can also improve the process by providing consistent and clear communication within the team, between teams and consultants, and the family.

Based on the needs of the patient or the trauma service, in-hospital palliative care teams may provide consultation with varying levels of intervention: (1) advice and recommendations to a trauma service without direct patient contact, (2) brief, targeted intervention with a patient or family, or (3) multiple visits for complex care of patients and their families.

References

- 1. Cherny NI, Fallon M, Kaasa S, et al. *Oxford textbook of palliative medicine*. 5th ed. Oxford, UK: Oxford University Press, 2015.
- 2. Coiera E, Tombs V. Communication behaviours in a hospital setting: An observational study *BMJ.* 1998;316:673-676.
- 3. Gosbee J. Communication among health professionals. *BMJ*. 1998;316:642.
- 4. Katzenbach JR, Smith DK. *The wisdom of teams: Creating the high-performance organization*. New York, NY: Harper Business Essentials, 2003.

ESSENTIAL COMPONENTS OF PALLIATIVE CARE

Key Messages

- Effective communication and support around prognosis, treatment options, and shared decision-making is the cornerstone of palliative care in trauma.
- Psychosocial, emotional, and spiritual care should be routinely provided over the course of hospitalization; including pastoral care, social work, and others are important for this care.
- Early and continuous assessment and treatment of pain, discomfort, and anxiety are paramount to providing high-quality care.
- The unit of care is the patient and family.

The delivery of high-quality palliative care requires consideration of psychosocial and spiritual needs, pain and symptom control, and effective care of the family. In fact, in the context of palliative care, the unit of care is the patient and family. Effective and compassionate communication is essential, particularly in managing uncertainty around prognosis and treatment decisions (See Breaking Bad News and Goals of Care Conversation).



Psychosocial, Spiritual, Religious, and Cultural Considerations

Trauma, by its very nature, is sudden, unpredictable, and often life-altering. Understanding the patient's pre-existing psychosocial functioning and support is paramount to providing high-quality palliative care. Thus, it is critical to assess a patient's support structure early in a patient's care and to assess and identify psychological needs, spiritual and/or religious beliefs, cultural identity, and other strengths, which can influence care and bolster patient and family resiliency. These are best understood over time through ongoing communication with the patient and family. Through this process, a "psychosocial support plan" can be developed and created. Components of the plan can include: (1) identification of a religious leader (if applicable and desirable) for the key decision maker, either within a family or support group, (2) collaboration with specific individuals, religious leaders, counselors or therapists, and so on to support the trauma team's efforts, and (3) identification of community referrals for long-term support of the family. In addition, the emotional health of the caregivers is an important focus in this early phase.

The trauma team often confronts situations in which young children in the patient's family are present. Support for these children requires additional staff with expertise in palliative care, including child life specialists and behavioral health professionals. Children's understanding of severe illness and death is related to their age and developmental level (Table 1). Therapists and experts in childhood bereavement can help guide the family and health care team toward appropriate communication with children and recommendations for providing them ongoing support.

Pain and Symptom Management

Physical pain is inevitable following trauma, and thus pain management is of paramount importance. Pain and discomfort are what patients and families worry about the most, so it is a source of great anxiety. Evaluation of pain is ongoing, with the use of appropriate assessment scales for patients who can and cannot communicate verbally. Assessment scales for pediatric patients must be age appropriate. If or when pain is identified, address and alleviate the underlying causes of pain first, if

Table 1. A Child's Understanding of Death by Developmental Level

Infants and toddlers (birth–2 years): Respond to their caregivers' emotions and changes in their environment; do not understand the meaning of death

Preschoolers (2–5 years): Often view death as temporary or reversible and might confuse death with sleeping or being away; have an expectation that the person will wake up or return

School-age children (5–11 years): Begin to understand the irreversibility of death and might show interest in the biological and cultural aspects of death

Adolescents (12–18 years): Tend to think more like adults; understand the physical and the emotional impact of the loss



possible. Anxiety control is also very helpful in pain management and might reduce psychological distress.

Symptom control is most important for patients and their families when withdrawing life-sustaining therapy and employing comfort measures. Guidelines delineating the relief of pain, dyspnea, and thirst in the intensive care unit (ICU) contain specific recommendations pertaining to (1) opioid use, (2) dyspnea interventions, (3) steps to assess and manage thirst, and (4) examples of symptom improvement initiatives. A standardized palliative care/comfort care order set is helpful to fulfill these goals of care in a consistent manner (Appendix 1).

Care of the Family

By definition, palliative care is focused on the patient and the family/support system. During meetings with the family, it is important to identify any special needs or issues that the family support group may have. Most families need to feel involved, and it is important that the health care team provide them with a sense of inclusion. Being included improves the family's understanding of the patient's injuries and treatments.

Serious injury and uncertainty of outcome often results in family member psychological and emotional stress. For patients with a protracted ICU course, the family might experience burnout

and/or emotional exhaustion. An important health care team role is to be sensitive to these experiences and to help validate the emotional roller coaster that the families experience. Honoring and identifying cultural and religious preferences is also helpful to some families. Introducing other members of the interdisciplinary team to the family becomes critical. Support for the family is critically important when the decision is made to withdraw life-sustaining care in cases of non-survivable injury or when outcomes are not compatible with a patient's wishes. Even when a clear advance directive exists, some family members become concerned that withdrawing life-sustaining care is initiated prematurely. The team must be sensitive and aware of the family's needs during this time and should support the family when providing care in accordance with the patient's wishes.

Bereavement support is invaluable after the patient dies, but that specialized support might not be available in many medical centers. Trauma care providers need to be able to ensure a reasonable degree of family comfort (physical and emotional). They need to be conversant with the process and help prepare the family for the next steps following death, including the possibility of medical examiner involvement. Referrals to grief resources within the medical center or in the community are also helpful.



References

- 1. Aslakson RA, et al. The changing role of palliative care in the intensive care unit. *Crit Care Med.* 2014;42(11):2418-2528.
- Cherny NI and ESMO Guidelines Working Group. ESMO Clinical Practice Guidelines for the management of refractory symptoms at the end of life and the use of palliative sedation. *Annals of Oncology*. 2014;25(supplement3);iii143-iii152. Available at: https://doi.org/10.1093/annonc/mdu238.
- 3. Clark PA, Drain M, Malone MP. Addressing patients' emotional and spiritual needs. *The Joint Commission Journal on Quality and Patient Safety*. 2003;29(12):659-670.
- 4. Crawley LM, Marshall PA, Lo B, Koenig BA, Endof-Life Care Consensus Panel. Strategies for culturally effective end-of-life care. *Ann Intern Med*. 2002;136(9):673.
- 5. Fink R. Pain assessment: The cornerstone to optimal pain management. *Proceedings* (Bayl Univ Med Cent). 2000;13(3):236-239.
- 6. Kelley AS, Morrison RS. Palliative care for the seriously ill. *NEJM*. 2015;373(8):747-755.
- Lautrette A, Darmon M, Megarbane B, Joly LM, Chevret S, Adrie C, et al. A communication strategy and brochure for relatives of patients dying in the ICU. *NEJM*. 2007;356(5):469-478.
- 8. McGrath PA. Development of the World Health Organization guidelines on cancer pain relief and palliative care in children. *Pain Symptom Manage*. 1996;12(2):87-92.
- 9. National Consensus Project for Quality Palliative Care. Clinical practice guidelines for quality palliative care, 3rd ed. 2013. Available at: http://www.nationalconsensusproject.org. Accessed April 18, 2017.
- 10. Nolen KB, Warren NA. Meeting the needs of family members of ICU patients. *Crit Care Nurs Q*. 2014;37(4):393-406.
- 11. Putillo K, et al. Palliative care in the ICU: Relief of pain, dyspnea and thirst. A report from the IPAL-ICU advisory board. *Intensive Care Med*. 2014;40:235-248.
- 12. Wesson JS. Meeting the informational, psychosocial and emotional needs of each ICU patient and family. *Intensive Crit Care Nurs*. 1997;13(2):111-118.

BREAKING BAD NEWS

Key Messages

- Breaking bad news is a skill that can be learned and improved with training.
- Prepare for the conversation with attention to relevant information related to injuries and possible prognosis; ensure access to a safe, quiet environment without interruption.
- In the case of sudden traumatic death, provide an opportunity for the family to see the decedent to allow for closure.

Trauma providers are often called upon to deliver bad news, including sudden death, catastrophic brain or spinal cord injury, and amputation or other disfiguring injuries. In the case of sudden, early death, only one occasion may exist to deliver bad news to families. The manner in which bad news is delivered has a significant impact on staff, patients, and families; however, strategies can be learned to minimize the negative impact when used. For examples, see Table 2, Table 3, Appendix 2, and vitaltalk. org. An essential ingredient of the conversation includes acknowledging and validating emotion and empathic response. A general communication framework called "Ask-Tell-Ask" is helpful. The provider asks the individual what he/she knows, tells the bad news with straightforward language, and asks if the information is understood.



Table 2. Environmental Considerations for "Breaking Bad News"

 Have time to spend with the family
 Have a safe but compassionate proximity
 Use judgment for keeping the door closed or open to maintain safety for patient, family, and staff Involve security as appropriate
 Sit down at the same level
 Use language interpreters when needed Do not ask family members to interpret
 Huddle with team before the meeting Have all information confirmed
 Debrief with team after meeting Review and plan follow-up

Table 3. Communicating Difficult News after Sudden Traumatic Death

Anticipation and preparation	 Get relevant and updated clinical information Talk about the patient by name Bring a partner (nurse, social worker, chaplain)
 Start with a warning shot 	 "I'm afraid I have some bad news"
 Give a brief context sentence, then deliver news of death 	 Use the "D" word (died, dying)
Allow for silence	Validate family emotionExpress empathy
 Recognize that expressions of emotion and grief vary by culture 	
 Allow the family to see or touch loved one 	 Prepare family for what they will see

Source: Lamba S, Bryczowski S, Tyrie L, Weissman DE, Mosenthal AC. Death disclosure and delivery of difficult news in trauma. Fast facts and concepts #305. *Journal of Palliative Medicine*. 2016;19(5):566-567. Available at: https://www.mypcnow.org. Accessed April 30, 2017.

Breaking Bad News Related to Sudden Traumatic Death in the Emergency Department

Multiple challenges to the effective communication of death or imminent death in the emergency department (ED) exist, including time constraints, incomplete information, incomplete family presence, and no prior relationship with family. Though trauma centers may have access to palliative care specialty consultants, the majority of ED deaths do not need this resource. Reasons to engage specialty level palliative care for the injured patient in the ED setting include: (1) bereavement support, especially after multiple fatalities or after the death of a child, (2) ongoing family support of the patient imminently dying



from traumatic injuries, or (3) navigating complex decision-making in the context of high uncertainty or family conflict.

The goal is to deliver the information in a clear and compassionate manner, free of jargon or medical short hand. The ability to effectively share the news of death can be learned and improved with training. The manner in which the family receives this information will be indelibly etched in their minds and likely never forgotten. Several approaches can make the process more "positive" and less stressful for families and the health care team.

When breaking bad news in the ED, the environmental considerations and strategies described in Tables 2 and 3 are important. In anticipation of breaking bad news, the team needs to review all relevant information, including what transpired in the field. Determine who the recipient of the news might be, particularly when identification of the patient is uncertain. It is important to ensure that the recipient is appropriate and any personal health information is consistent with HIPAA privacy requirements. Introduce yourself and identify the roles of your team members. Confirm the relationship to the deceased with all the recipients of bad news.

Families are often on edge waiting for bad news, and typically they first want to know if the patient is dead or alive. Deliver this news first in about 30 to 60 seconds. One strategy is to start with a quick narrative about what was done and then the news of the death. For example, "X was in a bad car crash, he was unconscious when he was found, his heart stopped when he arrived, and we could not get it started. I am very sorry, but he died." Using the "D" word (died, dying) when delivering news of death is important and is a best practice. Allow for silence. This is not the time to go into details about the medical care, injuries, or anything else. Silence and your mere presence can validate a family's emotion. Expressions of empathy (verbal and nonverbal) are welcome, but they need to come naturally.

Some families have intense and dramatic outbursts. A safe space for the family to grieve is needed. Safety of the people delivering the bad news must be considered. If feasible, deliver the news with a nurse, social worker, or chaplain, who might also be able to support the family after the provider breaks the bad news. Position yourself in the room so that you have easy access to an exit, but do not deliver the news from the doorway.

If the family does not request to see the deceased, the health care team needs to initiate the offer. This step often helps with closure and reduces later family psychological stress. In advance, prepare the deceased in a manner consistent with what is legally allowed. Prepare the family for what they will see and ensure a health care professional accompanies the family to answer questions and make sure that evidence is not disturbed (if relevant). Bring chairs to the bedside and, if possible, dim the lights and close privacy curtains to allow the family to grieve. This activity often takes no more than 15 to 30 minutes, and allowing families to have this time can be invaluable. even in the busiest trauma centers.



References

- 1. Aminiahidashti H, Mousavi SJ, Darzi MM. Patients' attitude toward breaking bad news: A brief report. *Emergency*. 2016;4:34-37.
- 2. Back A, Arnold R, Baile W, Tulsky J, Fryer-Edwards K. Fundamental communication skills. *Medical Oncology Communication Skills Training Learning Modules*. 3-6, 2002. Available at: http://vitaltalk.org/sites/default/files/ Oncotalk_Fundamental_Skills.pdf. Accessed April 30, 2017.
- 3. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES-A six-step protocol for delivering bad news: application to the patient with cancer. *Oncologist*. 2000;5:302-311.
- 4. Buckman R. Breaking bad news: Why is it still so difficult? *BMJ*. 1984;288(6430):1597-1599.
- Dosanjh S, Barnes J, Bhandari M. Barriers to breaking bad news among medical and surgical residents. *Medical Education*. 2001;35:1997-1205.
- Dunn GP, Martensen R, Weissman D. Surgical Palliative Care: A Resident's Guide. Chicago, IL: American College of Surgeons; 2009. Available at https://www.facs.org/~/ media/files/education/palliativecare/ surgicalpalliativecareresidents.ashx. Accessed April 21, 2017.
- 7. Fallowfield L, Jenkins V. Communicating sad, bad, and difficult news in medicine. *Lancet*, 2014;363:312-319.
- 8. Jurkovich GJ, Pierce B, Pananen L, Rivara FP. Giving bad news: The family perspective. *Journal of Trauma*. 2000;48:865-870.
- Lamaba S, Bryczowski S, Tyrie L, Weissman DE, Mosenthal AC. Death disclosure and delivery of news in trauma. Fast facts and concepts #305. *Journal of Palliative Medicine*. 2016;19(5):566-567. Available at: https://www. mypcnow.org. Accessed April 30, 2017.
- Lord B, Pockett R. Perceptions of social work intervention with bereaved clients; Some implications for hospital social work practice. *Social Work in Health Care.* 1998;27:51-66.
- 11. Morse J. Hearing bad news. *Journal of Medical Humanities*. 2011;32:187-211.
- 12. Ptacek JT, Eberhardt TL. Breaking bad news: A review of the literature. *JAMA*. 1996;276:496-502.
- Ptacek JT, Ptacek JJ, Ellison NM. "I'm sorry to tell you..." physicians' reports of breaking bad news. *Journal of Behavioral Medicine*. 2001;24:205-217.
- 14. Rabow MW McPhee SJ. Beyond breaking bad news: How to help patients who suffer. *Western Journal of Medicine*. 1999;171:260-263.

- Warnock C. Breaking bad news: Issues relating to nursing practice. *Nursing Standard*. 2014;28: 51-58.
- Warren AM. Does caring for trauma patients lead to psychological stress in surgeons? *Journal of Trauma and Acute Care Surgery*. 2013;75:179-184.
- 17. Watson LAP. Informing critical care patients of a loved one's death. *Crit Care Nurse*. 2008;28:52-63.

PALLIATIVE CARE ASSESSMENT

Key Messages

- Identify pre-existing advance directives or advance care planning wishes of hospitalized trauma patients early (in the trauma bay or within 24 hours of admission).
- Initiate the palliative care assessment on admission, and complete it within 24 hours.
- Hold a structured family meeting for critically injured patients as soon as possible, but definitely within 72 hours of admission, and every three to five days thereafter.
 - A prognosis of death, permanent disability, or uncertainty of either is a trigger for early palliative care and goals of care discussions alongside ongoing trauma care.
 - Advance care planning discussions are initiated at this time and revisited with each major change in status or care plan.



- Prognostication includes the risk of death and the expected *functional and cognitive recovery* or other outcomes that may be important to the patient.
- The "surprise question" is an excellent tool to use as part of a comprehensive palliative care screen.

Early palliative care assessment and screening has several purposes, including: (1) identifying the health care proxy or surrogate decision maker, (2) identifying any pre-existing advance directives, living will, or do-not-resuscitate (DNR) orders, (3) understanding the family and social contexts, and (4) assessing prognosis. Once this screening is completed and reveals a need, immediately initiate appropriate basic palliative care services and support high-risk patients with comprehensive palliative care (Figure 1). This section outlines the timelines and goals for comprehensive palliative screening and assessment.

Health Care Proxy

The ethical basis for surrogate decisionmaking rests on the concepts of substituted judgment and best interest standard. Surrogates serve as substitutes for the patient and make decisions based on the patient's established or probable wishes, even if they might conflict with their own personal wishes for the patient. This decision-making is often difficult, particularly in the absence of an advance directive. Providers need to encourage surrogates to make the decisions that the *patient* would want, so reassure them that they are respecting the patient's autonomy and dignity by carrying out the patient's wishes. In cases where the patient's wishes cannot be ascertained, surrogates are expected to use the best interest standard, which means they choose the option that is best for the patient based on what a "reasonable" person would want.

GOALS THROUGHOUT HOSPITALIZATION				
Pain and symptom managementFamily access to patient		 Family emotional support Interdisciplinary communication 		
≤24 hours	INITIAL PALLIATIVE CARE ASSESSMENT			
	 Identify the health care proxy Obtain advance directive documents Perform a prognostication assessment Provide emotional and informational support for the family and patie Address urgent and focused advance care planning and decision-making needs Screen for further palliative care needs 			
≤72 hours	 Hold a family meetir 	Conversation for advance care planning		

Figure 1. Model for Palliative Care Screen and Assessment in Trauma



Surrogates are often poorly prepared for their role. They often need education and support so that patient autonomy is preserved and the risk of adverse psychological outcomes for the surrogate is mitigated. Surrogates responsible for withdrawing life-sustaining treatments are at increased risk of depression, post-traumatic stress disorder (PTSD), and complicated bereavement after the patient's death. They require support from an interdisciplinary team and written information on care options and shared decision-making.

Palliative Care Assessment: Initial Meeting (Within 24 Hours)

The goals of the first meeting include:

- Identify the key family members or other supports.
- Determine who are key decision makers and if any are absent.
- Identify any advance directives or advance care planning wishes that might have been communicated at an earlier time.
- Complete prognostication assessment based on injuries, age, and pre-existing health issues.
- Communicate prognosis to family members about the extent of the injuries, an estimated range of outcomes based on pre-injury health status, and the impact the injuries might have on physical and cognitive function. Include the level of certainty or uncertainty in prognostication.

This first conversation is very important and sets the stage for future communications and family interactions. The discussion provides realistic expectations for the family. Communicate compassionately in a concise manner that is free of jargon. Listen and acknowledge difficult emotions. For patients with severe comorbid illnesses and/or unsurvivable injuries, this first family discussion could occur in the ED. This early conversation could lead to early alignment of care with patient goals and the avoidance of further aggressive care. On occasion, family members may agree to the process of withdrawing life-sustaining therapy in the ED. Schedule the date and time for the next meeting at the conclusion of this first meeting.

Document the initial discussion in the medical record, including essential factors such as advance directives or new decisions regarding treatment preferences. Communication to other members of the health care team is important to reduce the risk for mixed messages that could occur between the trauma team and the critical care nursing and medical team.

Patients have a right to be treated according to their wishes, as stated in their advance directives. Unfortunately, some advance directive documentation is too vague to apply to real practice (for example, use no heroic measures). Physician Orders on Life-Sustaining Treatment (POLST) are recognized in most states and can provide vital information on resuscitation status,



among other specific directions (Appendix 3). In some cases, these forms may be called Medical Orders on Life-Sustaining Treatment (MOLST). Clinicians need to be familiar with their state and hospital policies. Hospitals customarily develop *a guide to advance* directives that includes relevant state laws, key hospital policies, copies of acceptable advance directive forms, answers to commonly asked questions, and a quality improvement process. The quality improvement process targets clinician education and monitors whether actual care provided to a patient is consistent with a patient's documented advance directives.

Palliative Care Screening and the Value of the "Surprise Question"

Screening for further palliative care needs begins on admission and continues during the first 72 hours (Table 4). The results of screening will identify the group of patients who need more intensive palliative care, end-of-life care, or specialist palliative care consultation. It sets the stage for the next structured family meeting. Screening involves evaluating the influences of the combined impact of the injuries, potential for disability, and the pre-morbid functional status on the likelihood of functional recovery or death. It is important to understand that the injury severity score is not the only predictor of outcome, but also age, frailty, or pre-morbid illness. The "surprise question" is one of the best prognostic tools for the seriously ill

hospitalized patient. The answer to this question, "Would you be surprised if this patient were dead in 12 months?" is a helpful part of the screening process. If the answer is NO, then this, along with other information, should trigger palliative care pathways and lead to discussion about advance care planning. Goals of care are clarified with respect to prolonging life, maintaining function and quality of life, and shared decisionmaking in the context of the injuries.

Screening will identify a group of patients who are primarily young or otherwise healthy with non-life-threatening injuries. These patients are considered "screen negative," and they require pain and symptom management as well as the identification of a health care proxy. The remaining patients with a positive screen will benefit from early palliative care focused on Goals of Care Conversations and appropriate decision-making. The patients with a positive screen often fall into two separate categories (Table 5):

Category 1: Patients have *uncertainty* regarding long-term functional recovery or survival due to severe traumatic injuries, age, frailty, comorbidities, or a combination of these factors. The answer to the "surprise question" is a "maybe" or "no." These patients need advance care planning discussions and clarification of resuscitation preferences. Early Goals of Care Conversations are needed to establish priorities and preferences for ongoing trauma care with a focus on the care of potential complications, for example, organ failure.



Category 2: Patients have major lifethreatening or disabling traumatic injuries, or lesser injuries with serious underlying comorbidities, frailty, or advanced age. They are at high risk of in-hospital death or discharge to dependent care. The answer to the "surprise question" is a definitive "no." These patients need early Goals of Care Conversations, clarification of treatment preferences, and endof-life care if appropriate, including consideration of hospice.

Table 4.	Palliative	Care	Screening	in Trauma
----------	------------	------	-----------	-----------

	Negative Screen	Category 1: Positive Screen	Category 2: Positive Screen
Traumatic Injury Severity	Non-life-threatening injuries	Potentially life- threatening injuries	Anticipated high risk of hospital mortality due to injury
Disability	Non-disabling trauma injuries	Potentially disabling injuries	Permanent disability or functional outcome incompatible with patient's wishes
Previous Functional Status	Healthy, no serious chronic illness	One or more serious illness, frailty, older age	Chronic serious illness, frailty, older age
Surprise Question	Surprise question: YES	Surprise question: MAYBE or NO	Surprise question: NO
Example: Young Patient	Young with • Multiple fractures • Mild TBI • Abdominal GSW • Pneumothorax	Young with • Spinal cord injury • Moderate TBI • Amputation • Any trauma plus shock	Young with • Severe TBI • High spinal cord injury • Major hemorrhage • Multiple amputation
Example: Older Patient		Older or chronically ill with • Mild TBI • Multiple fractures • Chest trauma • Low spinal cord injury	Older, frail, or end organ failure with • Mild TBI • Multiple rib fractures • Any spinal cord injury • Any injury requiring surgery

Adapted for trauma patients from: Weissman DE, et al. *Patient Screening and Conversation Categories, Improving Generalist palliative care for hospitalized seriously ill patients*. The Palliative Care Network of Wisconsin. Available at: https://www.mypcnow.org/about1-c22s6. Accessed May 3, 2017.



Table 5. Trauma Palliative Care Bundle: The First 72 Hours

ALL Trauma Patients within the First 24 hours	CATEGORY I: Trauma Patients with a Positive Screen Within 72 hours	CATEGORY II: Trauma Patients with a Positive Screen Within 72 hours
 Identify health care proxy Identify existing advance directives Identify whether a DNR order or POLST exists 	 Advance care plan Goals of Care Conversation Code status discussion 	 Consider comfort measures Consider focused Goals of Care Conversation Consider DNR order and withdrawal of life- sustaining therapy
 Assess and treat pain, manage symptoms Support the family 	 Assess and treat pain, manage symptoms Support the family 	 Assess and treat pain, manage symptoms Support the family Offer bereavement, spiritual support
Continue with full trauma care unless outcomes are clearly inconsistent with patient wishes	Care plan options: • Time-limited trials • Palliative care consultation	Care plan options: • Hospice • Transitions in care • Organ donation
 Begin palliative screen with prognostication based on injuries, frailty, and possible outcome(s); apply "surprise question" 		

Subsequent Meeting (No Later than 72 Hours Later)

A subsequent formal structured family meeting is needed within the first 72 hours. The meeting is conducted in a similar manner to the first meeting, beginning with a clear message of the patient's status and the presence or absence of any improvement. With time, the family and support system(s) begin to absorb the seriousness of the injuries and better understand the long-term outcome. More detailed discussions about the patient's wishes and goals of care are explored, especially in the absence of advance directives. (See Goals of Care Conversation). By this time, the patient's injuries are more fully identified, and the prognosis can be determined with greater clarity. The completed palliative care screening helps inform the conversation with an opportunity to share information related to the severity of injuries and factors such as co-morbid factors and the degree of frailty that will have great impact on the probability of functional recovery. If the patient has screened positive for early palliative care, advance care planning discussions are initiated at this meeting.

The advance care planning discussion focuses on identifying the general goals and values for medical treatment, and it includes discussions of resuscitation preferences such as DNR, do not intubate



(DNI), and other interventions. Document the discussion and preferences in the chart, and communicate them to all members of the health care team as well as the surrogate. DNR orders that will go with the patient after hospital discharge can be documented on a POLST form.

Not all patients or surrogates are ready to entertain advance care planning, even after a potentially life-threatening traumatic event. It is wise to assess the patient's readiness to engage in advance care planning and to learn about possible barriers to the conversation. These conversations are an iterative process, and they may need to be re-addressed later in the course of hospitalization or when the patient's condition changes.

Current procedural terminology (CPT) codes exist for advance care planning. Become familiar with these codes and the documentation required to support their use.

References

- Cooper Z, Koritsanszky LA, Cauley CE, et al. Recommendations for best communication practices to facilitate goal-concordant care for seriously ill older patients with emergency surgical conditions. *Annals of Surgery*. 2016;263(1):1-6.
- 2. Cooper Z, Courtwright A, Kariage A, et al. Pitfalls in communication that lead to nonbeneficial emergency surgery in elderly patients with serious illness: Description of the problem and elements of a solution. *Annals of Surgery*. 2014;260(6):949-957.
- 3. Dy SM, Kiley KB, Ast K, et al. Measuring what matters: Top-ranked quality indicators for hospice and palliative care from the American Academy of Hospice and Palliative Medicine and Hospice and Palliative Nurses Association. *J. Pain Symptom Manage*. 2015;49(4):773-781.

- Ferrell B, Connor SR, Cordes A, et al. The national agenda for quality palliative care: The National Consensus Project and the National Quality Forum. *J. Pain Symptom Manage*. 2007;33(6):737-744.
- Fromme EK, Zive D, Schmidt TA, Olszewski E, Tolle SW. POLST Registry do-not-resuscitate orders and other patient treatment preferences. JAMA. 2012;307(1):34-35.
- Hickman SE, Nelson CA, Perrin NA, Moss AH, Hammes BJ, Tolle SW. A comparison of methods to communicate treatment preferences in nursing facilities: Traditional practices versus the physician orders for lifesustaining treatment program. J Am Geriatr Soc. 2010;58(7):1241-1248.
- Maxwell CA, Mion LC, Mukherjee K, et al. Preinjury physical frailty and cognitive impairment among geriatric trauma patients determine postinjury functional recovery and survival. *J Trauma Acute Care Surg.* 2016;80(2):195-203.
- 8. Mosenthal, AC, Weissman, DE, Curtis, JR et al. 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. *Crit Care Med.* 2012;40(4):1199-206.
- 9. Nelson J, Mulkerin C, Adams L, Pronovost P. Improving comfort and communication in the ICU: A practical new tool for palliative care performance measurement and feedback. *Quality and Safety in Health Care*. 2006;15(4):264-271.
- 10. Weissman DE, et al. Patient Screening and Conversation Categories, Improving Generalist palliative care for hospitalized seriously ill patients. The Palliative Care Network of Wisconsin, Available at: https://www. mypcnow.org/about1-c22s6. Accessed May 3, 2017.
- Silveira MJ, Kim SY, Langa KM. Advance directives and outcomes of surrogate decision making before death. *NEJM*. 2010;362(13):1211-1218.
- Teno JM, Gruneir A, Schwartz Z, Nanda A, Wetle T. Association between advance directives and quality of end-of-life care: A national study. J Am Geriatr Soc. 2007;55(2):189-194.
- Weissman DE. Consultation in palliative medicine. Archives in Internal Medicine. 1997;157(7):733–737



GOALS OF CARE

Key Messages

- All patients with a positive screen for early palliative care need a Goals of Care Conversation (GOCC) as soon as possible and within 72 hours of admission.
- The purpose of the GOCC is to ensure that all therapy during hospitalization is concordant with the patient's preferences and ultimate goals.
- Trauma centers need established policies and protocols for the timing of the GOCC and its documentation.
- Time-limited trials are considered when seriously ill patients, their surrogates, or providers face difficult decisions about initiating major new interventions or continuing life-sustaining treatments in the face of poor or uncertain prognosis.

The GOCC builds on the advance care planning discussion while incorporating the patient's values and goals in the context of the traumatic injury, prognosis, and burdens associated with medical care. The conversation is planned specifically to guide therapy. Invite other individuals (for example, the nurse, social worker, and a palliative care professional, if available) to support the surrogate and to facilitate communication. Focus the discussion on the uncertainty of prognosis in the context of the patient's health state and injury burden. The patient's expected trajectory or any further expected declines in functional

or cognitive status are discussed along with the benefits and burdens of each therapy, and the likelihood of each outcome. The GOCC is sometimes an iterative process, but each conversation must clarify the patient's wishes regarding life-sustaining treatment and whether treatments are expected to be temporary or prolonged. Each GOCC and its decisions are documented clearly in the patient's record. The outcome of a GOCC should include decisions on:

- Cardiopulmonary resuscitation
- Mechanical ventilation
- Artificial nutrition and hydration
- Hemodialysis

Code status and other preferences for life-sustaining treatments are communicated to other treating clinicians, including the patient's primary care clinician and clinicians at accepting facilities.

When surrogates and/or providers face very difficult decisions about initiating major new interventions, or continuing life-sustaining treatments in the face of poor or uncertain prognosis, timelimited trials (TLT) may be considered. These trials are an alternative to the "all-or-nothing treatment" approach and can positively reframe the treatment plan when "the patient or family wants everything." TLTs are described "as an agreement between clinicians and a patient, and their family or surrogates, to use certain therapies such as: mechanical ventilation, vasopressors, life-sustaining infusions, thoracostomy or ventriculostomy tubes, continuous renal replacement therapy, parenteral/ enteral feeding, over a uniquely



defined period of time, to see if the patient improves or deteriorates according to mutually agreed-upon clinical outcomes." To proceed with a TLT, initiate the following steps:

- Define and communicate the patient's clinical problems and prognoses.
- Clarify the patient's personal values, goals of care, and quality of life priorities.
- Identify realistic objective markers that constitute clinical improvement or deterioration.
- Suggest and agree upon a time frame for reassessment and reevaluation.
- Define clear expectations and the plan of action at the end of the TLT.

Ideally, one or two providers take ownership of the TLT process to ensure smooth communication and build trust with the family. The palliative care team can be effective in facilitating the TLT discussion and providing additional expertise in communication skills and bereavement support for families and providers.

References

- Back AL, Arnold RM. "Yes it's sad, but what should I do?" Moving from empathy to action in discussing goals of care. *J Palliat Med*. 2014;17(2):141-144.
- Bernacki RE, Block SD, American College of Physicians High Value Care Task Force. Communication about serious illness care goals: a review and synthesis of best practices. JAMA Intern Med. 2014;174(12):1994-2003.
- 3. Bruce CR, Liang C, Blumenthal-Barby JS, et al. Barriers and facilitators to initiating and completing time limited trials in critical care. *Crit Care Med*. 2015;43(12):2535-2543.

- 4. Davidson JE, Powers K, Hedayat KM, et al. 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. *Crit Care Med*. 2007;35:605-622.
- Dunn GP, Martensen R, Weissman D. Surgical palliative care: A resident's guide. American College of Surgeons and Cunniff-Dixon Foundation, 2009. Available from https:// www.facs.org/~/media/files/education/ palliativecare/surgicalpalliativecareresidents. ashx. Accessed April 21, 2017.
- Jacobsen J, Thomas J, Jackson VA. Misunderstandings about prognosis: An approach for palliative care consultants when the patient does not seem to understand what was said. *Journal of Palliative Medicine*. 2013;16(1):91-95.
- Neuman MD, Allen S, Schwarze ML, Uy J. Using time-limited trials to improve surgical care for frail older adults. *Ann Surg.* 2015;261(4):639-641.
- 8. Quill TE, Arnold RA, Back AL. Discussing treatment preferences with patients who want "everything." Ann Intern Med. 2009;151:345-349.
- 9. Quill TE, Holloway R. Time-limited trials near the end of life. *JAMA*. 2011;306(13):1483-1484.
- 10. Schwarze ML, Bradley CT, Brasel KJ. Surgical "buy-in": The contractual relationship between surgeons and patients that influences decisions regarding life-supporting therapy. *Crit Care Med.* 2010;38(3):843-848.
- 11. Shrime MG, Ferket BS, et al. Time-limited trials of intensive care for critically ill patients with cancer: How long is long enough? *JAMA Oncol.* 2016;2(1):76-83
- Turnbull AE, Ruhl AP, et al. Timing of limitations in life support in acute lung injury patients: A multisite study. *Crit Care Med*. 2014;42(2):296-302
- 13. Weissman DE, et al. *Patient Screening and Conversation Categories, Improving Generalist palliative care for hospitalized seriously ill patients.* The Palliative Care Network of Wisconsin, Available at: https://www. mypcnow.org/about1-c22s6. Accessed May 3, 2017.
- 14. Weissman DE, Quill TE, Arnold RM. Preparing for the family meeting #222. *J Palliat Med*. 2010;13(2):203-204.
- 15. Weissman DE, Quill TE, Arnold RM. The family meeting: End-of-life goal setting and future planning #227. *J Palliat Med*. 2010;13(4):462-463.



END-OF-LIFE CARE

Key Messages

- DNR or DNI orders do not preclude treatment or the delivery of care with curative intent.
- Withdrawal of life support does not imply withdrawal of "care." More precisely, it refers to withdrawal of life-sustaining interventions.
- Medical centers need the following polices/procedures in place to ensure high-quality palliative care:
 - Policies related to reconsideration of DNR status in the perioperative period
 - Protocols related to withdrawal of life-sustaining therapy
 - Standardized comfort care order sets addressing pain and symptom management
 - Particular attention to treatment of delirium, dyspnea, and thirst is important in trauma patients at the end of life

Once goals of care discussions take place and broad consensus is reached for the goals of care with the patient/ surrogate and health care team, consider how interventions can be aligned with these goals. The types of interventions may include writing of a DNR order, withdrawal of lifesustaining therapy, and/or comfort care.

Do-Not-Resuscitate Orders

DNR (no CPR) or DNI status and their associated orders in the medical record are a component of palliative and endof-life care, but they are not synonymous with that care. Not all patients with DNR or DNI status are at the end of life, and some still choose aggressive attempts at curative care while excluding these specific interventions. Many conditions do demand treatment that can result in cardiac arrest (to which DNR or no CPR most appropriately apply), including management of arrhythmias and/or hypotension. Surgical intervention can be appropriate in the right context. The American College of Surgeons and the American Society of Anesthesiologists advise a policy of "required reconsideration" of DNR/ DNI status around the time of surgery. Decisions about suspending DNR orders need to be made on an individual basis, following discussion with patients/ surrogates about anticipated goals and outcomes of intervention. It is here that the concept of TLTs is particularly helpful.

Withdrawal of Life Support

Once a decision is made to proceed with withdrawal of life support, this process is not considered "withdrawal of care." It is the withdrawal of lifesustaining interventions, and the focus shifts to ensuring that the patient does not experience pain or suffering. A DNR/DNI order needs to be in place. Several considerations regarding the dying process are important, such



as estimating how rapidly death will occur and appropriate preparations needed for the patient and family. In patients on pressor medication or ventilator support, their removal usually leads to death in a manner of minutes, while patients with severe traumatic brain injury (TBI) often survive several days. Transferring the patient and family to a different environment (for example, a private room, ward bed, palliative care unit, hospice) may be appropriate for many; however, avoid transfer if death is imminent.

The withdrawal of life support procedure must be coordinated, taking into account the needs of the family and patient. Defined policies and procedures are needed to guide this process to minimize pain, discomfort, and dyspnea.

- Create a peaceful environment with ample space for the family.
- Remove all unnecessary equipment, monitoring devices, and restraints. Silence all alarms.
- Discontinue all medications, feedings, or intravenous lines that are not related to comfort.
- Provide tissues, water, and comfortable chairs for the family members.
- Adjust the bedrails/bed height to enable family-patient touching or handholding.
- Inform the family about the dying process and what might transpire.
- Allow time for any rituals, especially if death is likely to be imminent following removal of support.

Precede the withdrawal of ventilator support with the cessation of neuromuscular blockade, and administer appropriate medications for sedation, pain control, and prevention of dyspnea. Opioids are the first line for treatment of dyspnea. If dyspnea is refractory, then administer small doses of benzodiazepines that are titrated to effect. Often the patient is simply extubated after suctioning because oral and respiratory secretions can cause stridor, airway obstruction, or the "death rattle." To diminish secretions, scopolamine is effective, as are elevating the head of the bed and oral suctioning. Patients and families find dyspnea very distressing. Reassure them that medications will be offered and dyspnea will be managed.

When death is not imminent, transfer the patient to a floor bed with comfort measures ordered. Unlimited family visitation is optimal. Often the family needs ongoing reassurance that they are pursuing care in accordance with the patient's wishes, since the patient did not simply die when "everything was stopped."

Following the declaration of death, it is important to allow family and staff to be with the patient. Death after traumatic injury is often a medical examiner or coroner's case, so inform the family about that possibility well in advance. Lastly, in many cases it is useful to allow the involved health care team to debrief and discuss the case.



There are circumstances that will allow for organ donation after cardiac death. Where applicable, the policies and protocols should take into consideration the needs of patients and families as described above along with considerations important to the transplant team to optimize the function of the organs to the recipient.

References

- American Society of Anesthesiologists. Ethical guidelines for the anesthesia care of patients with do-not-resuscitate orders or other directives that limit treatment. Available at: http://www.asahq.org/~/media/Sites/ASAHQ/ Files/Public/Resources/standards-guidelines/ ethical-guidelines-for-the-anesthesia-careof-patients.pdf. Published October 17, 2001. Amended October 16, 2013. Accessed July 6, 2016.
- 2. Palliative Care Network of Wisconsin. Fast facts 33: Ventilator withdrawal—procedure. Available at: https://www.mypcnow.org/fastfact-index. Accessed April 28, 2017.
- 3. Palliative Care Network of Wisconsin. Fast facts 34: Ventilator withdrawal—symptom control. Available at: https://www.mypcnow.org/fastfact-index. Accessed April 28, 2017.
- 4. Palliative Care Network of Wisconsin. Fast facts 35: Ventilator withdrawal—family information. Available at: https://www.mypcnow.org/fastfact-index. Accessed April 28, 2017.
- Kazaure H, Roman S, Sosa JA. High mortality in surgical patients with do-not-resuscitate orders: Analysis of 8256 patients. *Arch Surg.* 2011;146(8):922-928.
- 6. Mosenthal AC et al. Changing the culture around end-of-life care in the intensive care unit. *J Trauma*. 2008;64:1587-1593.
- American College of Surgeons. Statement on advance directives by patients: "Do not resuscitate" in the operating room. 2014. Available at: https://www.facs.org/about-acs/ statements/19-advance-directives. Accessed June 2, 2016.
- 8. Treece PD, et al. Evaluation of a standardized order form for the withdrawal of life support in the intensive care unit. *Crit Care Med*. 2004;32:1141-1148.

SPECIAL CONSIDERATIONS FOR GERIATRIC PATIENTS

Key Messages

- A frailty screen should be completed on admission for all patients 65 years or older.
- Presence of frailty by any measure predicts a high likelihood of mortality or poor functional status at discharge regardless of injury severity.
- Presence of frailty should trigger palliative care processes, including identification of advance directives and Goals of Care Conversation.

Frailty, rather than chronologic age, is the dominant predictor of adverse outcomes and the need for palliative care among elderly patients. Frailty is a clinically recognizable state of vulnerability resulting from pre-existing end organ failure and age-related decline in reserve and function across multiple physiologic systems. It may be manifest as sarcopenia, history of multiple falls, or functional decline.



Table 6. 5-Item FRAIL Questionnaire

F: Fatigue	Does the patient fatigue or get exhausted easily?
R: Resistance	Does the patient have difficulty walking up one flight of stairs independently?
A: Ambulation	Does the patient have difficulty walking one block (several hundred yards)?
I: Illnesses	Does the patient have 5 or more illnesses (comorbidities, including hypertension, diabetes, cancer [other than minor skin cancer], chronic lung disease, heart attack, congestive heart failure, angina, asthma, arthritis, stroke, and kidney disease)?
L: Loss of weight	Has the patient lost weight (5 to 10 percent) over the last six months to one year?

- 3 or more "Yes" answers indicates possible frailty
- 1 to 2 "Yes" answers indicates possible pre-frailty

Source: Morley JE, Malmstrom TK, Miller DK. A simple frailty questionnaire (FRAIL) predicts outcomes in middle aged African Americans. *J Nutri Health Aging*. 2012;16(7):601-608.

Its presence is a positive screen for palliative care pathways and should trigger additional assessment and quality coordinated care that addresses multiple domains (in other words, physical, psychological, social, spiritual, cultural, ethical). (See Palliative Care Assessment.)

Screening for frailty in geriatric trauma patients is highly dependent on a proxy respondent, most often a family member. While several screening instruments are available, a growing body of research supports the 5-Item FRAIL Scale as an easy, yet valid, screening instrument for use by clinicians (Table 6).

References

- 1. Hanson, LC, Winzelberg, G. Research priorities for geriatric palliative care: Goals, values, and preferences. *J Palliative Med*. 2013;16(10):1175-1179.
- 2. Joseph B, Pandit V, Zanbar B, et al. Superiority of frailty over age in predicting outcomes among geriatric trauma patients: A prospective analysis. *JAMA Surg.* 2014;149(8):766-772.
- 3. Joseph B, Pandit V, Zangbar B, et al. Validating trauma-specific frailty index for geriatric trauma patients: A prospective analysis. *J Am Coll Surg.* 2014;219(1):10-17.

- 4. Malmstrom TK, Miller DK, Morley JE. A comparison of four frailty models. *JAGS*. 2014;62(4):721-726.
- 5. Maxwell CA, Mion LC, Mukherjee K, et al. Feasibility of screening for preinjury frailty in hospitalized injured older adults. *J Trauma Acute Care Surg.* 2015;78(4):844-851.
- Maxwell CA, Mion LC, Mukherjee, K, et al. Pre-injury physical frailty and cognitive impairment among geriatric trauma patients determine post-injury functional recovery and survival. *J Trauma Acute Care Surg.* 2016;80(2):195-203.
- Maxwell, CA. Screening hospitalized injured older adults for cognitive impairment and preinjury functional impairment. *Appl Nurs Res.* 2013;26(3):146-150.
- 8. Morley JE, Malmstrom TK, Miller KS. A simple frailty questionnaire (FRAIL) predicts outcomes in middle aged African Americans. J Nutr Health Aging. 2012;16:601.
- 9. Woo J, Yu R, Wong M, et al. Frailty screening in the community using the FRAIL Scale. *J Am Med Dir Assoc*. 2015;16(5):412-419.
- Abellan van Kan G, Rolland Y, Bergman H, et al. The I.A.N.A. Task Force on frailty assessment of older people in clinical practice. *J Nutr Health Aging*. 2008;12:29.
- 11. Zhao FZ, Wolf SE, Nakonezny PA, et al. Estimating geriatric mortality after injury using age, injury, and performance of a transfusion: The Geriatric Trauma Outcome Score. J Palliative Med. 2015;18(8):677-681.



SPECIAL CONSIDERATIONS FOR PEDIATRIC PATIENTS

Key Messages

- Decision-making for older children and adolescents needs to include patient assent.
- Age of consent for medical treatment varies by state.
- Bereavement care for the family, including siblings, poses unique challenges.

Palliative care for the pediatric patient differs from care for adult patients. Death during childhood is rare, and the cultural and social norms regarding care are based on the expectation that children do not die. Physiologic and cognitive developmental differences affect assessment, treatment, communication, and decision-making in the pediatric patient. Decision-making for dependent, non-autonomous children can be associated with significant legal and ethical issues. Additionally, bereavement care for the family, including siblings, poses unique challenges.

In spite of these differences, the goals of care and palliative care needs of children are similar to those of adults. Some specific differences include a clear and definite need for outside referrals for child life services and pediatric palliative care specialists. Another important difference is related to the health care surrogates who have responsibility for decision-making. In general, decisionmaking falls to the legal guardian of the child unless legal documentation (court orders) or the legal guardian states otherwise. The decision maker needs to be the person who is in the best position to represent the best interests and wishes of the child. Of note, the age of minor *consent* for medical treatment varies by state. Decision-making for older children and adolescents must include, as much as possible, the *assent* of the patient as well as the participation of the parents and the physician.

Hospice agencies are valuable resources to children, families, and care providers because they can provide 24-hour availability for in-home assessment and management; psychosocial, spiritual, and decision-making support for the child and family; and grief and bereavement care for the family after the child dies.

References

- 1. American Academy of Pediatrics Committee on Bioethics. Informed consent, parental permission, and assent in pediatric practice. *Pediatrics* 1995;95(2):314-317.
- Dunn GP, Martensen R, Weissman D. Chapter 13: Pediatric palliative care. In Surgical Palliative Care: A Resident's Guide. American College of Surgeons, 2009. Available at: https://www.facs. org/~/media/files/education/palliativecare/ surgicalpalliativecareresidents.ashx. Accessed April 25, 2017.
- 3. Himelstein BP, Hilden JM, Boldt AM, et al. Pediatric palliative care. *NEJM*. 2004;350(17):1754.
- 4. Minor Consent to Medical Treatment Laws. National District Attorney Association Website. Available at: http://www.ndaa.org/ pdf/Minor%20Consent%20to%20Medical%20 Treatment%20(2).pdf, Published January, 2013. Accessed April 23, 2017.



SPECIAL CONSIDERATIONS FOR SPINAL CORD INJURY

Key Messages

- Spinal cord injury is life changing in predictable ways that might guide discussions related to advance care planning.
- Some patients with high spinal cord injury may request withdrawal of lifesustaining therapy; mental health specialists and rehabilitation specialists with expertise in spinal cord injury need to participate in conversations to better inform decision-making.

Spinal cord injury (SCI) is one of the most devastating and life-altering injuries admitted to the trauma service. Unlike other injuries, SCI has well-established prognoses based on injury level and severity (Table 7). This information is very useful when providing patients with early palliative and emotional supportive care, and it might very well direct advance care planning conversations. Spinal cord rehabilitation physicians and mental health specialists may be valuable additional members of the team at an early stage to help inform conversations and to address the high incidence of depression following SCI.

Additional important facts related to SCI:

- The vast majority of motor recovery occurs over the first two years.
- The cumulative 20-year survival rate is 70 percent; however, this figure is likely generous and subject to under-reporting and patients lost to follow-up.
- Little chance of functional recovery is found in the lower extremities of tetraplegics if the motor and sensory deficits remain complete for greater than one month post-injury.
- Prognosis for ambulation at one to two years (requires at least one functioning hip flexor and leg braces):
 - Complete paraplegic 5%
 - Incomplete paraplegic 76%
 - Complete tetraplegic 0%
 - Incomplete tetraplegic 46%

Functions	Spinal Cord Level and Significance						
Activities	C5	C6	C7	T1	T6	T12	L4
Activities of daily living	-	+/-	+	+	+	+	+
Bed mobility	-	+/-	+	+	+	+	+
Wheelchair independence	-	+/-	+/-	+	+	+	+
Functional ambulation	-	-	-	-	+/-	+	+
Attendant assisting	+	+	+	+/-	+/-	-	-

Table 7. Functional Significance of Spinal Cord Lesion Level

Key: + = present; = absent; +/- = sometimes present, sometimes absent.

Adapted from: Burns AS, Ditunno JF. Establishing prognosis and maximizing functional outcomes after spinal cord injury. *Spine.* 2001;26:S137-S145.



References

- 1. Arango-Lasprilla JC, Ketchum JM, Starkweather A, Nicholls E, Wilk AR. Factors predicting depression among persons with spinal cord injury 1 to 5 years post injury. *NeuroRehabilitation*. 2011;29(1):9-21.
- Burns AS, Ditunno JF. Establishing prognosis and maximizing functional outcomes after spinal cord injury. *Spine*. 2001;26:S135-S145.
- 3. Craig A, Tran Y, Middleton J. Psychological morbidity and spinal cord injury: A systematic review. *Spinal Cord*. 2009;47(2):108-114.
- National Spinal Cord Injury Statistical Center, Facts and Figures at a Glance. Birmingham, AL: University of Alabama at Birmingham, 2016. Available at: https://www.nscisc.uab. edu/Public/Facts%202016.pdf. Accessed May 8, 2017.
- Sise M, Sise B, Shackford S, et al. Withdrawal of care: A 10-year perspective at a level I trauma center. J Trauma and Acute Care Surgery. 2012;75:1186-1193.
- Stevens S, Caputo J, Morgan D. Physical activity and quality of life in adults with spinal cord injury. J Spinal Cord Med. 2008;31:373-378.
- 7. Williams R, Murray A. Prevalence of depression after spinal cord injury: A meta-analysis. *Arch Phys Med Rehabil*. 2015;96(1):133-140.

SPECIAL CONSIDERATIONS FOR TRAUMATIC BRAIN INJURY

Key Messages

- The Glasgow Coma Score (GCS) is an accurate predictor of death from traumatic brain injury, but it is less useful in predicting functional cognitive outcome in survivors.
- Conversations need to focus on potential cognitive and functional outcomes to determine their compatibility with the patient's goals of care and/or advance directives.

Survivors of moderate (GCS < 12) or severe TBI might have significant functional and cognitive limitations. GCS is a good predictor of mortality, but it is less useful for predicting long-term functional outcome, which is of greater importance in decisions related to end-of-life care. A GCS < 12 is a trigger for the patient to receive a more extensive palliative care screen. The combination of severe TBI and advanced age is particularly relevant, as generally outcomes are poor. Approximately 25 percent of patients age 65 years or older who have a cranial procedure for TBI die in hospital, and 50 percent die within one year of injury. More importantly, almost none return to independent living. Additional information on prognosis to guide discussions is available through a prognostic calculator found at *tbi-impact.org*/?*p=impact/calc*.

While some concern about the potential for establishing a "self-fulfilling prophecy" with early limitations of treatment, objective discussions to establish realistic goals of care must still occur. All members of the health care team, including intensivists, neurologists, neurosurgeons, and physiatrists, must communicate with one voice regarding the status of the patient. At times, allowing the family/decision maker to view the computed tomography (CT) scan to see the evidence of injury can be helpful in supporting a decision for palliative care. TLTs can be useful in allowing the family and health care team to see whether improvement in mental status occurs before proceeding with withdrawal of support or further life-sustaining medical care.



References

- 1. Cipolle MD, Geffe K, Getchell J, Reed JF 3rd, Fulda G, Sugarman M, Tinkoff GH. Long-term outcome in elderly patients after operation for traumatic intracranial hemorrhage. *Del Med J*. 2014;86(8):237-244.
- 2. Lilley EJ, Williams K, Schneider EB, et al. Intensity of treatment, end-of-life care, and mortality for older patients with severe traumatic brain injury. *J of Trauma and Acute Care Surgery*. 2016;80(6):998-1004.
- Frontera J, Mosenthal A, Brasel K, et al for the Improving Palliative Care in the ICU Project Advisory Board. Integrating palliative care into the care of neurocritically ill patients: A report from the improving palliative care in the ICU Project Advisory Board and the Center to Advance Palliative Care. *Crit Care Med*. 2015;43:1964-1977.
- 4. Izzy S, Compton R, Carandang R, et al. Selffulfilling prophecies through withdrawal of care: Do they exist in traumatic brain injury too? *Neurocritical Care.* 2013;19:347-363.
- 5. Jiang JY, Gao GY, Li WP, et al. Early indicators of prognosis in 846 cases of severe traumatic brain injury. *J Neurotrauma*. 2002;19:869-874.
- 6. Kaufmann MA, Buchmann B, Scheidegger D, et al. Severe head injury: Should expected outcome influence resuscitation and first-day decisions? *Resuscitation*. 1992;23:199-206.
- Luaute J, Maucort-Boulch D. Tell L, et al. Longterm outcomes of chronic minimally conscious and vegetative states. *Neurology*. 2010;75:246-252.
- Murray GD, Burcher I, Steyerberg EW, et al. Multivariable prognostic analysis in traumatic brain injury: Results from the impact study. *J of Neurotrauma*. 2007;24:329-337.
- Perel P, Arango M, Yutthakasaemsunt S, et al. Predicting outcome after traumatic brain injury: Practical prognostic models based on large cohort of international patients. *BMJ*. 2008;336:425-429.
- Turgeon AF, Lauzier F, Fegusson DA, et al. Determination of neurologic prognosis and clinical decision-making in adult patients with severe traumatic brain injury: A survey of Canadian intensivists, neurosurgeons, and neurologists. *Crit Care Med.* 2013;41:1086-1093.

SUPPORTING THE HEALTH CARE TEAM

Key Messages

- The palliative care team can in some cases provide support to health care providers.
- Stress management training and education for the health care team is important to ensure staff wellness, and it needs to be offered by the medical center.
- Establish triggers to identify the circumstances when a debriefing may benefit staff.

Daily exposure to patients and families dealing with life-limiting illness provokes considerable stress in the health care team. It may manifest as secondary traumatic stress, the presence of PTSD caused by indirect exposure to a traumatic event. Because this is sufficiently common, the health care team must be aware of the phenomenon and provide the necessary support to each other. At times, the palliative care team may provide direct support to the health care providers (Table 8). Morale and staff engagement need to be assessed periodically through informal self-assessments or more formal evaluations. Defined procedures, policies, and protocols that enable staff to seek support confidentially and without consequence need to exist. To ensure staff wellness and a highly functioning team, medical center support is critically important for stress management training and education in self-care, compassion fatigue, and resilient coping.



Educational Resources for Staff

Increased ability and comfort in delivering bad news and effectively communicating with families can be taught and improved through education and training. Several online resources and mobile applications are specifically tailored to either trauma or palliative care, including:

- Clinician education from vitaltalk.org
- Palliative Care Fast Facts from mypcnow.org/fast-fact-index
- The American College of Surgeons' Surgical Palliative Care Resident Guide

These specific resources may be particularly effective in providing training and education for trauma care providers.

Debriefing

Debriefing allows the free exchange of ideas between multiple providers, each sharing their point of view relevant to recent events. Trauma centers need a process to debrief the staff and palliative care teams, but not every case requires a debriefing. The health care team often benefits from a debriefing session for specific circumstances of the patient death, such as an unexpected death, a difficult family, or death after a prolonged ICU course where the staff became very close to the family. A debriefing session needs to be triggered for these and similar circumstances. These formal debriefing sessions promote better communication across professional lines and allow everyone to express their opinions and feelings, which lead to improved staff resiliency and morale. It also reduces the overall stress associated with providing care in a difficult environment.

Table 8. Supporting the Health Care Team

Ways the Palliative Care Team Can Provide Staff Support	Interventions That Can Relieve Staff Stress
 Recognize, normalize, and validate the impact of trauma on the trauma staff Provide staff with education regarding the possible impact of extensive work with trauma, death, and other end-of-life issues Increase awareness of risk factors and mitigating factors for compassion fatigue, burnout, and vicarious trauma; provide training to build skills in resilience and self-care Provide appropriate supervision to identify individuals who may be experiencing the negative impact of trauma exposure Maintain the physical safety of the staff Increase staff monitoring in situations more likely to result in staff distress, such as death of a child, mass-casualty event, suicide, and high-profile events 	 Encourage breaks and provide respite areas Manage the provider caseload Adjust work assignments Promote casual gathering to facilitate communication Offer formal debriefings and after-action meetings Make referrals to staff, including assistance programs, pastoral care, or other behavioral health professionals Recognize staff for their successes Provide reminders of the importance of self-care and work-life balance Encourage trauma staff participation in organizational groups to ensure that resources are available to support trauma health care professionals Establish specific procedures for a large- scale disaster or mass-casualty event



References

- 1. Dunn GP, Martensen R, Weissman D. Surgical palliative care: A resident's guide. American College of Surgeons and Cunniff-Dixon Foundation. 2009. Available at: https:// www.facs.org/~/media/files/education/ palliativecare/surgicalpalliativecareresidents. ashx. Accessed April 21, 2017.
- Figley CR, ed. Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized. New York: Brunner/ Mazel; 1995.
- 3. Palliative Care Network of Wisconsin. Fast facts and concepts. Available at: https:// www.mypcnow.org/fast-fact-index. Accessed September 25, 2017.
- 4. Kearney MK, et al. Self-care of physicians caring for patients at the end of life. *JAMA*. 2009;301:1155-1164.
- National Child Traumatic Stress Network. Secondary traumatic stress: A fact sheet for child-serving professionals. 2011. Available at: http://www.nctsn. org. Accessed April 29, 2017.
- 6. Vachon ML. Staff stress in hospice/palliative care: a review. *Palliat Med*. 1995;9:91-122.
- Van Mol MMC, Kompanje EJO, Benoit DD, Bakker J, Nijkamp MD. The prevalence of compassion fatigue and burnout among healthcare professionals in intensive care units: A sytematic review. *PLoS ONE*. 2015;10(8):e0136955. doi:10.1371/journal. pone.0136955.

CLINICAL DOCUMENTATION

Key Messages

- Document palliative care activities as part of standard practices.
- Use specialized forms to document palliative care activities to help with (1) providing best practices in clinical care, (2) performance improvement (PI) activities, and (3) billing for services.

Specific components of palliative care need to be part of the initial trauma history and physical examination. Expand the data collected for the family and/or social history sections to capture the following information:

- Identification and contact information of family or surrogates
- The status of advance directives, POLST, and appropriate resuscitation status if known at the time of admission
- Any particular cultural, religion, or other information
- Identification of the patient's other health care providers, if any, who may be an invaluable source of medications prescribed and health status

Good medical practice mandates a specific note in the medical record by the health care team for any significant change in a patient's status. Educating the team on the importance of documenting the notification of family/surrogates improves overall palliative care documentation. More importantly, it allows all members of the health care and palliative care teams to understand what the family has been told at any given point in time.

Subsequent information to document includes: (1) identification of health care proxy and advance directive documents, (2) prognostication/frailty assessment, (3) what, if any, emotional and informational support was provided for the family and patient, and (4) any



Table 9. Clinical Documentation Components Related to Palliative Care

History and Physical Examination	Determine Health Care Proxy
Psychological, social, and cultural aspects of care	Communication plan (family meetings)
Patient's definition of quality of life	Primary care provider
Patient's goals of care	Symptom and pain scores
Review of advance directives, POLST	Process of withdrawal of life-sustaining care (where applicable)
Assessment and plan of care	Prognosis and trajectory

goals of care or focused decisionmaking discussions (Table 9). The use of an electronic health record (EHR) template can facilitate and ensure that the information is documented. This note will satisfy two National Quality Forum (NQF) measures, defined as follows:

NQF metric 1626: Percentage of vulnerable adults admitted to the ICU who survive at least 48 hours who have their care preferences documented within 48 hours OR documentation as to why this was not done.

NQF metric 0326: Percentage of patients aged 65 years and older who have an advance care plan or surrogate decisionmaker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decisionmaker or provide an advance care plan.

Good clinical documentation includes a specific note about all family meetings. All participants are identified, and any goals of care decisions (for example, withdrawal of life support, TLTs, or no change in current plan) made during this meeting are documented. The timing for the next meeting is scheduled and recorded. An EHR template can make documentation more complete and chart abstraction for performance improvement review easier. Identification of the note in some form as "palliative care" further simplifies and streamlines the process.

References

- National Quality Measures Clearinghouse (NQMC). NQF #1626 Patients admitted to ICU who have care preferences documented. Available at: https://www.qualityforum.org/ WorkArea/linkit.aspx?Linkldentifier=id&Item ID=67385, Accessed Aug 30, 2016.
- 2. National Quality Measures Clearinghouse (NQMC). Measure summary: Palliative care for adults: percentage of adult patients with a serious illness who have documentation in the medical record of a completed advance directive. 2013. Available at: https://www. qualitymeasures.ahrq.gov/summaries/ summary/49445/geriatrics-percentage-ofpatients-aged-65-years-and-older-whohave-an-advance-care-plan-or-surrogatedecision-maker-documented-in-the-medicalrecord-or-documentation-in-the-medicalrecord-that-an-advance-care-plan-wasdiscussed-but-the-patient-did-not-wish-or-?g=Hospital+Inpatient. Accessed April 30, 2017.



- National Quality Measures Clearinghouse (NQMC). Measure summary: Palliative care for adults: Percentage of adult patients with a serious illness who have a completed Physician/Provider Order for Life-Sustaining Treatment (POLST) form documented in the medical record. 2013. Available at:
- https://www.qualitymeasures.ahrq. gov/summaries/summary/47734/ palliative-care-for-adults-percentageof-adult-patients-with-a-serious-illnesswho-have-a-completed-physicianproviderorder-for-lifesustaining-treatment-polst-formdocumented-in-the-medical-record?q=Life+s ustaining+treatment. Accessed April 30, 2017.
- 5. National Quality Measures Clearinghouse (NQMC). Measure summary: Intensive care unit (ICU) palliative care: Percent of patients who have documentation of resuscitation status on or before Day One of ICU admission. 2006. Available at: https:// www.qualitymeasures.ahrq.gov/summaries/ summary/28308/intensive-care-unit-icupalliative-care-percent-of-patients-who-havedocumentation-of-advance-directive-statuson-or-before-day-one-of-the-icu-admission. Accessed April 30, 2017.
- 6. National Quality Measures Clearinghouse (NQMC). Measure summary: Geriatrics: percentage of patients aged 65 years and older who have an advance care plan or surrogate decision maker documented in the medical record or documentation in the medical record that an advance care plan was discussed but the patient did not wish or was not able to name a surrogate decision maker or provide an advance care plan. 2013 Available at: https://www.qualitymeasures. ahrq.gov/summaries/summary/49445/ geriatrics-percentage-of-patients-aged-65years-and-older-who-have-an-advancecare-plan-or-surrogate-decision-makerdocumented-in-the-medical-record-ordocumentation-in-the-medical-record-thatan-advance-care-plan-was-discussed-but-thepatient-did-not-wish-or-. Accessed April 30, 2017.
- Weissman DE, Meier DE, Spragens LH. Center to Advance Palliative Care Consultation Service Metrics: Consensus recommendations. *J Palliat Med*. 2008;11(10):1294-1298.

PERFORMANCE IMPROVEMENT INITIATIVES

The three basic concepts running through this Best Practices Guideline on providing care for patients with a serious/life-threatening injury or illness are: (1) avoid or limit care that is contrary to a patient's wishes, (2) support patient and family well-being, and (3) improve the comfort and ability of the health care team to communicate and discuss palliative and end-of-life care with patients and their families. A robust and comprehensive PI program is a defined metric for ACS trauma center verification. Extending this program to include some basic palliative care metrics is important to delivering quality care.

The following information outlines several PI opportunities and indicators for hospitals and programs interested in improving the quality of palliative and end-of-life care. These measures are not currently a requirement for trauma center verification; however, they may provide useful tools to monitor and employ some of the best practices contained in this document. The proposed measures are derived from the best combination of available published evidence and expert opinion.



A. Global Medical Center Measures

- A defined and identifiable program to provide primary level and specialist palliative care services exists within the medical center, which is available to health care providers 24 hours a day throughout the year.
- 2. Multidisciplinary agreed-upon policies and procedures to manage pain, anxiety, delirium, and other common distressing symptoms exist and are easily accessible to health care providers.
- Policies and procedures exist to ensure that clinicians are aware of pre-existing advance directives, DNR orders, health care surrogate decision makers, and/or physician orders for life-sustaining treatments (POLST).
- An explicit policy exists and is easily accessible to health care providers regarding the management of pre-existing DNR orders for patients requiring operative or other invasive procedures.
- A policy exists to define the steps to take when conflicts occur between patients, families, and the health care team concerning DNR orders and/ or use of life-sustaining treatments.

B. Education Initiatives

 Medical center training and continuing clinical education support are offered to allow all health care providers to provide palliative care at a primary level to include symptom management; principles of medical ethics, applicable state laws, and hospital regulations; communication skills for conveying bad news; discussing prognosis and leading a family goal setting meeting; and available medical center and community end-of-life resources.

 The medical center has processes and systems to support and debrief health care providers in dealing with stressful and difficult decisions to prevent and limit burnout, emotional exhaustion, and compassion fatigue.

C. Process Measures

- All patients 65 years or older have an assessment of their preinjury frailty status as soon as possible, and not greater than 24 hours following admission.
- All patients 65 years or older have any pre-existing advance directives, health care proxies, and/ or physician orders for life-sustaining treatments (POLST) identified as soon as possible, and not greater than 24 hours following admission.
- 3. A family meeting to discuss goals of care is held as soon as possible and not greater than 72 hours after admission for all patients who screen positive, using the palliative care screening tool. Family includes the patient, when possible, and the people empowered and involved in the patient's medical decision-making.



D. Expansion of Standard Medical Center Performance Improvement

- All trauma deaths subjected to multidisciplinary trauma review are also assessed for the quality of end-of-life care. A distinct documentation template is helpful for the review process and to capture and trend medical center data. These data are useful to identify care gaps and opportunities for improvement in palliative care education and services. A sample review sheet is included and can be modified for use at individual medical centers. (Appendix 4.)
- 2. All trauma deaths following withdrawal of life support undergo formal peer review as part of the multidisciplinary trauma PI process, and cases are specifically evaluated for "failure to rescue." These include deaths that may not meet specific medical center policies. The rationale for this level of review is to ensure that deaths secondary to withdrawal of life support are not due to preventable complications that precipitated the withdrawal.

IMPLEMENTATION GUIDELINES

Key Messages

- Implementation of the ACS TQIP Palliative Care Best Practices Guidelines provides an infrastructure and framework for consistency and processes that are patient centered and focus on quality through the continuum of care.
- Successful implementation requires the process to be championed at the highest levels of the trauma program (for example, by the trauma medical director, trauma program manager, and hospital administration).
- Utilizing the trauma center's interdisciplinary resources is an excellent approach in the implementation of best practices guidelines.

The increasing number of severely injured or elderly patients who survive the initial resuscitation has created an imperative to better integrate palliative care into every trauma program. The introduction of these Best Practices Guidelines into the Trauma Operations Committee is a good starting point for implementation, and the support of trauma leadership is essential for success. To begin, form specific and focused work groups to review the current medical center guidelines and protocols and identify where the current practices fall short. These work groups need to define practices that need modification



and make recommendations for change. Anticipate potential barriers to guideline implementation. Selecting one or two gaps to target in the earliest phases of implementation is a way to achieve early success and gain support and momentum for greater changes in a trauma center's culture (Appendix 5). Tracking, analyzing, and presenting the outcomes to the work group and larger stakeholder audiences is invaluable.

Developing and disseminating an education plan for front-line providers may be an initial step. A multimodality approach such as using online computerbased learning modules, PowerPoint presentations, poster boards, and flyers for learning opportunities may be useful to increasing knowledge and awareness of what the new guidelines hope to achieve. Use the trauma performance improvement and patient safety (PIPS) process to consistently evaluate compliance and variations from the guidelines. Initiate multidisciplinary review of each trauma case in which the palliative care guidelines were initiated to define: (1) what went well, (2) what opportunities were identified, and (3) specific metrics to monitor compliance to guidelines that target patient outcomes, length of stay, and documentation standards. Trauma PI can be aided by identification and creation of custom PI events in the trauma registry to facilitate data extraction and summary reports to support the guideline initiatives.

The palliative care measures can be integrated into the trauma center dashboard for review by the Trauma Operations Committee (Appendix 6). This step provides data to define the level of guideline compliance and identifies measures that reflect increased efficiency or decreased cost. Formulate action plans to address noncompliance and opportunities to improve patient care.

Glossary of Terms Relevant to Palliative Care

Advance care planning	A <i>process</i> to identify and express values and goals for medical treatment
Advance directive	A legal document that appoints a surrogate decision- maker and describes desires for medical treatment
Comfort Measures Only (CMO) or Comfort Care	The approach to care is focused on comfort and the alleviation of physical, spiritual, and psychological suffering rather than prolonging life; it is not the same as DNR
Do not hospitalize (DNH)	A medical order declining hospitalization if the patient develops a change in health status that would typically warrant hospitalization; rather, patients receive comfort-focused care where they reside
Do-not-intubate order (DNI)	A medical order declining intubation for mechanical ventilation if the patient develops pulmonary failure
Do-not-resuscitate order (DNR)	Medical order declining attempts at CPR if the patient's heart stops
Durable power of attorney for health care (or health care proxy form)	Legal document that names an individual to make medical decisions if the patient loses capacity
Health care proxy	The individual named in a patient's durable power of attorney for health care to serve as a person's "agent" to make medical decisions if that person becomes incapable of making his or her own medical decisions
Living will	A document that outlines a person's wishes for starting, withholding, or stopping medical and life- sustaining treatments in the event that the patient loses capacity to make his or her own medical decisions
Palliative care	Care with the goal of maximizing quality of life for patients facing serious illness that is patient- and family-centered, utilizing a multidisciplinary approach
Primary palliative care	Refers to palliative care that is within the scope of trauma care providers and can be provided without additional consultation
Specialist palliative care	Care provided by providers with focused clinical expertise and specialty training in palliative care
Physician Order for Life- Sustaining Treatment (POLST, also known as MOLST)	A medical order, transferable across sites of care, that converts a person's desires for life-sustaining treatments into a medical order; POLST forms are intended for patients with serious illnesses or injuries, or residing in long-term care settings
Shared decision-making	An approach in which clinicians and patients share available evidence when faced with decision-making and in which patients are supported to consider options to achieve informed preferences



Acronyms

- ACS—American College of Surgeons
- CMO—comfort measures only
- CPAP—continuous positive airway pressure
- CPR—cardiopulmonary resuscitation
- CPT—current procedural terminology
- DNH-do not hospitalize
- DNI-do not intubate
- DNR-do not resuscitate
- ED—emergency department
- EHR—electronic health record
- GCS—Glasgow Coma Scale or Glasgow Coma Score
- GOCC—goals of care conversation
- GSW—gunshot wound
- IABP-intra-aortic balloon pump
- ICU—intensive care unit
- LST—life-sustaining treatment
- MOLST—Medical Order for Life-Sustaining Treatment
- NP—nurse practitioner
- NQF—National Quality Forum
- NQMC—National Quality Measures Clearinghouse
- PA—physician assistant
- PEEP—positive end-expiratory pressure
- PI—performance improvement
- PIPS—performance improvement and patient safety
- POLST—Physician Order for Life-Sustaining Treatment
- PTSD—post-traumatic stress disorder
- SCDs—sequential compression devices
- SCI—spinal cord injury
- TBI-traumatic brain injury
- TLT—time-limited trials
- VAD—ventricular assist device



Adult Comfort Care Order Set Sample

Nursing

- DNR orders written and signed
- Document the rationale for withdrawing life support and discussion with family
- Limit the frequency of vital signs
- Liberalize visitation per unit policy
- Avoid the use of physical restraints
- Discontinue: enteral and parenteral feeding, IV fluids and drips, medications not having palliative effects, finger sticks, and diagnostic labs and tests
- Remove devices not necessary for comfort: blood pressure cuffs, sequential compression devices (SCDs), and monitors unless needed or family preference; silence monitor alarms
- Discontinue all resuscitation devices: defibrillator, intra-aortic balloon pump (IABP), ventricular-assist devices (VADs), and cardioverter
- Remove braces, orthotics, collars, and traction for patient comfort at discretion of managing team
- Check orogastric/nasogastic tube output, and if less than 500ml, discontinue

Sedation and Analgesia

- Treat both anxiety and pain
- Begin (or continue) analgesia/anxiolytic medications at current rate (if patient is comfortable and calm) and increase as needed by 10% every 15 minutes
- Analgesia/dyspnea
 - Morphine injection: 4mg IV every 15 minutes push as needed for pain or respiratory distress; give first dose prior to extubation if applicable OR
 - Fentanyl injection: 100 mcg IV push every 15 minutes as needed for pain or respiratory distress



- For additional analgesia: morphine infusion dosing advice
 - If 4 mg or less of morphine given over 2 hours, start infusion at 2mg/hour
 - If 5–16 mg of morphine given over 2 hours, start infusion at 4–6 mg/hour
 - If more than 16mg of morphine given over 2 hours, start infusion at 8 mg/hour
 - Titrate every 15 minutes to patient comfort
- If morphine is contraindicated **OR** if already receiving fentanyl:
 - Fentanyl infusion (dose selection dependent on current infusion rate) mcg/hr IV and titrate every 15 minutes to patient comfort
- Anxiolysis/dyspnea
 - Lorazepam injection: 1 mg IV every 1 hour as needed for anxiety or respiratory distress OR
 - Midazolam injection: 4 mg IV every 30 minutes as needed for anxiety or respiratory distress
- For additional anxiolysis:
 - Midazolam infusion: 2 mg/hour IV and titrate to patient comfort
- Distressful delirium or hallucinations:
 - Haloperidol injection: 2.5 mg IV every 4 hours as needed

Excessive Orotracheal Secretions

• Glycopyrrolate injection: 0.2mg IV every 6 hours; give first dose prior to extubation if applicable

Nausea and Vomiting

• Ondansetron injection: 4mg IV every 4 hours as needed

Mechanical Ventilation

- Wean oxygen to room air
- Ventilator weaning parameter: wean PEEP, CPAP, pressure support to minimal settings over 5 to 20 minutes
- Disable apnea, heater, and other ventilator alarms
- Extubate when the patient is comfortable on minimal settings **OR**
- Use a T-piece humidified room air for tracheostomy



Palliative Sedation

• Measure of last resort used at the end of life to relieve severe and refractory symptoms

Consults (if family wishes)

- Chaplain/pastoral care
- Social work
- Palliative care service/specialist

Used with permission from Mohana Karlekar, MD, Medical Director, Palliative Care Services, Vanderbilt University Medical Center



Communication Models for Breaking Bad News

Examples of Models of Breaking Bad New	vs and Communication
Death Disclosure and Delivery of Difficult News in Trauma ¹	A: Anticipate B: Be aware of self and surroundings C: Conversation / Concerns D: Do not speak, LISTEN E: Empathy / Explain Debrief and Document
"Ask-Tell-Ask" Model for Communication ²	ASK the individual what he/she knows TELL "bad news" in straightforward language ASK if the information was understood
SPIKES Model for Delivery of "Bad News" ³	 SETTING UP the interview Assessing the patient's PERCEPTION Obtaining the patient's INVITATION Giving KNOWLEDGE and information to the patient Addressing the patient's EMOTIONS with EMPATHIC responses STRATEGY and SUMMARY
ABCDE's of Delivering Bad News ^₄	 ADVANCE preparation BUILD a therapeutic environment/relationship COMMUNICATE well DEAL with patient and family reactions ENCOURAGE and validate emotions
Surgical Palliative Care Resident's Guide⁵	 Speak slowly, deliberately, and clearly Give fair warning Present bad news in a succinct manner Sit quietly and listen to the patient Anticipate common reactions to bad news Listen carefully and actively; pick up clues; recognize, acknowledge, and validate the patient's and family's emotions, reactions, and thoughts Give an early opportunity for questions and comments Present information at the patient's and family's pace Be flexible and responsive Be mindful Assess for thoughts of self-harm Agree on a follow-up plan



References

- 1. Back A, Arnold R, Baile W, Tulsky J, Fryer-Edwards K. Fundamental communication Skills. *Medical Oncology Communication Skills Training Learning Modules*. 2002;3-6. Available at Available at: http://vitaltalk.org/sites/default/files/Oncotalk_Fundamental_Skills.pdf. Accessed April 30, 2017.
- 2. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES A six-step protocol for delivering bad news: Application to the patient with cancer. *Oncologist*. 2000;5:302-311.
- 3. Dunn GP, Martensen R, Weissman D. Surgical Palliative Care: A Resident's Guide. Chicago, IL: American College of Surgeons; 2009. Available at https://www.facs.org/~/media/files/education/palliativecare/ surgicalpalliativecareresidents.ashx. Accessed April 21, 2017.
- Lamba S, Bryczowski LT, Weissman DE, Mosenthal AC. Fast Facts and Concepts #305. Death disclosure and delivery of difficult news in trauma. October 2015. Available at: https://www.mypcnow.org. Accessed April 30, 2017.
- 5. Rabow MW, McPhee SJ. Beyond breaking bad news: how to help patients who suffer. *Western Journal of Medicine*. 1999;171:260-263.



Frequently Asked Questions Regarding Physician Orders for Life-Sustaining Treatment (POLST)

What is POLST?	Physician Orders for Life-Sustaining Treatment. Also called MOLST (medical). POLST forms need to be brightly colored and clearly documented in the medical record. Patients also receive a copy of a POLST form once it is completed and signed.
What is the purpose of POLST?	POLST forms translate patients' desires for life- sustaining treatment (LST) into medical orders that are transferrable between sites of care. POLST forms allow patients to receive the type of care they want no matter where treatment is received.
Is a POLST form just like a DNR order?	No, POLST is a medical order <i>transferable</i> across sites. POLST forms are highly individualized and only one-third of patients who fill out a POLST chose the lowest possible level of treatment.
What types of treatments are included on a POLST?	POLST is intended to determine the desired scope and types of treatment for patients with serious illness (i.e., comfort, limited interventions or full treatment, hospitalization, CPR, intubation, artificial nutrition and hydration, hemodialysis and blood transfusions).
Who is eligible for POLST?	POLST is <i>most appropriate</i> for seriously ill persons with life-limiting or terminal illnesses, or advanced frailty characterized by significant weakness and extreme difficulty with personal activities.
Who can complete a POLST?	POLST forms are completed with the clinician and either the patient and/or their surrogate decision maker (if the patient lacks capacity). The medical order is immediately active upon signing. As a medical order, POLST can only be signed by a physician (or physician assistant (PA) or nurse practitioner (NP) in some states); however, the POLST conversation
Does the POLST have to be completed by the patient's primary care physician?	is frequently initiated by a non-physician facilitator. Any physician, NP or PA caring for a patient can initiate a POLST.
	Where available, complete POLST forms prior to hospital discharge for seriously ill trauma patients with a life expectancy of less than one year.
ls POLST available in my state?	POLST forms are available in more than 20 states. Implementation varies in each state, so it is important to understand the specifics of your states' POLST program. Go to <i>POLST.org</i> for more information
Do POLST forms increase the delivery of goal concordant care?	Study findings demonstrate that POLST orders to withhold treatment are usually followed and that orders for comfort measures are associated with lower rates of hospitalization and death in hospital.



Sample Peer Review Sheet for End-of-Life and Palliative Care in Trauma Patients

Peer Review of End-of-Life and Palliative Care in Trauma Patients								
Place of death:	SICU	Hospital flo	or OR	ER ER				
If death was in <	< 6 hours wa	as palliative care i	nvolved?	YES	NO			
Did palliative care write a note on chart?YESNO								
DNR order placed on chart?YESNO								
Time from DNR	to death:							
Documentation	of DNR dis	cussion		YES	NO			
Was patient on	life support	prior to death?		YES	NO			
Which?	(circle)	Ventilator P	ressors	Nutrition	Dialysis			
Withdrawal of li	fe support?			YES	NO			
Which	support wit	hdrawn? (circle)	Ventilato	r Pressors	Nutrition	Dialysis		

Palliative care involves decision-making, communication, pain and symptom management, and bereavement support. Please assess these parameters as follows:

Communication with the family/patient regarding prognosis and end of life: Was there a family meeting to clarify goals of treatment? ____YES ____NO Were clear, realistic, and appropriate goals of care documented in the chart? ____YES ____NO

- 1. Was there evidence in the chart that pain and other symptom and comfort measures were provided at the end of life? _____YES _____NO
- 2. Were all unnecessary procedures and lab work discontinued? _____YES _____NO
- 3. Was the standardized palliative care order form used? _____YES _____NO
- 4. Was the palliative care team involved? ____YES ____NO Did palliative care team document in the chart? ____YES ____NO



- 5. Should palliative care have been introduced during this patient's course?
 - ____Yes, hours before death
 - ____Yes, days before death
 - ____Yes, weeks before death
 - _____No, palliative care should not have been offered
- 6. If palliative care was instituted, was there a delay in initiation? _____YES _____NO
- 7. If yes, delay was in _____hours _____days _____weeks

Palliative Care Practices Gap Analysis Assessment Tool

I	Palliative Care in the Emergency Department (ED)	Met	Partially Met	Unmet	Status	Comments
	Screen/identify early at-risk ED patients					
	Communicate difficult news after sudden traumatic death					
	Early Goals of Care Conversations					
	Obtain Advance Directives and MOLST/POLST forms					
	Family presence in resuscitation (optional)					
П	Trauma In-Patients	Met	Partially Met	Unmet	Status	Comments
	Assess all seriously ill patients for palliative care needs					
	Palliative care is delivered in conjunction with curative, life-prolonging or disease-modifying trauma care					
	Palliative care is delivered by an interdisciplinary team					
	Pain and symptom management, communication, and prognostication are provided					
	Patients and families receive education about their condition, its impact on prognosis, and health care trajectory					
	A predictive or prognostic tool is utilized for estimating survival time and tracking palliative care needs					
	Identification of the surrogate or proxy decision maker is documented on patient's medical record within 24 hours of admission					
	The advance care plan is discussed and developed with patient/family within 72 hours					
	Family meetings are utilized early to discuss outcomes, expectations, and goals of care					
	Psychosocial/emotional support is assessed and a plan is created					
	Time-limited trials (TLT) are utilized when faced with difficult decisions to initiate or continue life-sustaining interventions					
	TLTs are designed collaboratively with interdisciplinary input					



					1	1
	TLTs include objective markers of clinical improvement, have a time frame for reassessment, and define potential actions at the end of trial					
	Patients with life-expectancy of less than 1 year have a POLST completed prior to discharge					
ш	Operating Room	Met	Partially Met	Unmet	Status	Comments
	Decisions about reversing perioperative code status is made on individual basis					
IV	End-of-Life Care	Met	Partially Met	Unmet	Status	Comments
	Withdrawal of life support procedure is defined					
	Create peaceful surroundings for patient and family					
	Gather and prepare the family					
	Discontinue all medications not related to comfort					
	Define the ventilator withdrawal process					
	Provide pain and symptom management					
	Provide psychosocial care/grief support to the family, respecting their cultural and spiritual needs and personal preferences					
	Follow organ donation/OPO referral processes					
	Facilitate/optimize visitation					
	Adhere to the medical center's formal bereavement protocol					
	Ensure that communication with children is developmentally appropriate					
	Grief and bereavement services are provided for staff					
VI	Transitions in Care	Met	Partially Met	Unmet	Status	Comments
	Develop interdisciplinary teams to interact with the patient and family					
	Establish realistic expectations regarding patient outcomes					
	Engage in goals of care discussion and formulate a transition care plan (including prognosis,					
	goals of care and patient/family needs)					



v	Special Populations	Met	Partially Met	Unmet	Status	Comments
	GERIATRICS					
	Screen all geriatric patients for frailty within 24 hours of admission					
	Schedule a discussion with the geriatric patient and family within 72 hours to discuss injury severity, co-morbid conditions, and frailty					
	PEDIATRICS					
	Age-appropriate pain assessment is used for neonates (i.e. CRIES)					
	Age-appropriate pain assessment is used for infants and toddlers (i.e. FLACC)					
	Age-appropriate pain assessment is used in school-aged children (i.e. Faces Pain Scale)					
	SPINAL CORD INJURY					
	Obtain early consults from Physical Medicine and Rehabilitation as well as Behavioral Health					
	Screen for mental health conditions (e.g. depression, PTSD)					
	ТВІ					
	Palliative care assessment is performed in all moderate and severe adult TBI patients (GCS \leq 12 (within 24 hours) and pediatric TBI patients with GCS < 8					
	The brain death policy is derived from accepted national standards					
VI	Breaking Bad News	Met	Partially Met	Unmet	Status	Comments
	Formal training is available for delivering bad news					
	Protocol and procedure is defined					
	A crisis intervention team is available for patients/families					
	A crisis intervention team is available for staff					
	Stress management training is available for staff					
	Assess and monitor staff communication skills					
VII	Interdisciplinary Team	Met	Partially Met	Unmet	Status	Comments
	Interdisciplinary service model is used for the palliative care team					
	Physical, emotional, spiritual care is addressed					
	Shared decision making occurs between the patient/family and providers					



VIII	Documentation Standards	Met	Partially Met	Unmet	Status	Comments
	A formal standard for documentation exists for primary palliative care practice					
	Clear documentation of goals of care					
	Advance directives/POLST/MOLST are available for providers					
	Health care proxy information is on the patient chart					
	Billing documentation is defined					
IX	Performance Improvement	Met	Partially Met	Unmet	Status	Comments
	Policies/procedures to manage pain, anxiety, delirium and symptoms are present and easily accessible to health care providers					
	Policies to address early identification of advance directives, proxies, and POLST/MOLST orders are present					
	Trauma PI process is established to review all trauma deaths for quality of end-of-life care					
	Criteria Assessment	Met	Partially Met	Unmet	Status	Comments
	A policy regarding pre-existing DNR orders in patients requiring operative procedure is present					
	Training and continuing education on primary palliative care is offered to all health care providers					
	Support, including debriefing, is available to all health care providers					
	Family meeting is held within 48 hours of admission for all patients 65 and older					
	Palliative and end-of-life care is evaluated in all trauma deaths					

K

1.



Palliative Care Performance Improvement Process Gap Analysis Assessment Tool

System/Organizational Criteria for Review	In Place	Needs Revision	Not in Place	Status	Comments
Palliative care program is available for at-risk trauma patients					
Guidelines for communicating difficult news after sudden trauma death is documented, and staff are prepared to follow the protocol					
Guidelines for assessing the trauma patient's advance directives are documented, and staff demonstrate competency in completing this assessment					
Guidelines for identifying the patient's surrogate decision- maker or health care proxy are in place, and documentation demonstrates compliance to these guidelines					
Guidelines for family presence in trauma resuscitations and invasive procedures are documented					
Trauma center has a defined palliative care protocol which defines the screening process for at-risk patients, implementation guidelines, documentation standards, and resources available					
Trauma center has implemented a defined "prognostic tool" for assessing "at-risk" patients					
Trauma center has an interdisciplinary team identified for palliative care coordination					
Trauma center has documentation standards to reflect the discussion of advance directives with the patient/family					



System/Organizational Criteria for Review	In Place	Needs Revision	Not in Place	Status	Comments
Trauma center has defined guidelines for TLTs that are monitored through the Trauma PIPS process					
Trauma center has a defined order set for comfort care					
Trauma center has defined guidelines for withdrawal of care					
Trauma center has guidelines and resources to address the psychosocial care needs for the patient					
Individuals participating in oversight, coordination and bedside care from trauma resuscitation through hospital discharge have education and training on palliative care guidelines					
Process Criteria for Review	In Place	Needs Revision	Not in Place	Status	Comments
90% of trauma patients identified as "at-risk" have advance care planning implemented and documentation reflects the appropriate E/M code and CPT code					
85% of trauma patients 65 years and older have a frailty assessment completed within 24 hours of admission					
90% of trauma patients identified as "outcome risks" have an advance care plan documented within 24 hours of admission					

Ŀ



Process Criteria for Review	In Place	Needs Revision	Not in Place	Status	Comments
Tracking process to monitor the ICU and hospital length of stay from admissions to implementation of comfort care and from comfort care implementation to hospital discharge is evaluated, analyzed and reported through the trauma operations committee					
100% of trauma deaths with implemented comfort care and/or withdrawal of life sustaining measures are reviewed through the trauma PIPS process, secondary level of review at a minimum.					



Expert Panel

Gail T. Tominaga, MD (Co-Chair)

Chief, Trauma Section Scripps Memorial Hospital La Jolla, CA

Anne C. Mosenthal, MD, FACS (Co-Chair)

Benjamin F Rush, Jr. Chair of Surgery Professor and Chair, Department of Surgery Rutgers New Jersey Medical School, Newark, NJ

David H. Livingston, MD, FACS

Wesley J. Howe Professor of Surgery Chief of Trauma and Surgical Critical Care Rutgers-New Jersey Medical School, Newark, NJ

Karen J. Brasel, MD, MPH

Professor and Program Director, General Surgery Oregon Health and Sciences University, Portland, OR

Mark Cipolle, MD, PhD, FACS, FCCM

Professor of Surgery Thomas Jefferson University Director, Outcomes Research Surgical Service Line Christiana Care Health System, Wilmington, DE

Zara Cooper, MD, Msc Associate Surgeon Brigham and Women's Hospital, Boston, MA

Katie Wiggins-Dohlvik, MD

Resident Physician, General Surgery Baylor Scott and White Healthcare, Temple, TX

Chester Dreiman, MD, FACP

Medical Director Palliative Care St. Anthony Hospital, Lakewood, CO

Jessica L. George, PhD

Trauma Psychologist Manager, Rees-Jones Trauma Center Parkland Health and Hospital System, Dallas, TX

Mohana Karlekar, MD, FACP FAAHPM Assistant Professor of Medicine Medical Director Palliative Care Vanderbilt University Medical Center, Nashville, TN

Jorie Klein, BSN, RN

Director, Trauma Program, Rees-Jones Trauma Center Parkland Health and Hospital System, Dallas, TX

Sangeeta Lamba, MD, MS, HPEd

Associate Professor of Emergency Medicine Associate Dean of Education Rutgers New Jersey Medical School, Newark, NJ

Cathy A. Maxwell, PhD, RN

Assistant Professor Vanderbilt University School of Nursing, Nashville, TN

Richard S. Miller, MD, FACS

Professor of Surgery Chief, Division of Trauma and Surgical Critical Care Vanderbilt University Medical Center, Nashville, TN

Avery B. Nathens MD PhD FRCS(C)

Surgeon-in-Chief, Sunnybrook Health Sciences Centre Professor of Surgery, University of Toronto De Souza Chair in Trauma Research

Kamela K. Scott, PhD

Professor in Surgery University of Florida College of Medicine, Jacksonville, FL

David E. Weissman, MD

Professor Emeritus Medical College of Wisconsin, Milwaukee, WI

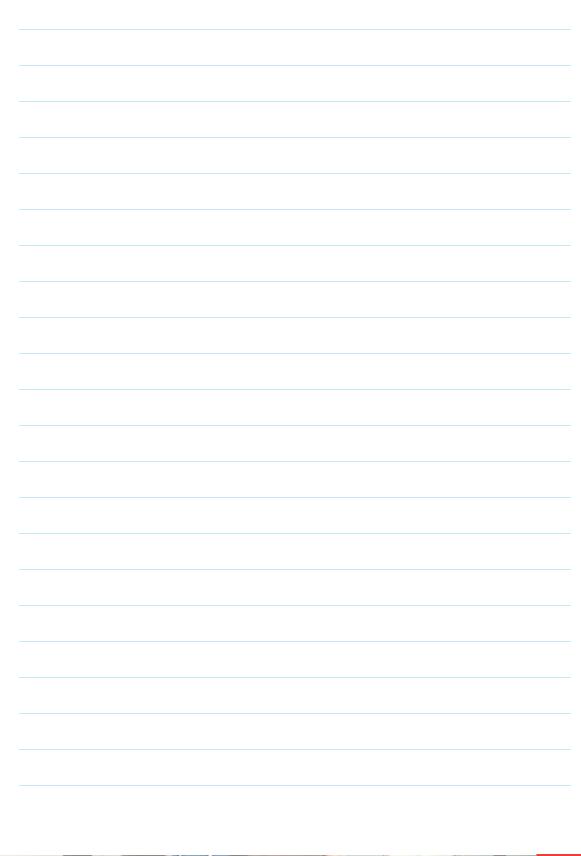
David Zonies, MD, MPH

Associate Professor of Surgery Director, Surgical Critical Care Oregon Health and Sciences University, Portland, OR















AMERICAN COLLEGE OF SURGEONS Inspiring Quality:

Highest Standards, Better Outcomes

100+years