Integrating Palliative Care in the Intensive Care Unit

Jacob J. Strand, MD; and J. Andrew Billings, MD

ABSTRACT

The admission of cancer patients into intensive care units (ICUs) is on the rise. These patients are at high risk for physical and psychosocial suffering. Patients and their families often face difficult end-of-life decisions that highlight the importance of effective and empathetic communication. Palliative care teams are uniquely equipped to help care for cancer patients who are admitted to ICUs. When utilized in the ICU, palliative care has the potential to improve a patient’s symptoms, enhance the communication between care teams and families, and improve family-centered decision making. Within the context of this article, we will discuss how palliative care can be integrated into the care of ICU patients and how to enhance family-centered communication; we will also highlight the care of ICU patients at the end of life.

THE CASE

If, a 43-year-old married mother of two children, has breast cancer that is metastatic to bone, brain, and liver. She is sent to the emergency department by her oncologist after presenting with progressive shortness of breath, increasing in severity during the past 3 days. A chest x-ray suggests lymphangitic spread of the tumor. She is profoundly hypoxic and immediately requires intubation; she is then admitted to the intensive care unit (ICU) for further management.

END-OF-LIFE CARE IN THE ICU

The ICU is a common site of end-of-life care. In 1999 in the United States, 540,000 people died in an ICU, close to a quarter of all US deaths.4 Despite trends toward declining hospital length of stay prior to death and increased hospice utilization, ICU days during the last six months of life continue to climb. Despite improvements in ICU-level care, mortality rates for some patients with malignancies are actually increasing.2,3

Patients with advanced malignancies are at high risk of developing complications that lead to an ICU admission, such as respiratory failure, sepsis, bleeding, and obstruction of the bowel. However, aggresive ICU care, while leading to increased costs, seems to be correlated with a worse quality of death.4 Patients with advanced malignancies who receive care in the ICU also frequently suffer from multiple sources of physical and psychosocial distress. Poorly controlled symptoms such as pain, dyspnea, depression, and anxiety have been reported in the majority of ICU cancer patients.5,6 Families of patients who die in the ICU also experience increased risk for prolonged grief disorder and post-traumatic stress disorder, compared with families of patients who die at home with hospice care.7 ICU teams are also affected by the care of these patients. ICU staff are concerned about such matters as inappropriate care, high patient mortality, excess resource utilization, and patient and family suffering; as a result of these concerns, ICU staff increasingly experience burnout.8

Mortality rates for cancer patients who are admitted to the ICU are especially high. In multicenter studies, 42% of cancer patients admitted to
the ICU died during the hospitalization. Cancer patients requiring mechanical ventilation had a hospital mortality rate of 76%. In a Viennese cancer center, ICU mortality was 53%, with a 1-year mortality of 77%, compared with 39% for ICU patients suffering from other diseases and 45% for hospitalized cancer patients not requiring ICU admissions.

THE GROWING ROLE OF PALLIATIVE CARE IN THE ICU

Palliative care teams have demonstrated their value in the care of cancer patients at all stages of illness. High mortality rates and high levels of suffering among cancer patients and their families have led to an increasing involvement of interdisciplinary palliative care teams in ICUs, where they help with patient comfort, psychosocial and spiritual support, communication, shared decision making, continuity of care, and staff support.

Numerous consensus statements from professional societies and other groups representing the fields of critical care, oncology, and palliative care have called for greater palliative care involvement in the ICU. Palliative care consultative teams are present in more than 75% of large US academic hospitals and have a federally mandated presence in all Department of Veterans Affairs medical centers. However, in one study of a large comprehensive cancer center with a well-established palliative care service, consultations for ICU patients represented only 5% of total palliative care consultations, and only 6% of ICU admissions led to a consultation.

MODELS FOR PALLIATIVE CARE INVOLVEMENT IN THE ICU

A variety of models have been proposed to enhance palliative care involvement in the care of ICU patients. The Improving Palliative Care in the ICU (IPAL-ICU) project has identified 2 main models of palliative care involvement in intensive care units. First, a “consultative model” seeks to increase the involvement of palliative care teams in the care of ICU patients, especially those patients at high risk for suffering and death. Second, an “integrative model” focuses on promoting the integration of palliative care principles and education into the daily care of all ICU patients by ICU teams.

Consultative Model

Palliative care consultations in the ICU are commonly initiated by the ICU team and typically are reactive to recognized problems with care, which tend to occur when the patient, family, and staff experience conflicts around goals and methods of care. A large body of evidence now suggests that focusing the consultative model on routinely proactive palliative care consultations in high-risk patient populations offers significant benefit for patients and their families, while also improving resource utilization. For instance, one study reported on the use of proactive palliative care consultations in patients meeting predetermined “triggers” that identified a high risk for dying, including any patient with a stage IV malignancy. Another study examined proactive palliative care consultations in patients with advanced dementia, global cerebral ischemic events, and/or prolonged multigorgan dysfunction. These studies found that proactive palliative care consultations led to significant reductions in ICU length of stay, increased DNR (“do not resuscitate”) orders, reduced nonbeneficial resource utilization after a DNR order, and increased transition to goals focused on comfort, all while not significantly affecting mortality rates.

Integrative Models

While consultative models of palliative care in the ICU provide many potential benefits in the care of critically ill patients, they rely on adequate palliative care staffing as well as a willingness on the part of ICU clinicians either to refer to palliative care or to agree to palliative care triggers. Integrative models of ICU palliative care are focused on interventions to increase staff awareness of patient/family palliative care needs, improve communication skills, and incorporate palliative care skills training in staff education. These models include ICU and palliative care leadership collaboration, the use of palliative care order sets for those patients undergoing palliative or terminal extubations, and the training of ICU “nurse champions” to promote palliative care principles in the ICU.

Just distributing a brochure to the patient’s family about the ICU leads to improved comprehension of diagnosis and prognosis as well as enhanced family satisfaction with communication. Clinicians in 22 ICUs in France went further, utilizing a palliative care–designed communication intervention for family meetings, along with a brochure about the ICU and bereavement for the families of patients who the physician believed would die in a few days. This intervention led to a reduction in nonbeneficial interventions, increased the withdrawal of life-sustaining measures, increased family satisfaction with communication, and was linked with low rates of posttraumatic stress syndrome, depression, and anxiety among the bereaved family members at 90 days after the death. This last finding is of particular importance, as having a family member in the ICU is associated with higher rates of the aforementioned psychiatric diagnoses.

Other approaches have combined the 2 models, embedding a palliative care clinician who participates on ICU rounds as well as implementing mechanisms to facilitate formal and informal palliative care consultations. Regardless of the model, palliative care is not an alternative to intensive care but is an integral part of it.

THE CASE CONTINUED

Despite maximal therapy, JF’s clinical status declines over a period of several days. A family meeting is held to summarize the events of the past 48 hours as well as to discuss prognosis and inquire about JF’s goals of care. Her parents and younger sister emphasize that JF is a “fighter who never gives up.” Her husband has serious doubts about whether she would want to be kept alive in this situation. Plans for a time-limited trial of aggressive care and a further diagnostic work-up are put in place. A palliative care consultation is requested to meet with the family to help them cope with JF’s illness and to further explore her goals and values for end-of-life care.
THE FAMILY MEETING

A high proportion of ICU deaths involve withholding or withdrawing life-sustaining treatments, and often follow challenging, emotion-laden end-of-life discussions and decisions. Because ICU patients are often unable to participate in these decisions, discussions regularly take place without the patient, placing considerable burdens on the family. High levels of family distress are common. Conflict around end-of-life decisions, such as whether to remove life support, is also common, and was reported in 1 study to occur among family members in 24% of cases, among ICU staff in 48%, and between family and staff in 48% of cases. These complex situations call for high-level clinician skills both in communicating effectively and empathetically and in negotiating conflict. Most ICU physicians believe that mediating conflict through direct patient and family communication is the most effective tool for achieving resolution, which further emphasizes the importance of effective communication skills for physicians.34

Families place high importance on their physician's ability to talk about end-of-life concerns, even rating such skills higher than a physician's general medical abilities.35,36 But in 1 study of more than 600 family members of ICU patients, family satisfaction with physician communication in the ICU ranked as one of the lowest satisfactory aspects of care.37 Ineffective communication also has consequences for family emotional well-being. Another study found that the risk of symptoms consistent with posttraumatic stress disorder were found in 33.1% of family members of patients; however, these symptoms were more prevalent in families who felt that communication with physicians was incomplete.38

Effective Communication in Family Meetings

Family meetings are the most studied and effective end-of-life interventions for patients and their families in the ICU. Although the value of interdisciplinary teamwork has been shown to improve the care of dying patients in the ICU, clear communication is challenging in the ICU setting with large teams of providers.39,40 Family meetings provide an opportunity to focus the message of the ICU team, the patient’s primary physician, and any consulting services. These complex interdisciplinary procedures are designed to assess the family’s understanding of their loved one’s illness, share medical information, provide education, offer emotional support, and promote shared decision making based on the patient’s goals and values of care.41

Common triggers for family meetings include a conflict between the family and ICU team, clinician decisions to recommend withholding or withdrawing life-sustaining treatments, and imminent death. However, initiating earlier communication with and providing support for families ensure that the initial family communication does not simply begin with a DNR discussion or a recommendation to withdraw life support.42 A proactive approach to family meetings for all ICU patients was the subject of a clinical care study and its 4-year follow-up.43,44 The intervention consisted of multidisciplinary family meetings held within 72 hours of ICU admission for all patients admitted to the ICU, compared with reactive meetings that were held after the team had determined that survival was unlikely, which had been the usual practice of this unit prior to the intervention. Prophylactic meetings led to decreased ICU length of stay, increased team and family consensus on patient goals, and high levels of family satisfaction with team communication.

Common Strategies for Family Meetings

A core competency of palliative care clinicians is the ability to communicate and work together with patients and their families to arrive at decisions about goals of care. Such decisions should reflect shared decision making based on the patient’s values and quality of life. Palliative care teams frequently participate and lead family meetings, and are uniquely positioned to assist and help train ICU staff in this advanced communication technique. Table 1 explores ways in which providers can allow families a voice, express empathy, convey information, and elicit patient/family goals and values.45

Family meetings have historically been dominated by physician-led information sharing. In a study of family meetings in 4 ICUs, physicians took, on average, 71% of a total meeting time that averaged 32 minutes. Although the duration of the meeting was not linked to family satisfaction, an increased proportion of family speech led to significantly increased satisfaction with how physicians communicated.46

Unfortunately, not only may physicians talk too much, but they may also overlook what matters most to families. In an analysis of audiotaped family meetings, one study found that physicians often missed opportunities to listen and to respond to family members’ questions, as well as to acknowledge and address family emotional responses.47

Empathetic listening is a central tenet of palliative care. It allows the clinician to identify the topics that are most important to family members, clarify misunderstandings, and help family members express their concerns.48 The impact of this family-focused communication continues after the death; proactive family communication that allows more time for the family to express themselves leads to significant lessening of bereavement morbidity.49
Despite aggressive care, JF continues to require maximal ventilator support. Cytology obtained from bronchoscopy confirms the diagnosis of lymphangitic carcinomatosis. The ICU team feels that JF is suffering and agrees with the palliative care team to recommend a shift in goals of care toward comfort. A family meeting is held to assess family understanding, discuss the findings of progressive lung disease, and share prognostic information.

<table>
<thead>
<tr>
<th>STEPS</th>
<th>GOALS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare.</td>
<td>● Setting the agenda for the meeting.</td>
<td>A premeeting conference among staff is crucial. Staff should agree on what will be presented to the family as well as who will facilitate the meeting.</td>
</tr>
<tr>
<td>Adduce participants and identify goals.</td>
<td>● Introduce everyone by name.</td>
<td>&quot;We thought it would be a good idea to bring everyone up to date on your mother’s care. Before we do that, what are your goals for the meeting today?&quot;</td>
</tr>
<tr>
<td>Assess family understanding.</td>
<td>● Before launching into a discussion of the medical details, listen.</td>
<td>&quot;What is your understanding of what has been happening with your mother over these last 48 hours?&quot; &quot;What is your impression about how she is doing at this time?&quot;</td>
</tr>
<tr>
<td>Identify preferences for decision-making and information sharing.</td>
<td>● Identify how families prefer to receive information and make decisions, and the level of detail they would like to receive.</td>
<td>&quot;Families have different approaches to receiving information and making decisions. How do these things work in your family?&quot;</td>
</tr>
<tr>
<td>Summarize information and educate the family.</td>
<td>● Avoid long, medically-dense discussions and jargon.</td>
<td>&quot;Does that seem like a fair summary of what we have discussed so far?&quot; &quot;What questions come to mind when you hear this information?&quot; &quot;While we had hoped that she would pull through this, regretfully she is dying.&quot;</td>
</tr>
<tr>
<td>Explore patient wishes under current circumstances.</td>
<td>● Ask about the patient’s goals, values, and previous discussions about end-of-life care.</td>
<td>&quot;What was your mother like? How has she dealt with this illness?&quot; &quot;If she understood her condition and could make decisions for herself, what do you think would be her preferences now?&quot; &quot;Are there any medical or health situations that your mother would not find acceptable?&quot;</td>
</tr>
</tbody>
</table>
| Make a recommendation. | ● Not making a recommendation places a terrible burden on families and ignores the expert role that the ICU staff plays in the care of the patient. | "Given what we know about your mother’s condition and what her wishes would be, we would not recommend CPR or intubation; they would be ineffective and would disturb a peaceful death."
"If your mother does not have significant improvement in her breathing status over the next 72 hours, we would recommend discontinuing life-prolonging treatment." |
| Affirm ongoing quality care. | ● Reassure the family that care will never be withdrawn. | "Our goal will be to continue intensive care but now with a focus on her comfort." "We will aggressively treat any symptoms that could cause suffering." |
| Plan for follow-up. | ● Assure the family that the team is accessible. | "Let’s plan to meet again in 2 days when we may have more information." "I am sure other questions will come up, here is how to get in touch with me." |
| After the meeting: Discuss, debrief, and document. | ● Ongoing feedback among clinicians fosters improvement in clinical skills. | "What went well?" "What would you do differently next time?" "What is your sense of how the family is coping?" |

---

**THE CASE CONTINUED**

**Table 1**

Ten Steps for an Effective Family Meeting

<table>
<thead>
<tr>
<th>STEPS</th>
<th>GOALS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare.</td>
<td>● Setting the agenda for the meeting.</td>
<td>A premeeting conference among staff is crucial. Staff should agree on what will be presented to the family as well as who will facilitate the meeting.</td>
</tr>
<tr>
<td>Adduce participants and identify goals.</td>
<td>● Introduce everyone by name.</td>
<td>&quot;We thought it would be a good idea to bring everyone up to date on your mother’s care. Before we do that, what are your goals for the meeting today?&quot;</td>
</tr>
<tr>
<td>Assess family understanding.</td>
<td>● Before launching into a discussion of the medical details, listen.</td>
<td>&quot;What is your understanding of what has been happening with your mother over these last 48 hours?&quot; &quot;What is your impression about how she is doing at this time?&quot;</td>
</tr>
<tr>
<td>Identify preferences for decision-making and information sharing.</td>
<td>● Identify how families prefer to receive information and make decisions, and the level of detail they would like to receive.</td>
<td>&quot;Families have different approaches to receiving information and making decisions. How do these things work in your family?&quot;</td>
</tr>
<tr>
<td>Summarize information and educate the family.</td>
<td>● Avoid long, medically-dense discussions and jargon.</td>
<td>&quot;Does that seem like a fair summary of what we have discussed so far?&quot; &quot;What questions come to mind when you hear this information?&quot; &quot;While we had hoped that she would pull through this, regretfully she is dying.&quot;</td>
</tr>
<tr>
<td>Explore patient wishes under current circumstances.</td>
<td>● Ask about the patient’s goals, values, and previous discussions about end-of-life care.</td>
<td>&quot;What was your mother like? How has she dealt with this illness?&quot; &quot;If she understood her condition and could make decisions for herself, what do you think would be her preferences now?&quot; &quot;Are there any medical or health situations that your mother would not find acceptable?&quot;</td>
</tr>
</tbody>
</table>
| Make a recommendation. | ● Not making a recommendation places a terrible burden on families and ignores the expert role that the ICU staff plays in the care of the patient. | "Given what we know about your mother’s condition and what her wishes would be, we would not recommend CPR or intubation; they would be ineffective and would disturb a peaceful death."
"If your mother does not have significant improvement in her breathing status over the next 72 hours, we would recommend discontinuing life-prolonging treatment." |
| Affirm ongoing quality care. | ● Reassure the family that care will never be withdrawn. | "Our goal will be to continue intensive care but now with a focus on her comfort." "We will aggressively treat any symptoms that could cause suffering." |
| Plan for follow-up. | ● Assure the family that the team is accessible. | "Let’s plan to meet again in 2 days when we may have more information." "I am sure other questions will come up, here is how to get in touch with me." |
| After the meeting: Discuss, debrief, and document. | ● Ongoing feedback among clinicians fosters improvement in clinical skills. | "What went well?" "What would you do differently next time?" "What is your sense of how the family is coping?" |

---

**THE CASE CONTINUED**

Despite aggressive care, JF continues to require maximal ventilator support. Cytology obtained from bronchoscopy confirms the diagnosis of lymphangitic carcinomatosis. The ICU team feels that JF is suffering and agrees with the palliative care team to recommend a shift in goals of care toward comfort. A family meeting is held to assess family understanding, discuss the findings of progressive lung disease, and share prognostic information.
The family, too, is worried that JF is suffering and agrees that she was able to participate in the decision making and knew of her cancer progression, she would not want to be “hooked up to machines” any longer. The decision is made between her family and the ICU team to focus on comfort. A detailed plan for palliative extubation is discussed between the palliative care and ICU team. As JF undergoes extubation, her symptoms and signs of dyspnea are managed aggressively and prophylactically with benzodiazepines and opioids (Table 2). She dies peacefully, surrounded by her family. JF’s family is subsequently followed by bereavement support from the palliative care service.

**SYMPTOM MANAGEMENT**

The inability of most ICU patients to communicate has led to scant data regarding their symptom experience and raises concerns about unrecognized suffering. A prospective analysis of cancer patients who had been admitted to a medical ICU and could self-report symptoms found that 55% had pain, 75% noted discomfort, and 63% reported anxiety. In a study of all patients who were admitted to an ICU at a comprehensive cancer center and were referred to the palliative care service, patients were found to have multiple distressing symptoms including fatigue (95%), pain (84%), dyspnea (76%), sleep disturbance (69%), anxiety (65%), constipation (62%), and depression (45%). The palliative care team made frequent medication recommendations aimed at alleviating those symptoms. This included starting or rotating medications including opioid therapy (99%), antiemetics (79%), and medications for constipation (72%). In addition, the teams made recommendations to discontinue benzodiazepines (56%) and made significant changes in the use of antipsychotics, which led to a decrease in delirium in 41% of the patients evaluated.

**VENTILATOR WITHDRAWAL**

For ICU patients at the end of life, withdrawal of life-sustaining treatments can be fraught with family distress and concern. However, stopping treatments that are no longer beneficial or desired by the patient, family, or surrogate and that do not promote comfort is commonly recognized as ethically appropriate. Critical to care at the end of life is a recognition that the withdrawing of life-sustaining treatments should not mean a lessening of comfort measures.

Removal of mechanical ventilation is often the final act in stopping life-sustaining treatments, and represents an important palliative care procedure. Symptoms such as dyspnea, agitation, and anxiety are common during ventilator withdrawal and require close monitoring, appropriate selection of medications, prophylaxis against suffering, and aggressive titration to comfort. If the clinician waits for symptoms—such as stridor, gasping, or “death rattle”—to develop, then patient distress is inevitable; thus, prophylactic management is demanded.

The 2 main extubation methods are “terminal extubation” (in which the first step is removal of the endotracheal tube), and “terminal weaning” (in which ventilator settings are slowly reduced and the artificial airway is maintained for suctioning). Although terminal weaning has been proposed as a way to avoid uncontrolled respiratory secretions, it precludes any potential for the patient to speak to the family. With proper titration of medications for terminal secretions as needed and aggressive titration of opioids and benzodiazepines while ventilator support is decreased, terminal extubation can allow alert patients to

<table>
<thead>
<tr>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ventilator Withdrawal Guidelines</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Family meeting.</strong> Review decision to withdraw life-sustaining treatment (LST), and discuss a preferred process.</td>
</tr>
<tr>
<td>a. If the patient is conscious, what are his or her desires about conducting the procedure?</td>
</tr>
<tr>
<td>b. Does the family want to be present in the patient's room or in the waiting room, or how should they be notified about the completion of the procedure or death? Do they want to see the patient after the death? Consider special readings, rituals, prayers, or music before, during, and after withdrawal of the ventilator. Advise the family on the possibility, if any, of prolonged survival after withdrawal of ventilatory support, as well as immediate death.</td>
</tr>
<tr>
<td>c. Discuss how younger children would be involved and what resources are available to help them (eg, social worker, bereavement counselor, or child-life specialists).</td>
</tr>
<tr>
<td>d. Consider discussing in advance any decisions that will be faced after death, such as tissue, organ, or body donation; autopsy; and funeral arrangements.</td>
</tr>
<tr>
<td>e. Decide on a plan, and then document the meeting and plan in the chart.</td>
</tr>
<tr>
<td>2. <strong>Clinical team meeting.</strong> This may include physicians, nurses, social service, chaplaincy, and respiratory therapists.</td>
</tr>
<tr>
<td>a. Review which LSTs are being provided now and which should be withdrawn.</td>
</tr>
<tr>
<td>b. Review all orders (life-sustaining and routine treatments) and discontinue those orders that either cause patient discomfort or do not promote comfort, while adding measures to palliate current or anticipated distress.</td>
</tr>
<tr>
<td>c. What order of LST withdrawal makes the most sense? Typically, adequate sedation should be achieved before any anticipated discomfort arises, but the following order of withdrawal usually makes sense:</td>
</tr>
<tr>
<td>i. Intermittent therapies (antibiotics, hemodialysis)</td>
</tr>
<tr>
<td>ii. Fluid and nutrition</td>
</tr>
<tr>
<td>iii. Continuous therapies that maintain circulation (pressors, pacers, LVAD, IABP)</td>
</tr>
<tr>
<td>iv. Ventilator</td>
</tr>
</tbody>
</table>
### Notes on Discussing Ventilator Withdrawal With Patient and/or Family

1. Describe the process. Use simple language and allow for questions.
2. Pause periodically and leave time to listen to the family members’ concerns and/ or reminiscences.
3. Assure them that achieving comfort is the goal and can be managed.
4. Determine in advance a reasonable level of sedation desired by the patient and family (conscious but calm, light sleep, heavily sedated).
5. Explain that changes in breathing—such as tachypnea, deep breathing, or irregular or agonal breathing—commonly occur, but that the sensation of breathlessness can be prevented or totally relieved. If the patient is capable of feeling discomfort, medications will be given to avoid the sensations of breathlessness, pain, or anxiety.
   - “She’ll have many breaths that may look like her last breath but, in the end, we’ll know.”
6. If a well-sedated or comatose patient shows gasping, twitching, or other involuntary movements, reassure the family that such actions do not reflect conscious suffering.
7. Encourage the family to engage in cultural or spiritual practices befitting the patient’s life and traditions.
8. Caution the family that, although death is expected, the timing of it is uncertain.

### Table 2

<table>
<thead>
<tr>
<th>Continued</th>
</tr>
</thead>
</table>

#### Ventilator withdrawal

**Clinical Team Preparation**

1. Determine who will be present during and after the withdrawal procedure in order to assure that plenty of hands are available, but also to address the family’s needs (eg, nurse, social worker, or chaplain). Consider involving palliative care service.

2. Family Preparation

   a. Create peaceful surroundings.
      - Remove unnecessary equipment, creating bedside space for the family.
      - Provide tissues and comfortable chairs.
      - Remove restraints, lower bedrails, and set bed height to facilitate family/patient touching or hand holding.
      - Discontinue all monitors and alarms in the room.
      - Discontinue inappropriate television or radio distractions.

   b. Gather the family.
      - If they stay in the room, review the process of what they might see.
      - Address the needs of young children.
      - Social worker, nurse, or chaplain may stay with the family by the bedside or in the waiting room.
      - Check family perception of the level of patient comfort, and address appropriately to incorporate their wishes about sedation and analgesia.

3. Withdrawal Procedure

   a. Determine if premedication is necessary:
      - If the patient is capable of experiencing distress or if distress is likely during the withdrawal procedure, continue the current analgesia and sedation regimen.
      - Premedicate with opioids and benzodiazepines via bolus or infusion (see below). Propofol may also be continued or started.
      - Even if the patient appears comfortable when undisturbed, anticipatory dosing is appropriate if he or she has shown signs of distress during past nursing or respiratory care interventions. For example, a comfortable-appearing patient may have grimaced or shown distress with prior suctioning, repositioning, or reduction in ventilatory support, and would be expected to experience distress with withdrawal of ventilatory support.

   b. Reduce ventilator alarm settings (apnea, heat, etc.) to minimal settings or, if possible, turn them off.

   c. Over 0–5 minutes, reduce FiO₂ to room air (21%); reduce pressure support and PEEP to zero.

   d. If the patient experiences discomfort during any of the reductions in ventilation, resume higher ventilator settings and adjust the opioid and benzodiazepine medications for comfort prior to further ventilator reduction.

   e. Concerning the airway, choose either Option 1 or Option 2. (With either choice, if tracheal secretions are bothersome, an in-line suction catheter can be attached to the ETT without supplemental O₂ or humidity.)
      - Option 1: Extubate patient to room air, wrapping the ET tube (which may be messy) in a towel.
      - Option 2: Remove the connection to the ventilator, keeping the ETT or tracheostomy in place.

   f. During the withdrawal process, use suctioning as needed, monitor the patient’s comfort frequently, and titrate medications for any signs of distress, such as tachypnea, labored breathing, accessory muscle use, nasal flaring, tachycardia, hypertension, diaphoresis, grimacing, restlessness, and excess or noisy secretions.

   g. The combination of an opioid plus a benzodiazepine is indicated because narcotics provide relief of dyspnea and pain, while also suppressing cough, whereas benzodiazepines provide sedation and anxiolysis. Benzodiazepines also offer anticonvulsant effects that may protect the patient from hypoxemia-related seizures.

   h. In the ICUs, fentanyl is often the preferred narcotic because of staff familiarity with this agent, whereas morphine may be a bit more likely to lead to toxicity (typically myoclonus) at high doses, especially in the setting of renal failure.

**After the Death**

1. Allow the family and staff to be with the patient.
2. Allow the family to help with postmortem care, if they choose to do so.
3. Assess the individual family member’s state of grief and ability to travel.
4. Assist with any decisions, if relevant, about tissue, organ, or body donation; autopsy; rituals after death (calling a funeral home, arranging a wake, funeral service, or memorial service); and notification of relatives and friends.
5. Place a brief note in the chart and prepare the death certificate (in black ink).
6. Notify the involved staff and allow time for the health care team to debrief.
be free of unwanted artificial support. Discussions with the family about patient comfort should ultimately influence the conduct of the procedure.  

TAKE-HOME POINTS

Interdisciplinary palliative care teams are uniquely positioned to help care for cancer patients who are admitted to ICUs. These teams help foster comprehensive care, enhance effective communication, and reduce physical and psychosocial distress for ICU patients and their families.

Palliative care is no longer optional, but rather is an integral component of high-quality care of cancer patients in the ICU.

Conflicts of Interest

Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Dr Strand has no conflicts to disclose. Dr Billings is an editor for UpToDate, a web-based clinical decision support system.

Previous Presentation: Palliative Care in the ICU was presented in part at the Seventh Annual Chicago Supportive Oncology Conference; October 27–29, 2011; Chicago, Illinois.

REFERENCES