



# Prioritizing Communication in the Provision of Palliative Care for the Trauma Patient

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## Abstract

**Purpose of Review** Communication skills in the ICU are an essential part of the care of trauma patients. The goal of this review is to summarize key aspects of our understanding of communication with injured patients in the ICU.

**Recent Findings** The need to communicate effectively and empathetically with patients and identify primary goals of care is an essential part of trauma care in the ICU. The optimal design to support complex communication in the ICU will be dependent on institutional experience and resources. The best/worst/most likely model provides a structural model for communication.

**Summary** We have an imperative to improve the communication for all patients, not just those at the end of their life. A structured approach is important as is involving family at all stages of care. Communication skills can and should be taught to trainees.

**Keywords** Palliative care · Goals of care · Comfort care · Communication

## Introduction

In 2005, the American College of Surgeons called upon surgeons to provide high-quality palliative care to ALL patients with serious illness, not just those approaching the end of their life [1••]. Comprehensive care of the acutely injured and critically ill patient is the defining skill set of the acute care surgeon and an essential part of that skill set is the ability to communicate clearly, effectively, and efficiently with the patient and their family. Communicating clearly as part of providing high-quality palliative care in the intensive care unit (ICU) is about guiding difficult decisions, defining goals of care, explaining the impact of acute surgical problems on future quality of life, and facilitating transitions to end of life care [2, 3]. It is critically important to understand that essential communication skills can be learned and taught [4, 5].

The goal of this review is to summarize key aspects of our understanding of communication with injured patients in the ICU. We will discuss communication through all phases of trauma care, review specific literature on guiding family meetings, and discuss strategies to teach these skills.

## Clinical and Research Need

The acuity of trauma patients admitted to ICUs in the USA is very high, with a diversity of pathologies [6]. Roughly one in five Americans will die in hospital after receiving ICU level care [7]. When approaching the acutely injured and critically ill trauma patient, it is important to keep in mind the general observation that the seriously ill often value quality of life over extending quantity of their life [8, 9]. While individual variation is wide, this point should guide initial approaches to communication with patients and their surrogates. There is a clear clinical need to improve our communication regarding goals and wishes; as even in patients with a stated desire to favor quality over quantity of life, preserving quality of life is not reliably honored [10]. Even in patients with established living wills or advanced directives, fulfillment of end of life wishes in the ICU remains inconsistent [11]. These data emphasize the imperative to improve the communication between patients, their families, and the care team through an earlier consensus on goals of care (GOC) [12•]. Attending to and

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following a patient's GOC, even if that includes comfort measures only, do not negatively impact mortality or length of stay [12, 13].

This clinical need is matched by an urgent research need. As our ability to care for patients through their initial phases of injury improves, the need to focus on the key communication issues unique to trauma patients in the ICU increases [14, 15, 16]. This was recently emphasized in 2020 by the critical care committee of the American Association for the Surgery of Trauma (AAST). Their statement on research priorities in adult surgical critical care highlighted addressing GOC in the acute care setting as *THE* top research priority [14]. There is only limited data specific to the trauma population available to review—with end of life/GOC articles comprising just 1.4% of the articles retrieved for the AAST statement of research priorities [14].

While frequently extrapolated, data generated on the optimal communication practices in elective surgical patients and non-surgical ICU patients may have incomplete generalizability to trauma. Much of the data available on the GOC discussions pertained to older patients or those patients with a pre-existing life-limiting illness. There is a wide span of injured patients and indeed the leading cause of death between 1 and 44 years old is injury [17]. In addition to a wide span of ages, trauma patients may be socially marginalized, homeless, have pre-existing mental health and substance abuse disorders, and be estranged from their family and surrogates. The wide diversity of ages and associated medical and social challenges faced by trauma patients are unique. This raises the importance of an organized, consistent, and transparent approach to communication and palliative care in the trauma ICU.

## Communication Priorities Through Phases of Trauma Care

Communication with injured patients can be organized by phases of care and is an ethical imperative that must not be forgotten in the hustle of acute medical interventions [12]. Perhaps most easily organized by the physical location of the patient (prehospital setting, resuscitation bay, ICU), communication challenges and priorities during these phases are distinct and build upon each other.

A defining feature of trauma care is the unexpected nature of injury and the near instantaneous transition between normal life and high-intensity medical interventions. This temporal uniqueness of trauma care poses a challenge when communicating with families and surrogates. While everyone in medicine hopes that patients have had meaningful conversations with their surrogate decision makers prior to injury, the reality is that few have [18]. We must help with the sudden news of a major injury while coaching them through a new and potentially uncomfortable role as a surrogate.

## Communication During Prehospital Trauma Care

The prehospital care of an acutely injured patient can be an extraordinarily challenging and time-pressured phase. As physiology is assessed and stabilized, in-depth de novo discussions are neither feasible nor appropriate. It is important, however, that any pre-established advanced directives are retrieved. This takes on critical importance when transporting patients from long-term care facilities, as trauma mortality in the frail elderly can be quite high. Prehospital personnel can and do uphold advanced directives and established end of life wishes while managing family emotions near death [19, 20]. The role of the hospital trauma service and state trauma system at this point is to support the medics as they seek to obtain and uphold established advanced directives.

Having access to an advanced directive on a patient's arrival, or shortly thereafter, opens a door to address GOC in the resuscitation area and potentially avoid high-intensity interventions that a patient has previously decided are not consistent with their goals [21]. It should come as no surprise that the presence of a pre-admission Do Not Resuscitate (DNR) order is associated with a high risk of adverse in hospital events and death after injury, likely reflecting the high-risk nature of injury in patients who are already nearing the end of their life [22]. It is far better to find out that a patient has an advanced directive limiting aggressive care *before* intubation, and prehospital personnel can help set the trauma team up for success.

Advanced care plans may be documented in a variety of different ways, including advanced directives, living wills, and durable power of attorney of health care documents. It is not feasible for prehospital personnel to read these documents in the acute setting, although it is helpful to bring them with the patient. What may be applicable in the acute prehospital, however, and can change acute management is a form similar to the Physician Orders of Life-Sustaining Treatment (POLST) form. Designed to be portable and applicable across the spectrum of care, including prehospital care, POLST forms are medical orders and valid in the 40 states where programs have been established [23]. They are designed to be easily and rapidly interpreted and honored, regardless of a patient's physical location [24].

The state of Oregon has a robust and easily searchable POLST registry, and the presence of an active POLST form at the time of 911 contact is associated with a higher chance of dying *not* at a hospital (i.e., dying in a way concordant with wishes) [24–27]. At our institution, trauma activation pages may include information on a pre-existing POLST form, and it is not uncommon for a physical POLST form to be given to the attending surgeon by the responding prehospital providers, while the team is completing the primary survey. Even in the absence of a physical POLST form, a social worker in the

emergency department immediately searches the statewide registry and, if a POLST exists, it is available to the care team within 10 min of patient's arrival. POLST programs fill an important gap where other advanced directive documents fail, namely limiting unwanted resuscitative measures in the urgent/emergent setting if patients are unable to speak for themselves [24, 28].

## Communication During Initial Trauma Resuscitation

Advanced Trauma Life Support (ATLS) principles are an essential part of trauma care, and when a patient arrives at a trauma hospital, efforts should be focused on efficiently completing the primary and secondary survey. As much as possible, subject to available resources, communication with the patient, family, and surrogate decision makers should proceed in parallel with the trauma resuscitation. This is easier to support with the increasingly robust data on family presence during a trauma resuscitation. Having families observe trauma evaluations can result in reduced family anxiety and stress in the short term [29]. Importantly, there were no long-term psychological effects from being at trauma resuscitations, and high-quality trauma care was able to be provided with families present; indeed, all family members present for a trauma resuscitation in one study reported they would choose to be present again [30, 31]. Having families at the bedside for trauma resuscitations can actually build trust in the health care team as well as fill information needs [32]. These are concordant data with the findings on family presence during resuscitation from cardiac arrest and in pediatric trauma [33, 34]. Protocols to allow families to be present during trauma resuscitation do require an institutional commitment as well as support from the physician and nursing staff. A designated person, most frequently a social worker, should be present to provide context, guidance, and support.

The trauma resuscitation is also a moment to review POLST forms and assure that the care plan is concordant with pre-existing wishes. Geriatric trauma patients with a POLST specifying limited intervention that was available on admission spent fewer ICU days with no change in in-hospital mortality, compared to age-matched controls without limitations on care [35]. Presumably this comes from limiting/focusing ICU utilization and care based on a patient's pre-injury goals of care and reflects the sizeable mortality of patients admitted to the trauma system with pre-established limitations on medical interventions. In the absence of a POLST, a well informed and empowered surrogate or otherwise well-established pre-injury wishes, trauma bay communication with the family is often focused "just" on delivering bad news about the nature of the injury and further planning is left to the ICU team.

## Communication in the Trauma/Surgical Intensive Care Unit

The paucity of data on the provision of high-quality palliative care in the ICU is even more significant when the injured patient is considered [14, 36]. Three key points warrant close attention: clarifying GOC, providing goal concordant care and transitioning goals to comfort measures only. Given that the vast majority of severely injured trauma patients in the ICU have limited abilities to function as their own decision makers, this discussion will primarily focus on the interactions with family and surrogate decision makers as this is the group most in need of high-quality communication [6, 37]. The principles outlined below, however, would apply if a patient was competent to and able to make their own decisions.

It is important to recognize that efforts to prioritize communication in the ICU are difficult and multi-faceted with potentially disparate effects on patients and their families. As an example, among critically ill patients and their surrogates, a family-support intervention delivered by the ICU team did not significantly affect the surrogates' burden of psychological symptoms, but their ratings of the quality of communication were higher and the length of stay in the ICU was shorter with the intervention than with usual care [38]. In a similar study, the use of palliative care-led informational and emotional support meetings compared with usual care did not reduce anxiety or depression symptoms and may have increased posttraumatic stress disorder symptoms [39]. As we seek to advocate for the patient and aim for providing goal concordant care, it is essential to realize that the families and surrogates are under tremendous stress and a consistent, organized, and empathetic approach is likely the optimal approach to decision-making.

One of the first questions that must be addressed as we think about communication in the ICU setting is who will be primarily responsible for family facing communication, clarifying GOC, guiding goal concordant care, and transitioning goals as warranted. This can be thought of both at the team level (trauma surgery, neurosurgery, orthopedics, etc.) and the individual level (attending, fellow, resident, advanced practice provider, etc.). The individual tasked as primary communication point for the family should be experienced enough to provide compassionate, meaningful, and nuanced updates. It is, furthermore, our belief that the primary trauma ICU team should be in charge of overall communication with the family as they have the perspective to integrate multiple organ system problems and the recommendations of the whole care team.

There are essentially three structural options: primary palliative care by the ICU team, integrated subspecialty palliative care into the ICU setting, and consult only subspecialty palliative care. There are strengths and weaknesses to each of these designs, and it is likely that the optimal design for any given

ICU will be dependent upon institutional level resources and culture. With that in mind, we attempt to outline potential benefits and challenges associated with each model.

Primary palliative care (PPC) is defined as palliative care provided by the primary treating service. This approach emphasizes the co-provision of palliative intensive care and may best integrate palliative communication principles into the ICU [2]. Increasingly, this is being viewed as part of the routine job description of an acute care surgeon [3]. Primary palliative care has been shown to promote stronger clinician and patient relationships and reduce the fragmentation of care and can be integrated with other critical care interventions and therapy [40–42]. The details of how PPC is integrated into routine ICU care remain an area of active research, and defining therapeutic goals in a nuanced and sensitive way is essential [40, 41]. The primary benefit to the PPC model is that, at least theoretically, all patients have their palliative needs, including communication, addressed on a daily basis. The primary limitation to the PPC model is that at times of high ICU acuity or with an intensive care team with less experience in complex communication, family communication may suffer. A particular challenge may be encountered when interacting with non-critical care surgical colleagues with different understandings of the patient's goals and the attendant conflict [43, 44]. This highlights the need for additional subspecialty input which can be accomplished in one of two ways.

The first model for providing subspecialty palliative care input in the ICU is integrated subspecialty palliative care in the ICU [45]. This is most commonly framed as a subspecialty trained palliative care provider who routinely sees all patients within the ICU, either as part of the rounding team or as a scheduled check in—ameliorating the lack of physician contact noted by family members of patients who died in hospital [46, 47]. This emphasis on the routine integration of trained palliative care specialists helps to overcome a major barrier to involving palliative care to aid with communication, the initial call [48]. The routine integration of trained palliative care subspecialists in the ICU has been associated with improved quality of life, higher rates of formal advance directives, and greater utilization of hospice service as well as less frequent use of certain non-beneficial life-prolonging treatments for critically ill patients at the end of life [49]. The challenges of this integrated subspecialty model are limited resources and the concurrent need for subspecialty palliative care across the inpatient and outpatient settings. It is likely that as the PPC skills of the rounding intensivists increase, the need for integrated subspecialty palliative care will decrease.

The second model for integrating subspecialty palliative care is consultative care. This system works the same way as any other consultant service in the ICU. The assumption in this model is that there is a baseline degree of comfort from the ICU team with defining GOC, providing goal concordant care and transitioning goals to comfort only. Additionally, this

model presumes a low barrier for the primary team to engage the palliative care consultant when appropriate, providing palliative and surgical care as an integrated whole [2]. The primary failing of this structure comes if those presumptions are not true and the communication needs of the family and patient are not attended to. When this structure of care is studied, patients with a palliative consult are older, more seriously ill, and more likely to be at the end of life [50]. Palliative care consultations tend to be within the last 24 h of life and are primarily symptom management at the end of life, suggesting an earlier opportunity to involve palliative care [51]. The risk of late consultation can be mitigated through structured triggers for palliative consultation.

Demonstrated to increase palliative care involvement in critically ill non-surgical ICU patients, triggers are established in only a minority of surgical ICUs, despite a sizeable identified need for palliative and communication support [37, 52, 53]. As the poor to moderate performance of the “surprise” question in non-cancer diseases demonstrated, established screening systems designed in non-trauma patients have only limited ability to perform well in trauma patients [54]. Within the trauma population, triggers for consultation are poorly defined, beyond injury severity score and profound neurologic injury in older patients [2, 11]. Within the general geriatric trauma population, the Geriatric Trauma Outcomes Score (GTOS) is a validated predictive tool that can provide a reliable estimate of in-hospital mortality risk using data available early in a patient's hospital course, allowing palliative consultations for the highest risk patients [55–57]. Predicting patients at risk for death in the year after injury, however, has proven much more challenging despite a clear need to identify patients who survive their hospital stay only to die in the coming year [55–59]. It may be that a sustained focus on changing the culture of an ICU unit towards one accepting and supportive of palliative care involvement is a key first step in routinely involving the consultative palliative care service [2].

The optimal structure to prioritize communication in a given ICU is likely dynamic and driven by local expertise and should be tailored to the individual institution's resources. The driving variable here is the quality of intensivist provided PPC as well as the culture of the institution and ICU. At an institution where the attending physicians and the medical infrastructure are supportive of early approaches to GOC discussions and supportive of a proactive approach to palliative principles, then consulting only subspecialty palliative care can be reserved for only the most difficult or complex cases. In the setting where the attending physicians or the hospital or patient cultures are less open to an early focus on understanding GOC and considering less than maximally interventionist care plans, it may be necessary to integrate a palliative care subspecialist into the ICU team. This will lower the barrier to integration of palliative care principles, help to prioritize

communication, and, over time, will improve the ability of the treating team to provide high-quality primary palliative care in the ICU.

## General Communication Skills in the ICU

In the ICU setting, communication often occurs with surrogate decision makers—particularly in the most complex patients at highest risk for a poor outcome. When organizing family meetings, we seek to use the broadest definition of “family” as is reasonable—essentially any person of importance in the patient’s life who might attend a conference related to their care, as not all family is genetically related. As a general rule, most surrogates are not well prepared for their new, emotionally intense role and can suffer long-term psychological consequences as a result [60, 61]. While we hope that all patients have had in-depth discussions about their wishes prior to injury, this is unfortunately not the case. As a result, when communicating with a surrogate in a complex and difficult clinical situation, we have a dual role of not only communicating the medical situation to the surrogates but also preparing them for the role of decision maker. Involvement of surrogate decision makers and high-quality communication with them is essential, as physicians tend to systematically underestimate quality of life in favor of life-sustaining treatments, and this can often be mitigated by input from surrogate decision makers [62, 63]. A structured communication tool or education program for family members may be helpful in supporting surrogates as they take on their new role.

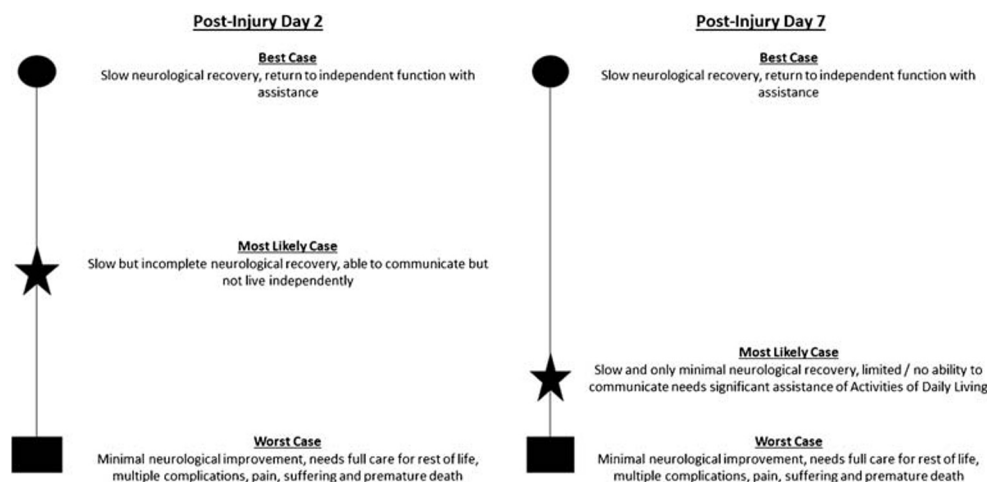
There are several predictable errors that are commonly made while communicating with critically ill patients and their families that can be mitigated by training and a standardized approach. The most common pitfalls are not budgeting appropriate time, entering into communication with family members without adequate information about the prognosis, and harboring a fear of inaction in face of a complex and high-risk scenario [64]. This last pitfall is all too common among surgeons, who tend to have a “fix-it” mentality—focusing on the disease as an isolated anatomic or physiologic abnormality that can be corrected. This mental model fails in the complex critically ill and, when used to frame a high-risk communication, may lead to overly permissive decision-making that favors intervention even when the chance of the desired outcome is low [65]. An additional error, more common in junior trainees, is terminating the discussion after a directive to “do everything.” Such a general statement is difficult to turn into actionable medical decisions. It is *very* important for the clinician, if asked to “do everything,” to not prematurely truncate discussions but rather respond with empathy and explore what is meant, therefore understanding and capturing values that can be used to help guide treatment [66].

A specific structured tool to help communication in the ICU that is gathering a solid evidence base is the “best case/worst case” (BC/WC) model of communication. This model can help facilitate difficult decisions in high-risk scenarios with support from surgeons, patients, and family members [67]. The BC/WC tool presents a range of possible outcomes ranging from the best case to the worst case, starting from where the patient is now, and using the spectrum to discuss what is possible. When using the tool to facilitate communication, a “most likely” case is marked and then used to make a recommendation that is informed by the patient’s values and GOC (Fig. 1). In an adaptive tool that can be updated with changed in clinical condition, it has been shown to be effective with older patients considering invasive and acute medical treatments as well as high-stakes surgical decisions [68, 69].

## Communicating with Families Effectively in the ICU

There are several routine communication scenarios that are frequently used in the ICU and can be an opportunity, if correctly done, to build trust, support decision-making, and improve the psychological well-being of family members [12, 70, 71]. Communication with families must take the potential for long-term disability, and not just the potential for death, into account when discussing options. The astute surgeon needs to account for media portrayals of trauma care that de-emphasize the impact and frequency of long-term physical and neurologic disability [72]. .

- 1) The first family meeting is a time to take a breath from the initial ICU admission and acute stabilizing interventions. This is an opportunity for the treating ICU team to do a comprehensive patient assessment, including not only their anatomic and physiologic status but also their goals, wishes, and values while providing a medical update to the family. This should occur within 72 h of admission in order to optimize the quality of the communication, reduce ICU length of stay, and understand patient’s pre-injury wishes, before proceeding with care that they would not want [12, 70, 73]. Early updates to the family and surrogate decision makers have been associated with earlier transition to comfort measured only as well as reduced length of stay, reduced ventilator days, and reduced chance of dying during a medical code (i.e., a DNR order placed for medical futility) [74]. A proactive discussion regarding the patient’s wishes early in the course of an ICU admission is vastly preferable to an urgent discussion in the middle of the night following an acute deterioration [75, 76]. While there are many ways to structure this first meeting, one of the most effective that we have



**Fig. 1** A graphical distribution of the use of the best case/worst case communication tool. Within a theoretical case of a young man with a severe traumatic brain injury. The tool is used to integrate all available clinical information and estimate the range of future outcomes. The circle represents the absolute best case outcome, while the square represents the

absolute worst case outcome and the star represents the clinicians' best judgment about what the future may bring. There is a clinical deterioration between day 2 and day 7, as manifested by the "most likely" scenario moving closer to the "worst case." This is an original figure using the structure of Taylor et al. [69]

found is as described by the VITALtalk group using the GUIDE mnemonic [77••].

**Get ready:** pre-meet, get the right people, find quiet place, and sit down

**Understand:** what the patient knows

**Inform:** starting with a headline and STOP for questions and emotions

**Demonstrate:** empathy and respond to emotion

**Equip:** the family to understand the next step in care (an opportunity to use the BC/WC tool)

It is important to note that within this framework, there is no space reserved for decision-making. This is intentional as the first family meeting is framed as a meeting to deliver bad news and medical updates, gather information, and build relationships. The emotional toll of this meeting can overwhelm surrogates, limiting their ability to make complex decisions.

- 2) The next common meeting type encountered in the surgical ICU is the general family meeting, an update or planned check in following the initial meeting. The structure of this meeting can vary somewhat based upon the relationship with family and the urgency and scope of issues to be addressed. However, there are several essential components to the general family meeting. The first is a "pre-meeting"; this should include clinicians only and is an opportunity for multiple consulting teams to share their opinions and come to consensus regarding the medical situation, establish a shared understanding of prognosis, and agree on therapeutic options. It is not effective for clinician disagreements to be sorted out in front of the patient or the family, as discord in the care team often

leads to family and patient distress and mistrust [78]. As referenced earlier, since we are often coaching surrogate decision makers through a new and uncomfortable role, specifically saying things such as "what would they say" or "imagine that they are sitting here with us" to emphasize that we are not asking the surrogate for a decision but rather are seeking to hear the patient's voice. Planning next steps together is an essential part of these meetings. The degree and nature of this plan, however, will depend significantly on the scope of the discussion [77••].

- 3) Clinician anxiety can be understandably high when heading into a meeting to talk about the third specific scenario, transitioning to end of life and comfort measures only. Discussions regarding limiting life-sustaining interventions tend to be triggered by clinicians after an acute clinical deterioration and by family after a longer period where the patient fails to improve [79]. In a study of New York State level 1 trauma centers, advancing age, traumatic brain injury with an advanced directive, pre-existing dementia, and pre-existing bleeding disorders are all associated with transition to comfort focused measures after injury [80]. When discussing end of life issues, it is important to avoid an overly detailed review of clinical data, as this may obscure the overall life-limiting nature of the disease/injury, which is often multifactorial [81]. Similarly, it is essential to integrate patient preferences into medical recommendations, specifically patient preferences regarding quality of life, pain, chances of meaningful neurologic recovery, and anticipated degree of functional recovery [82]. The BC/WC tool can be very helpful in this setting, particularly when the "best case" is profound disability or impairment. Interestingly,

while family satisfaction falls with increasing time in the ICU, it actually rises when the process of transitioning to comfort only care takes greater than 1 day—suggesting that additional time to adjust to the realities and see the ongoing medical care their loved one is receiving is helpful [83]. Family satisfaction, similarly, is actually higher when their loved one dies than when they survived their ICU stay—a difference attributed to the improved patient and family-centered care that dying patients receive [84].

As with the first family meeting, a structured approach to a “transition of goals” talk is essential, and we have found much success with the REMAP mnemonic, again supported by VITALtalk [77••].

**R**eframe: It is important to warn the family that a change in status update is coming and that the clinical scenario duration may have changed from previous updates [85•].

**E**xpect emotion and empathize: The NURSE (Name, Understand, Respect, Support, Explore) mnemonic of emotional response can be helpful, as responding to emotions from the family improves information retention [77, 86, 87].

**M**ap the future: Use an understanding of patient’s goals to frame medical recommendations [81]. The BC/WC model can be particularly helpful in this setting as alternative approaches (recovery focused vs. comfort focused care) are considered [69]. It is essential to have bidirectional flow of information when mapping the future as the care team brings medical information and options while the family brings patient values. It is not uncommon to have to make decisions in light of incomplete prognostic information [88–91].

**A**lign with values: Clinicians must align themselves with the family’s and patient’s values. Using “I wish” statements (e.g., “I wish that were different too” or “I wish that was possible”) to reflect family requests for clinically impossible options allows clinicians to maintain a therapeutic alliance while not offering false hope. These are difficult decisions for patients and their surrogates and conflict with the care team benefits nobody.

**P**lan treatments to match values: A clear statement of the plan moving forward is important, as well as a statement of hope. Hope is an essential part of palliative care and even if we cannot hope for survival or recovery, we can still hope for time with family, an opportunity to say goodbye and an end to suffering.

When considering the actual transition to comfort only care, specific clinical recommendations from the American College of Critical Care Medicine are pertinent and informative [92]. We STRONGLY avoid using the words “withdrawal of care” as we never stop caring for patients, and we just shift our goal away from survival and recovery and towards

comfort and acceptance of impending death. Using “withdrawal of life-sustaining treatments” or “transition to comfort only goals” may be more acceptable.

A final tip is to discuss cardiopulmonary resuscitation and CODE STATUS last. Once you have aligned goals and planned transitions of goals with the family, not doing CPR is a foregone conclusion. If, however, you open the meeting with the discussion about chest compressions before setting the ground work, there is a strong likelihood that the entire meeting will derail on this point. It should hopefully go without saying that, as patients transition to comfort measures only, it becomes increasingly important to care for the family [93]. Building and supporting family-clinician relationships and continuing to communicate well in the final hours of a patient’s life help the family prepare for their upcoming death [94].

The limited amount of research as to communication patterns and skills in the ICU setting has focused, nearly exclusively, on formal “family meetings.” There is, however, a significant amount of information delivery and care planning that occurs outside the structure of formal meetings. This usually happens at the bedside and is based on family and clinician availability—an interaction format that is very poorly studied [95]. Structured communication tools and family may help to improve physician and family relationships and reduce the risk of PTSD in family members [96, 97].

## Educating the Next Generation

Difficult communication is a learned skill and must be taught to the next generation of surgical trainees. A cursory education about end of life care and high-stakes communication based on clinical exposure is no longer adequate, and there is very limited education in medical school on this topic [98, 99]. As might be expected from the limited efficacy data, there are precious little data on the optimal approach to teaching residents and medical students key communication skills [100, 101]. Resident self-reported comfort with providing end-of-life care does not correlate well with experience providing end-of-life care, although a formal curriculum may [102].

Residents can effectively learn to use structured communication tools, such as the BC/WC tool, although do need skilled feedback in order to improve [103, 104]. In the current medical training environment, it is likely that the clinical education of the vast majority of general surgery residents in high-stakes communication will occur in the surgical ICU, where brief intervention can improve self-reported comfort with key communication skills [105]. As we continue to improve our understanding of the optimal approach to high-stakes communication within injured patients, the educational process should proceed in parallel.

## A Note About COVID-19

Families have traditionally and nearly universally been included at the bedside in surgical ICUs [37]. As of the writing of this article, the COVID-19 pandemic is raging across the world. As physical distancing becomes ubiquitous and hospitals severely restrict the number of visitors, high-stakes communication is becoming increasingly challenging. Technological solutions have provided a bridge, but video conferencing will never be a full replacement for in-person communication and bedside discussions. While we suspect that many of the same principles and structures outlined in this article remain applicable in the current pandemic, adaptations to technological limitations will be required. The weight of the published work, to date, focuses on managing death and dying in the setting of a resource-limited pandemic. Much work remains to be done and with families not at the bedside. Conversations will need to become more intentional, more structured, and integrated more intentionally into the routine care of patients in the ICU. The realities of physical distancing and limited family visitation emphasize the need for rapid and universal acceptance of surgical palliative care principles, particularly structured and empathetic communication in the ICU [106].

## Conclusion

Communication skills in the ICU are an essential part of the care of trauma patients. We have an imperative to improve the communication for all patients, not just those at the end of their life [1]. The need to communicate effectively and empathetically with patients and identify primary GOC is an essential part of trauma care in the ICU [1, 3]. While the optimal design to support complex communication in the ICU will be dependent on institutional experience and resources, a PPC model or integrated palliative care model will allow assessment of every patient's communication needs and may be superior to a purely consult-based format. A structured approach to family meetings may improve our ability to communicate succinctly and clearly in high stress situations. Communication skills are teachable and can be improved. In an area of active and dynamic research, we look towards a coming explosion of research on surgical palliative care and complex communication challenges. This is an exciting time to be an acute care surgeon and an exciting time to build palliative and communication capabilities.

## Compliance with Ethical Standards

**Conflict of Interest** The authors declare that they have no conflict of interest.

**Human and Animal Rights and Informed Consent** All reported studies/experiments with human or animal subjects performed by the authors were performed in accordance with all applicable ethical standards including the Helsinki declaration and its amendments, institutional/national research committee standards, and international/national/institutional guidelines.

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  - Of major importance
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