

CASE REPORT

Snapshot of an acute palliative care unit in a tertiary cancer hospital

AKHILA REDDY, M.D.,* MARIEBERTA VIDAL, M.D.,* MAXINE DE LA CRUZ, M.D.,
SRIRAM YENNURAJALINGAM, M.D., AND EDUARDO BRUERA, M.D.

Department of Palliative Care and Rehabilitation Medicine, The University of Texas MD Anderson Cancer Center, Houston, Texas

(RECEIVED June 19, 2013; ACCEPTED July 9, 2013)

ABSTRACT

Most palliative care (PC) programs in the United States provide consultation services that assist the primary medical team with issues ranging from controlling patients' symptoms to initiating end-of-life discussions. This approach may be sufficient to address many patients' needs. However, for certain patients with complex medical and psychosocial issues, a better alternative is a more streamlined approach that can be provided in an acute palliative care unit (APCU), where the PC staff assumes the role of the primary team. An APCU is a specialized unit that delivers highly sophisticated care with professionals from various disciplines working together to improve the quality of life of patients and their families. However, descriptions of the process of delivering PC in the APCU are limited. In this special report, we portray a single day with a series of patients whose care was managed at our APCU to illustrate the unique components of an APCU that allow holistic care for patients with multiple complex medical and psychosocial issues.

KEYWORDS: Acute palliative care unit, Supportive oncology, End-of-life care, Symptom management, Interdisciplinary palliative care

INTRODUCTION

Acute palliative care units (APCUs) are dedicated entities where clinicians can provide optimal control of patients' symptoms and other domains of suffering. Care is delivered by an interdisciplinary team (IDT) that includes palliative care (PC)-certified physicians, fellows, and midlevel providers, along with nurses, social workers, chaplains, counselors, case managers, pharmacists, physical and occupational therapists, music and massage therapists, and volunteers designated to work exclusively in the APCU.

They are independent and closed units equipped with subdued lighting and continuous soft music that creates an environment more conducive to caring for terminally ill patients and their families. APCUs have been shown to be beneficial in caring for complex advanced cancer patients while also meeting acute care criteria for hospitalization and satisfactory financial reimbursement (Elsayem et al., 2004; 2011). The quality of care at the end of life is superior in APCUs compared with palliative consultation services (Casarett et al., 2011), which are useful for patients who have a lower symptom burden and less complicated medical and psychosocial circumstances.

In a recent report, only 23% of cancer centers surveyed had dedicated PC beds, and their hospital executives had no plans to expand their PC programs (Hui et al., 2010a). Based on a consensus report by

*Denotes equal contribution.

Address correspondence and reprint requests to: Akhila Reddy, Department of Palliative Care and Rehabilitation Medicine, Unit 1414, The University of Texas MD Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, Texas 77030. E-mail: asreddy@mdanderson.org

the National Quality Forum, a framework for preferred practices for PC and hospice care recommended that hospitals with 300 or more beds have APCUs (Ferrell et al., 2007). Although the number of PC teams is growing as a result of studies that have demonstrated an unmet need (Higginson et al., 2003; Teno et al., 2004; Wright et al., 2008), information on the daily delivery of PC to advanced cancer patients in an APCU is still limited. We present herein a series of cases seen during a single day in an APCU at a major U.S. cancer center.

CASES

Patient 1 was transferred to the APCU seven days prior from the medical ward, where she was admitted for acute renal failure, altered mental status, and dehydration. She was a physician in her 60s with advanced pancreatic cancer associated with portal vein thrombosis and malignant ascites that required placement of an intraperitoneal catheter (IPC). The PC team was consulted, which resulted in APCU admission.

In the APCU, her abdominal pain was well managed with methadone at 2.5 mg orally every 8 hours with an additional dose every 4 hours as needed for breakthrough pain. Fatigue was managed with aggressive physical therapy and low-dose dexamethasone. Her family vehemently opposed hospice care, as they feared dehydration would recur. The focus of the day was initiating subcutaneous hydration and medications and providing counseling and hospice education to the patient and her family. Careful drainage of the IPC for symptom relief and balancing the risk of dehydration was explained.

Patient 2 was transferred to the APCU 15 days earlier from the medical ward, where she was admitted for uncontrolled pain. She was in her 40s, had recently immigrated to the United States, and had ovarian cancer that was metastatic to the left psoas muscle and supraclavicular and retroperitoneal lymph nodes. She had been unsuccessfully treated with hypogastric nerve block, epidural steroid injection, and cordotomy. While she awaited placement of an intrathecal pump by the chronic pain service, the PC team was consulted, and she was transferred from the medical ward to the APCU for pain management. She was receiving an intravenous hydromorphone infusion at a morphine equivalent daily dosage (MEDD) of 680 mg.

In the APCU, our IDT recognized and addressed the psychosocial and spiritual factors that contributed to her total pain expression. She came from an extremely poor family and had worked multiple jobs to support them. She was a newlywed, and her husband lost his first wife to cancer a few years prior. Our IDT

focused on frequent counseling, improving her function, educating her about medications and hospice, and discussing the goals of care. The focus of the day was planning her discharge to hospice. Her pain was well controlled with extended-release oxycodone at 15 mg every 12 hours and subcutaneous hydromorphone at 1 mg (MEDD = 95 mg, 88% reduction) every 4 hours as needed. She did not require an intrathecal pump.

Patient 3 was admitted to the APCU three days prior from the medical ward, where he was admitted for pneumonia, sepsis, diarrhea, and pancytopenia. He was in his 60s and had a history of progressive and refractory T-cell lymphoma with bone marrow involvement. Palliative care was consulted, and he was transferred to the APCU.

In the APCU, we initiated a continuous intravenous morphine infusion to alleviate his abdominal pain and dyspnea. Hospice education and psychosocial and spiritual counseling were provided daily. Our child life specialist helped counsel the patient's grandchildren. The focus of the day was planning his discharge to hospice. We discontinued the intravenous morphine infusion and initiated extended-release morphine sulfate taken orally twice daily plus immediate-release morphine as needed. We consulted the infectious-diseases team and switched his intravenous antibiotics to an oral regimen. Our occupational and physical therapists worked to maximize his function and alleviate his anasarca and scrotal edema.

Patient 4 was admitted from the PC clinic to the APCU five days prior for uncontrolled pain. He was in his 50s and had been diagnosed with unresectable hepatocellular carcinoma eight months prior. He had a large hepatic necrotic mass with a polymicrobial abscess and a drain.

In the APCU, he received a continuous hydromorphone infusion. The infectious-diseases team was consulted, and intravenous antibiotics were initiated. A CT scan revealed growth of the hepatic mass and necrosis. The primary oncologist was contacted upon our recommendation to refer the patient to hospice care. Later, a family meeting was conducted to discuss hospice, the goals of care, and prognosis. Hydromorphone was switched from infusion to oral route. Our case manager arranged for a home health company to provide intravenous antibiotics and, upon completion of the course, to communicate with the hospice to transfer the patient. The focus of the day was facilitating the patient's discharge. His pain was well controlled with oral hydromorphone taken every four hours, with an additional dose every two hours as needed for breakthrough pain.

Patient 5 was transferred to the APCU nine days earlier from the medical ward, where she was

admitted for a new L3 vertebral metastasis with a painful pathologic fracture. She was in her 50s and had a history of non-small-cell lung cancer metastatic to the brain, bone, and meninges. She underwent palliative radiation to the L3 vertebra followed by vertebroplasty. She continued to deteriorate and developed agitated delirium. Palliative care was consulted, and she was transferred to the APCU.

In the APCU, an opioid rotation to a continuous infusion of hydromorphone and dexamethasone was initiated. Haloperidol was administered initially, followed by increasing doses of chlorpromazine for the agitated delirium. Another opioid rotation to morphine was initiated to rule out opioid-induced neurotoxicity as the cause of persistent delirium. A family meeting was held to discuss the goals of care, prognosis, and hospice. The patient's family received daily psychosocial and spiritual support from our IDT. The focus of the day was ensuring a smooth discharge to the inpatient hospice facility in their hometown. Prefilled syringes of morphine, chlorpromazine, and dexamethasone were provided for the two-hour ambulance trip. The hospice facility confirmed that the transfer went smoothly.

Patient 6 was transferred to the APCU two days before from the medical ward, where she was admitted for severe dyspnea. She was in her 60s and had a history of uterine carcinosarcoma that was extensively metastatic to the lungs. A CT scan revealed progressive lung metastasis and pneumonia with extrinsic compression of a previously placed right-sided bronchial stent that was subsequently replaced. Nonetheless, severe dyspnea persisted, and delirium was diagnosed. The PC team was consulted, and the patient was transferred to the APCU.

In the APCU, discussions regarding prognosis were held with the patient's husband and two adult children. A morphine infusion was initiated along with vapotherm and antibiotics for the dyspnea, and haloperidol was initiated for the delirium. The focus of the day was aggressively managing the patient's symptoms. She became increasingly delirious with agitation and hallucinations. Watching her struggle to breathe, her son was reminded of his past asthma attacks and that his mother always helped him overcome them. His inability to do the same for his mother distressed him greatly, and our chaplain and counselor comforted him. Our team initiated chlorpromazine and titrated the morphine infusion and vapotherm, which enabled the patient to communicate with her family.

Patient 7 was transferred to the APCU two days prior from the medical ward, where he was admitted for gastrointestinal bleeding and uncontrolled pain. He was in his 40s and had a history of metastatic pancreatic cancer with gastric outlet obstruction mana-

ged with a jejunostomy and venting gastrostomy tube. The PC team was consulted to manage the patient's pain and address his and his wife's psychosocial distress related to hospice and end-of-life discussions. The patient was transferred to the APCU after our team convinced his wife to focus on comfort care instead of aggressive care.

In the APCU, the patient's previous pain medications were discontinued, and intravenous methadone was initiated at scheduled doses and for breakthrough pain. Haloperidol was initially administered and later switched to chlorpromazine as needed for delirium. The patient developed a fever, which prompted the ordering of a chest X-ray and blood and urine cultures. Broad-spectrum antibiotics and opioid rotation to a hydromorphone infusion were initiated. Octreotide and a beta blocker were initiated to help control rectal bleeding. Having lost a parent to cancer when she was only six years old, the patient's wife feared their young son would encounter the same situation. The focus of the day was controlling the patient's rectal bleeding and counseling his wife. Our child life specialist counseled both the wife and son.

Patient 8 was transferred to the APCU nine days prior from the medical ward, where he was admitted for recurrent pneumonia and an acute compression fracture of the T11 vertebra. He was in his 60s and had stage IV metastatic non-small-cell lung cancer with multiple osteoporotic vertebral fractures that necessitated vertebroplasty. Antibiotics and dexamethasone were initiated. The patient's wife and four adult children were very distressed about the oncology team's recommendation to transfer him to hospice. The patient's prognosis was estimated at less than two months, which was sooner than the upcoming birth of his first grandchild. The PC team was consulted, which resulted in a transfer to the APCU.

In the APCU, delirium prompted an opioid rotation from methadone and hydromorphone to a continuous intravenous infusion of fentanyl. The delirium worsened, which prompted further investigation into its cause. Antibiotics were changed, hypercalcemia was addressed with zoledronic acid and calcitonin, and chlorpromazine was initiated. A family meeting was held to address the family's multiple questions. They received daily counseling from our IDT. The delirium gradually improved. The focus of the day was counseling the patient and family to address their discharge anxiety. The hospice agency was contacted, and continuous care was arranged for the first 48 hours to ensure that the family's needs would be met. Our clinical pharmacy specialist educated the family about the patient's various medications. The patient was discharged home with hospice care.

Patient 9 was transferred to the APCU nine days before from the medical ward, where she was admitted for pneumonia and sepsis that necessitated intensive care with intubation. She was in her 20s and had a history of refractory acute myeloid leukemia. The PC team was consulted for uncontrolled abdominal and lower extremity pain after she was transferred to a regular floor. The patient was experiencing immense psychosocial distress related to being away from her two young children and being a single parent with no source of income, prompting a transfer to the APCU.

In the APCU, her pain medications were rotated to intravenous methadone along with hydromorphone as needed for breakthrough pain. She developed dysphagia consequent to a tracheoesophageal fistula. She needed multiple transfusions of packed red blood cells and platelets and required hydroxyurea to lower her rapidly rising white blood cell count. The elaborate antimicrobial treatment was continued. Our IDT provided psychosocial and spiritual support to the patient and her family. Our social worker arranged housing for her out-of-town relatives to visit for an extended period. The focus of the day was establishing the goals of care. The patient thought the stabilization of her white blood cell count via hydroxyurea meant her leukemia was improving. A family meeting was held to discuss the results of her most recent bone marrow biopsy, the purpose of hydroxyurea, the futility of any further treatment in the setting of intractable fungal pneumonia, and the possibility of losing the narrow window of opportunity to travel back to her hometown and spend quality time with her young children. The primary oncologist was contacted, who concurred with our recommendation for hospice. Our case manager facilitated hospice enrollment in her hometown. Before she was discharged, the entire IDT serenaded the patient for her birthday.

Patient 10 was transferred to the APCU five days prior from the medical ward, where she was admitted for bowel obstruction that resulted in a right hemicolectomy, ileostomy, and the placement of a venting gastrostomy tube and jejunostomy tube. She was in her 60s and had metastatic, poorly differentiated mucous adenocarcinoma of the appendix and a seizure disorder. The PC team was consulted for abdominal pain and nausea, which resulted in an APCU admission.

In the APCU, the patient's pain was controlled with a continuous hydromorphone infusion. Intravenous sandostatin was initiated and successfully resolved her persistent nausea and emesis. Extensive psychosocial and spiritual counseling was provided to the patient, who also experienced body image issues. She had significant spiritual distress associated with discontinuing church attendance after her son's

sudden demise. She subsequently had a seizure while in the APCU, which led to titration of phenytoin. The patient developed fever and delirium. The focus of the day was addressing her fever, and blood and urine cultures were ordered. Empiric antibiotics were initiated, the hydromorphone dosage was decreased, and lorazepam was initiated to relieve the agitation in the setting of a recent seizure. The primary oncologist was contacted and echoed our recommendation for hospice care. The IDT conducted a family meeting to discuss prognosis and hospice care.

Patient 11 was admitted from the emergency center to the APCU two days prior to the day described herein for delirium, uncontrolled pain, and neutropenic fever. He was a Spanish-speaking recent immigrant in his 60s and had widely metastatic small-cell lung cancer and bilateral malignant pleural effusions with intrapleural catheters. Understanding his poor prognosis, the patient and his family desired to travel to their home country to spend his remaining days with his large extended family.

In the APCU, broad-spectrum antibiotics were initiated while blood, sputum, and urine cultures were being tested. The initiation of methadone along with hydromorphone as needed for breakthrough pain was successful in controlling his pain, and haloperidol was administered for delirium. The focus of the day was educating the family about exaggerated symptom expression as a consequence of delirium and initiating discharge planning. The family could not afford an air ambulance or a commercial flight to his home country and would need oxygen supplementation for the drive. Our social worker and case manager worked with the family to explore options for discharge. Our IDT provided counseling to the larger extended family. As his delirium worsened, haloperidol was increased.

Patient 12 was transferred to the APCU two days prior from the medical ward, where she was admitted for respiratory failure, bilateral pleural effusions, delirium, and acute renal failure. She was in her 50s and had renal cell carcinoma that was metastatic to the lungs, pleura, bones, and lymph nodes. As the delirium, pain, and dyspnea persisted, PC was consulted, and she was transferred to the APCU.

In the APCU, hydromorphone infusion was rotated to methadone and intravenous fentanyl as needed, and haloperidol was initiated for the delirium. Psychosocial and spiritual support was provided to the patient's family. At the time, the patient was still receiving oral sunitinib. The focus of the day was discussing the goals of care. The primary oncology team was contacted and agreed with our recommendation to discontinue sunitinib and pursue hospice care. A family meeting was held to discuss prognosis, symptom management, and transition to hospice.

Table 1. Diagnostic and therapeutic interventions performed in the APCU

Pt.	Diagnostic Interventions	Therapeutic Interventions	Consultations to Other Teams	Interventions Discontinued	Interventions Continued
1	Daily laboratory studies, abdominal X-ray to evaluate constipation	Subcutaneous hydration and medication administration, opioid therapy, corticosteroid initiation, and blood product transfusion	Nutrition and dietary, speech and swallow evaluation, and Interventional radiology to evaluate intraperitoneal catheter	Antibiotics and intravenous administration of fluids and medications	Intraperitoneal catheter drainage
2	Daily laboratory studies, abdominal X-ray, CT scan of the abdomen and pelvis to evaluate nausea	Subcutaneous hydration and medication administration, opioid therapy, antidepressant, neuroleptics, and electrolyte replacement	Gynecological oncology team to discuss futility of further antineoplastic treatment	Benzodiazepines	Intermittent blood product transfusions
3	Daily laboratory studies	Continuous opioid infusion and electrolyte replacement	Infectious diseases	Benzodiazepines	Antimicrobial treatments
4	Daily laboratory studies, blood and urine cultures, CT scan of the abdomen and pelvis, and chest X-ray	Antibiotics, opioid rotation, electrolyte replacement, and blood product transfusions	Infectious diseases, Interventional radiology, and gastrointestinal medical oncology		Antibiotics
5	Daily laboratory studies, blood cultures, urine culture, chest X-ray	Opioid rotation, neuroleptics, and corticosteroids		Benzodiazepines	Antibiotics
6	Daily laboratory studies and chest X-ray	Vapotherm, continuous opioid infusion, and neuroleptics	Respiratory therapy		Antibiotics
7	Daily laboratory studies, chest X-ray, blood and urine cultures, MRI of the brain	Antibiotics, neuroleptics, β -blockers and sandostatin for GI bleeding, opioid rotation, and electrolyte replacement	Gastroenterology		Blood transfusions
8	Daily laboratory studies, abdominal X-ray to evaluate constipation, multiple chest X-rays, blood and urine cultures	Opioid rotation, bisphosphonate and calcitonin therapy for hypercalcemia, blood transfusions, neuroleptics, and electrolyte replacement	Infectious diseases, speech and swallow evaluation	Benzodiazepines	Antibiotics
9	Daily laboratory studies, blood culture and urine cultures, barium swallow study, chest X-rays, and abdominal X-ray	Blood product transfusions, antibiotics, electrolyte replacement, gastrostomy tube placement, opioid rotation, corticosteroids, and neuroleptics	Speech therapy, interventional radiology, pulmonary, and infectious disease	Hydroxyurea and benzodiazepines	Antibiotics and blood product transfusions

Continued

Table 1. *Continued*

Pt.	Diagnostic Interventions	Therapeutic Interventions	Consultations to Other Teams	Interventions Discontinued	Interventions Continued
10	Frequent laboratory studies, blood and urine cultures, chest X-ray and abdominal X-ray	Antibiotics, electrolyte replacement, phenytoin titration, opioid rotation, corticosteroids, and sandostatin infusion	Wound ostomy and surgical oncology		Antibiotics and benzodiazepines
11	Frequent laboratory studies, blood and urine cultures, chest X-rays	Antibiotics, blood product transfusion, electrolyte replacement, neuroleptics, opioid therapy, and oxygen therapy	Respiratory therapy		Benzodiazepines
12	Frequent laboratory studies	Intrapleural catheter exchange, electrolyte replacement, opioid rotation, and neuroleptics	Interventional radiology	Sunitinib	Antibiotics

Laboratory studies: complete blood count, electrolytes, liver function, renal function, calcium, magnesium, and phosphorus.

CT scan: computed tomography scan. MRI: magnetic resonance imaging.

The patient was comfortable with the medication changes initiated by our team. This day was also the patient's wedding anniversary, and emotional support was provided to her husband.

DISCUSSION

As described in our case series, APCUs are ideally suited to manage the complex and challenging PC needs of advanced cancer patients and their families. We presented only a single day to illustrate how effective APCUs are in controlling severe symptoms via various modes of treatment, providing acute medical care for patients who are no longer candidates for further aggressive chemotherapy regimens but still not inclined to go to hospice, and transitioning to hospice care.

In describing the role of the APCU at the Cleveland Clinic, Lagman and colleagues specified seven essential components of PC, ranging from controlling symptoms to transitioning patients to hospice (Lagman et al., 2008). With this list in mind, we described the complexity involved in delivering interdisciplinary PC and the diagnostic and therapeutic interventions applied to managing the challenges of caring for these patients (see Table 1).

APCUs differ significantly from an inpatient hospice setting (Hui et al., 2010b). Although the focus is the same with regard to controlling symptoms, alleviating suffering, and maintaining comfort until death when appropriate, patients in the APCU may

be admitted even before cancer therapies are discontinued. Medical procedures that are otherwise unavailable for patients in the traditional palliative hospice model or in long-term care facilities are carried out when necessary (Table 1). This illustrates that APCUs can deliver expert PC and address important internal medicine issues. The APCU is also the ideal setting for delivering sophisticated PC for issues such as somatization, chemical coping, and delirium because the nursing staff and other members of the team are trained in managing these issues (Stone et al., 2011; Mori et al., 2012; Reddy et al., 2012).

This interdisciplinary approach has been shown to be effective in improving pain and other symptoms, emotional and spiritual distress, communication, and overall satisfaction with medical care. Suffering is rarely an isolated phenomenon and is an expression of distress in various domains (Yennurajalingam et al., 2008; Casarett et al., 2011). Daily rounds and the involvement of the whole IDT allow delivery of high-impact multimodal interventions in these different domains. Such interventions would not be possible in a consultative service, where PC is not the primary medical team and patients are scattered throughout the hospital (Casarett et al., 2011). In conclusion, we strongly recommend the establishment of more APCUs in acute care facilities where medical interventions are implemented concomitantly with psychosocial counseling, family meetings, physical and occupational therapy, and art

and music therapy to relieve the suffering of patients and their families'.

DISCLOSURES AND ACKNOWLEDGMENTS

E.B. is supported by National Institutes of Health, National Institute of Nursing Research Grant No. R01 NR010162-01A1. S.Y. is supported in part by American Cancer Society Grant No. RSG-11-170-01-PCM. This research is supported in part by the MD Anderson Cancer Center Support Grant CA016672. We would like to thank Markeda Wade for editing the manuscript.

REFERENCES

- Casarett, D., Johnson, M., Smith, D., et al. (2011). The optimal delivery of palliative care: A national comparison of the outcomes of consultation teams vs. inpatient units. *Archives of Internal Medicine*, *171*(7), 649–655.
- Elsayem, A., Swint, K., Fisch, M.J., et al. (2004). Palliative care inpatient service in a comprehensive cancer center: Clinical and financial outcomes. *Journal of Clinical Oncology*, *22*(10), 2008–2014.
- Elsayem, A., Calderon, B.B., Camerines, E.M., et al. (2011). A month in an acute palliative care unit: Clinical interventions and financial outcomes. *The American Journal of Hospice & Palliative Care*, *28*(8), 550–555.
- Ferrell, B., Connor, S.R., Cordes, A., et al. (2007). The national agenda for quality palliative care: The National Consensus Project and the National Quality Forum. *Journal of Pain and Symptom Management*, *33*(6), 737–744.
- Higginson, I.J., Finlay, I.G., Goodwin, D.M., et al. (2003). Is there evidence that palliative care teams alter end-of-life experiences of patients and their caregivers? *Journal of Pain and Symptom Management*, *25*(2), 150–168.
- Hui, D., Elsayem, A., de la Cruz, M., et al. (2010a). Availability and integration of palliative care at U.S. cancer centers. *JAMA: The Journal of the American Medical Association*, *303*(11), 1054–1061.
- Hui, D., Elsayem, A., Palla, S., et al. (2010b). Discharge outcomes and survival of patients with advanced cancer admitted to an acute palliative care unit at a comprehensive cancer center. *Journal of Palliative Medicine*, *13*(1), 49–57.
- Lagman, R., Walsh, D., Heintz, J., et al. (2008). A day in the life: A case series of acute care palliative medicine—the Cleveland model. *The American Journal of Hospice & Palliative Care*, *25*(1), 24–32.
- Mori, M., Elsayem, D., Reddy, S.K., et al. (2012). Unrelieved pain and suffering in patients with advanced cancer. *The American Journal of Hospice & Palliative Care*, *29*(3), 236–240.
- Reddy, A., Hui, D., Bruera, E., et al. (2012). A successful palliative care intervention for cancer pain refractory to intrathecal analgesia. *Journal of Pain and Symptom Management*, *44*(1), 124–130.
- Stone, C., Lawlor, P.G., Nolan, B., et al. (2011). A prospective study of the incidence of falls in patients with advanced cancer. *Journal of Pain and Symptom Management*, *42*(4), 535–540.
- Teno, J.M., Clarridge, B.R., Casey, V., et al. (2004). Family perspectives on end-of-life care at the last place of care. *JAMA: The Journal of the American Medical Association*, *291*(1), 88–93.
- Wright, A., Zhang, A.B., Ray, A., et al. (2008). Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. *JAMA: The Journal of the American Medical Association*, *300*(14), 1665–1673.
- Yennurajalingam, S., Dev, R., Lockey, M., et al. (2008). Characteristics of family conferences in a palliative care unit at a comprehensive cancer center. *Journal of Palliative Medicine*, *11*(9), 1208–1211.