

In the Clinic

Palliative Care

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The content of *In the Clinic* is drawn from the clinical information and education resources of the American College of Physicians (ACP), including PIER (Physicians' Information and Education Resource) and MKSAP (Medical Knowledge and Self-Assessment Program). *Annals of Internal Medicine* editors develop *In the Clinic* from these primary sources in collaboration with the ACP's Medical Education and Publishing divisions and with the assistance of science writers and physician writers. Editorial consultants from PIER and MKSAP provide expert review of the content. Readers who are interested in these primary resources for more detail can consult <http://pier.acponline.org>, http://www.acponline.org/products_services/mksap/15/?pr31, and other resources referenced in each issue of *In the Clinic*.

CME Objective: To review current evidence on palliative care.

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Palliative medicine focuses on quality of life and the alleviation of symptoms in patients with serious illness. It aims to consider the physical, mental, spiritual, and social well-being of patients and their families in order to maintain hope while ensuring patient dignity and respecting autonomy. Palliative care medicine encompasses both consultative palliative care for patients with serious illnesses, and hospice care for patients at the end-of-life (EOL). Palliative care is appropriate at any stage of a serious illness whether the goal is cure or maximizing quality of life. It is a fundamental component of the practice of medicine in all disciplines and at all levels of health. When cure or life prolongation is no longer possible, palliative care becomes the central component of treatment. Whereas hospice is only appropriate for patients whose prognosis is 6 months or less, consultative palliative care can assess and treat patients anywhere along the chronic disease trajectory, regardless of prognosis.

The number of palliative care programs has grown significantly over the past decade, largely to meet deficiencies noted in the 1990s that timely discussions and decisions about goals of care among patients with serious illnesses were uncommon and that pain and other symptoms were routinely undertreated (1). To meet these deficiencies, along with the increasing number of Americans with chronic illness, the number of palliative care teams has grown by over 400% from 2000 through 2011. Recent studies suggest that palliative care and hospice are associated with improved survival.

Palliative Care vs. Hospice

How does palliative care differ from hospice?

Whereas hospice is only appropriate for patients who agree to give up insurance coverage for life-prolonging treatment and meet a Medicare-determined prognosis of 6 months or less, consultative palliative care can assess and treat patients anywhere along the disease trajectory, regardless of prognosis (see the Box). Unlike hospice care, consultative palliative care focuses on goal-setting and symptom needs alongside ongoing curative or disease-directed therapies. While working alongside primary care and subspecialty providers, consultative palliative care can assist in managing complex symptoms, conducting family meetings, and assisting in difficult conversations. This is especially valuable when the multiple, lengthy discussions required could strain a primary care or hospital physician's schedule and resources. Also, consultative palliative care works in an interdisciplinary fashion, thus providing additional resources (e.g., chaplains, social workers, physical therapists, pharmacists) to aid the

medical team in addressing a patient's needs. Whereas hospice care is delivered in patient homes or long-term care facilities, the vast majority of consultative palliative care is provided in hospitals or an outpatient clinic setting. Lastly, hospice inherently recognizes a trajectory toward EOL; consultative palliative care strives to address complex symptom and quality-of-life needs to support the primary care physician before patients become terminally ill.

Which patients should be considered for palliative care?

The Center to Advance Palliative Care recently put forth a consensus document to identify patients in need of a palliative care assessment (Table 1) (2). Clinicians should periodically review a patient's unmet needs regarding symptom management, independence and functional abilities, advance care planning, psychosocial distress, spiritual and existential issues, caregiver and family support, and prognostic understanding. If these needs are not being met, consultative palliative care may be appropriate.

Palliative Care vs. Hospice

Consultative palliative care

- Addresses goals of care and focuses on quality of life, family support, and symptom management
- Can begin with onset of symptoms from a serious, life-limiting disease

Hospice

- A specific type of palliative care provided when a patient is terminally ill (i.e., life expectancy < 6 months if the disease runs its expected course)
- Provides team-based support services to patient, family, and caregivers in the home or an institution

What treatments are prohibited or allowed when patients are receiving palliative care?

Unlike hospice, there are no treatment restrictions for patients who choose palliative care, including curative or life-prolonging treatments. Treatments that relieve symptoms may also prolong life (e.g., supplemental oxygen in hypoxic patients). At other times, disease-modifying treatments may cause symptoms or impose a burden that negatively affects quality of life (e.g., cytotoxic chemotherapy or hemodialysis in some patients). Provided they help a patient achieve his or her goals, hemodialysis, chemotherapy, radiation therapy, blood transfusions, and surgical procedures may all be within the purview of palliative medicine.

How is palliative care paid for by most insurance and how does this differ from hospice?

Funding and reimbursement for palliative care differ from those of hospice. Palliative medicine is recognized as a board-certified subspecialty by the American Board of Medical Specialties. Accordingly, palliative care consultations are usually reimbursed similarly to other subspecialty consultations.

Whereas consultative palliative care is billed through a fee-for-service model, hospice uses a geographically prorated per diem payment system. Regardless of the duration of patient enrollment in hospice, both nonprofit and for-profit hospices receive a set amount per day (often about \$150 US) to provide all the medication, equipment, and specialty services that the patient requires for comfort and quality of life. Once admitted to a hospice program, this per diem rate must cover all disease-modifying treatments that assist in symptom control, such as antibiotics, blood transfusions, radiation therapy for local pain, and octreotide for bowel obstruction. In hospice,

Table 1. Suggested Criteria for Consideration of a Palliative Care Assessment at Time of Hospital Admission*

Criteria	Definition
Surprise	You would not be surprised if the patient died within 12 months
Frequent admissions	Repeated admission for same condition within several months
Complex symptoms	Admission for difficult symptoms or psychological need
Complex care requirement	Functional dependence or complex home support needed
Failure to thrive	Decline in functional status, weight, or ability to care for self
Advance care need	No history of completing an advance care planning document or having a discussion
Limited social support	Family stress, chronic mental illness, lack of caregivers
Limited prognosis	Metastatic or locally advanced cancer, hip fracture with cognitive impairment, or out-of-hospital cardiac arrest; any <i>one</i> of these criteria may be sufficient to warrant consultation; multiple criteria need not be present

*Data from reference 2.

cost is often a barrier to receiving these expensive, but potentially palliative or life-prolonging, interventions.

What tools are available to assist in prognostication or estimating survival in seriously ill patients?

Prognostication is difficult in many disease states and relies on physician experience with seriously ill patients, comfort using validated prognostic scales, understanding of concomitant or comorbid conditions that may augment prognosis, correct identification of the imminent dying syndrome, and familiarity with death trajectories.

Basic assessment of functional status with a Karnofsky Performance Score (KPS) or the Eastern Cooperative Oncology Group (ECOG) Performance Status (PS) may help prognostication in advanced cancer and HIV/AIDS, but are not useful in the chronic degenerative diseases (heart failure, chronic obstructive pulmonary disease, dementia, end-stage renal failure) that account for more than 75% of deaths in the United States (3).

1. A controlled trial to improve care for seriously ill hospitalized patients. The study to understand prognoses and preferences for outcomes and risks of treatments (SUPPORT). The SUPPORT Principal Investigators. *JAMA*. 1995;274:1591-8. [PMID: 7474243]
2. Weissman DE, Meier DE. Identifying patients in need of a palliative care assessment in the hospital setting: a consensus report from the Center to Advance Palliative Care. *J Palliat Med*. 2011;14:17-23. [PMID: 21133809]
3. Fox E, Landrum-McNiff K, Zhong Z, Dawson NV, Wu AW, Lynn J. Evaluation of prognostic criteria for determining hospice eligibility in patients with advanced lung, heart, or liver disease. SUPPORT Investigators. Study to Understand Prognoses and Preferences for Outcomes and Risks of Treatments. *JAMA*. 1999;282:1638-45. [PMID: 10553790]

Other prognostic tools, such as the Palliative Performance Score, may be helpful in determining whether a patient has days or weeks versus weeks to months to live. Disease-specific prognostic tools, such as the Mitchell Mortality Index for dementia or the Seattle Heart Failure Score for heart failure, may be helpful but are most often used in a subspecialty palliative care setting in collaboration with the disease-specific subspecialist treating the patient. A patient's understanding of the limitations of available prognostic tools is important.

Who should be part of the palliative care team?

Effective palliative care requires an interdisciplinary team, which at a minimum usually involves physicians and advance practice nurses but increasingly includes chaplains, social workers, psychiatrists and psychologists, dietitians, pharmacists, and physical and occupational therapists. Other services that the team may call upon are music and pet therapists, mindfulness training practitioners, massage therapists, child life experts, and bereavement/grief counselors.

Palliative Care vs. Hospice... Palliative care and hospice are related but distinct forms of palliative medicine. They are not synonymous and should not be reserved only for patients who are imminently dying. Palliative care focuses on symptom management, quality of life, and delineating the goals of care in patients with serious illness, whether the goal is cure, life prolongation, or maximizing quality of life and function. Hospice is a special type of palliative care, reserved for patients in the last 6 months of life. All patients with serious illnesses should have goals of care elucidated and symptoms assessed and managed. If goals remain unclear and symptoms are difficult to manage, consultation with a palliative care specialist may be warranted.

CLINICAL BOTTOM LINE

Management of Common Symptoms

4. Abernethy AP, Currow DC, Frith P, Fazekas BS, McHugh A, Bui C. Randomised, double blind, placebo controlled crossover trial of sustained release morphine for the management of refractory dyspnoea. *BMJ*. 2003;327:523-8. [PMID: 12958109]
5. Currow DC, McDonald C, Oaten S, Kenny B, Allcroft P, Frith P, et al. Once-daily opioids for chronic dyspnea: a dose increment and pharmacovigilance study. *J Pain Symptom Manage*. 2011; 42:388-99. [PMID: 21458217]
6. Mahler DA, Selecky PA, Harrod CG. Management of dyspnea in patients with advanced lung or heart disease: practical guidance from the American college of chest physicians consensus statement. *Pol Arch Med Wewn*. 2010;120:160-6. [PMID: 20502400]

How should pain be evaluated and managed?

Nonopioid treatments, including aspirin, acetaminophen, or nonsteroidal anti-inflammatory drugs (NSAIDs), are used for mild pain (score of 1–3 on the 0–10 pain intensity scale). Moderate pain (pain score of 4–6) is treated with a combination of opioids and nonnarcotic pain relievers. If these agents are combined in a single pill (such as oxycodone and acetaminophen), care must be taken to avoid inadvertent overdosing of the nonopioid (acetaminophen) component when need for the opioid ingredient increases. Similarly, patients must be cautioned regarding simultaneous use of nonprescription formulations of acetaminophen (or other nonopioid components) to avoid unintentional overdose. The daily cumulative acetaminophen dose (< 4 g) limits the dosing of the opioid in

combination medications, with a recommended limit of 2 g for patients with liver disease. Severe pain (pain score 7–10) is primarily treated by opioids. Adjunct therapies, such as NSAIDs, corticosteroids, antiepileptics, and antidepressants with benefit in certain pain syndromes (e.g., neuropathic pain), can be used at any point. Commonly used noninjected opioids are detailed in Table 2 (morphine equivalents are given in the Box).

Oral administration of opioids is preferred because it is convenient and inexpensive and produces stable blood levels. Intramuscular injections are not recommended because of the associated pain, unreliable absorption, and relatively long interval to peak drug concentrations. If a parenteral route is needed, intravenous or subcutaneous administration is preferred. Intravenous

administration provides the most rapid onset of analgesia but has the shortest duration of action. Transdermal opioid patches are useful for chronic pain management in opioid-tolerant patients. Codeine, tramadol, and morphine should be used with caution in patients with renal insufficiency. Short-acting opioids alone are often insufficient to manage chronic pain. Here, long-acting opioids, such as extended-release morphine, extended-release oxycodone, and transdermal fentanyl patches, can be used to ensure basal pain relief throughout the day. A shorter-acting opioid should be prescribed as needed to relieve breakthrough pain. Combination opioid and acetaminophen preparations should be avoided to prevent unintended acetaminophen overdose. Using short-acting opioids and acetaminophen in separate tablets may allow the dose of opioid to be increased appropriately while the amount of acetaminophen is kept fixed. To avoid overmedication, start the long-acting basal pain medication by calculating the total short-acting

opioid dose in a 24-hour period (based on morphine equivalents) and dose the long-acting drug at 50%–75% of the 24-hour total (see the Box). The long-acting opioid may be increased every 3 to 4 days if breakthrough medication is frequently required. When calculating a breakthrough opioid dose, clinicians should consider the amount of opioids that a patient uses in a 24-hour period and should prescribe 10%–15% of that daily requirement as an immediate-release breakthrough medication on an as needed basis. As long-acting opioids may take 1 to 3 days to take full effect, the patient's mental status should be monitored closely. Ideally, to allow ease in dose titration, the same agents should be used for relief of both breakthrough and basal pain.

Several opioids should be avoided when treating chronic pain. Meperidine is rarely appropriate for oral use because of variable oral bioavailability and accumulation of neurotoxic metabolites with prolonged use at high doses or in cases of renal failure. This accumulation lowers the seizure

Morphine Equivalents

The "1:2:3" rule

The following drugs are equivalent:

- 1 mg IV morphine
- 2 mg PO oxycodone
- 3 mg PO morphine

The "30:20:10:7.5:1.5" rule is a corollary of the "1:2:3 rule" but includes hydromorphone

- 30 mg PO morphine
- 20 mg PO oxycodone
- 10 mg IV morphine
- 7.5 mg PO hydromorphone
- 1.5 mg IV hydromorphone

Rather than memorizing individual drug potencies, using these ratios allows clinicians to calculate equivalent dose using stoichiometry:

Example: Patient is on oxycodone SR 20 mg every 12 h and morphine IR 10 mg every 4 hours, 4 times a day. How many "oral morphine equivalents" is this?

- Oxycodone 20 mg x 2 doses = 40 mg x (30 mg PO morphine/20 mg PO oxycodone) = 60 oral morphine equivalents
- Morphine 10 mg x 4 doses = 40 oral equivalents

Patient is receiving 100 oral morphine equivalents.

IR = immediate release;
IV = intravenous; PO = oral;
SR = sustained release.

Table 2. Commonly Used Noninjected Opioids in Palliative Care

Agent	Form Available	Onset	Duration	Note
Morphine	Immediate release (IR) (tablet, liquid, or concentrated liquid)	15–30 min, peak at 60 min	4 h	Can be given rectally; "sublingual" liquid is absorbed in the gut, <i>not</i> in the buccal mucosa; avoid in renal failure
	Sustained release (SR) (tablet)	2–4 h	8–12 h	Tablets cannot be crushed; can be given orally or rectally; avoid in renal failure
Oxycodone	IR (tablet, liquid, or concentrated liquid)	15–30 min, peak at 60 min	3–6 h	Safer in renal failure than morphine, but still may not be tolerated
	SR (tablet)	1 h	8–12 h	SR morphine should be tried first due to cost considerations
Fentanyl	IR (buccal tablet, "film" or "lozenge" or intranasal)	5–15 min	4 h (max 4 doses/d)	Not recommended for opioid-naïve patients; expert consultation recommended before use
	SR (transdermal patch)	12–18 h (for initial dose)	72 h (less in some patients)	Patients should be on at least 60 oral morphine equivalents before starting; need 3 days after placement to assess benefit before adjusting; temperature can alter absorption (i.e., fever increases absorption)
Hydromorphone	IR (tablet or liquid)	15–30 min, peak at 60 min	4 h	Safer in renal failure and hepatic failure; can be used orally or rectally
	SR (tablet)	6–8 h	24 h	Only available in 1 SR form in the U.S.; expert consultation recommended before use

Calculating Short- and Long-Acting Opioid Doses

1. Convert the 24-hour dose of each medication to "oral morphine equivalents" (OMEs).
2. If the short-acting agent is different from the long-acting agent, the calculated dose of the short-acting agent in OMEs should be reduced by 50% because of incomplete cross-tolerance.
3. If the long- and short-acting agents are the same drug, no adjustment for incomplete cross-tolerance is required.
4. Provide a breakthrough dose of between 10%–15% of the combined total daily OME dose; this may be given as a short-acting opioid every 1–2 hours. No reduction in this calculation is required for incomplete cross-tolerance.

For example: A patient receiving oxycodone ER 30 mg every 12 hours continues to require hydromorphone 4 mg tablets every 4 hours for breakthrough (she is using 6 doses a day). How should one increase the long acting medication dose?

Step 1: Calculate oral morphine equivalents (OME) for each drug:

- Long-acting agent: $(2 \times 30 \text{ mg oxycodone/day}) \times (30 \text{ mg PO morphine/} 20 \text{ mg PO oxycodone}) = 90 \text{ OME}$
- Short-acting agent: $(6 \times 4 \text{ mg hydromorphone /day}) \times (30 \text{ mg PO morphine/} 7.5 \text{ mg PO hydromorphone}) = 96 \text{ OME}$

Steps 2 and 3: Here, the short and long-acting agents are different drugs, so the short-acting daily dose in OME should be reduced by 50% ($96 \times 0.5 = 48 \text{ OME}$). Sum the short and long-acting OME daily doses ($90 + 48 = 138 \text{ OME}$). Calculate the new total daily dose of the long-acting to be given: $118 \text{ OME} \times (20 \text{ mg oxycodone/} 30 \text{ mg PO morphine}) = 92 \text{ mg oxycodone}$. This may be given as 40 to 50 mg oxycodone ER every 12 hours.

Step 4: Calculate the new breakthrough dose: use total current OMEs from step 1 (no adjustment): $90 \text{ OME} + 96 \text{ OME} = 186 \text{ OME}$. Use 10 – 15% for breakthrough: (~ 18 to 28 OME) $\times (20 \text{ mg PO oxycodone} / 30 \text{ mg PO morphine}) = 12\text{--}19 \text{ mg PO oxycodone}$ immediate release as needed every 1–2 hours for breakthrough pain.

threshold and causes neurotoxic effects, including tremors, twitching, and nervousness. Partial opioid-receptor agonists and agonist–antagonist agents, such as buprenorphine, dezocine, nalbuphine, pentazocine, and butorphanol, may cause delirium and provide less incremental analgesia when used alone. Methadone is difficult to titrate, has an onset of action far shorter than its half-life, poses risk of inadvertent overdose and should only be administered by providers experienced in its use.

How should the side effects of opioid analgesics be managed?

Opioids have predictable side effects, including nausea, constipation, pruritus, and sedation. Sedation usually dissipates over a 1- to 2-day period as tolerance develops; significant sedation is often reversible with dose reduction or rotation to another opioid. Stimulant or osmotic laxatives should be prescribed concurrently for patients who use opioids daily to help prevent constipation, and laxative doses can be adjusted to a patient's bowel habits. Stool softeners alone are generally ineffective. A combination of docusate and either senna or bisacodyl is a popular initial prophylactic therapy. Osmotic laxatives, such as magnesium citrate, lactulose, and polyethylene glycol, are used if the prophylactic regimen does not produce daily bowel movements at least every other day. Polyethylene glycol powder is inexpensive, well-tolerated, and effective. Lactulose and magnesium citrate are expensive and less well-tolerated. Opioid-related itching and urticaria are rare and caused by histamine release and may be relieved by switching to another opioid. A nonsedating antihistamine may help with pruritus. Opioid-induced nausea is usually temporary, and tolerance typically develops in 3–5 days. It is best treated with antidopaminergic antiemetics, such as metoclopramide or prochlorperazine. Corticosteroids or ondansetron may

be useful in refractory cases. Some patients will have less nausea if the opioid blood level remains constant rather than peaking periodically throughout the day. Changing the dosing interval of an immediate-release preparation from every 4 hours to a smaller dose every 3 hours may level out blood levels and reduce nausea and vomiting. Changing to sustained-release or the transdermal route also produces more constant opioid blood levels and may be helpful.

What additional measures should be considered in pain due to specific causes?

Visceral pain is usually dull, colicky, and poorly localized. It is typically caused by distention, torsion, or inflammation and most frequently occurs in conjunction with pancreatic, hepatic, renal, or intestinal cancer. The discomfort may be associated with autonomic symptoms, such as nausea or diaphoresis. Referred pain may arise from liver or gallbladder pain and may radiate to the right shoulder. Visceral pain can also be caused by severe constipation due to underlying disease, medications, and immobility. Palliative surgery can be useful to relieve visceral pain caused by bowel obstruction. Blockade of the celiac plexus, sympathetic plexus, or splanchnic nerves may also be useful in patients with pain refractory to opioid analgesics.

Neuropathic pain is usually caused by direct pathologic changes to the central or peripheral nervous system. In terminally ill patients, this is usually related to cancer causing nerve root compression or encroachment on a plexus of nerve fibers. Corticosteroids are effective in reducing tumor swelling and edema and may reduce the pain of obstruction while improving mood, appetite, and energy levels. Corticosteroids can reduce edema and lyse certain tumors, thereby enhancing the analgesic effect of nonopioid and opioid drugs.

They are effective in managing malignant infiltration of the brachial and lumbar plexus and spinal cord compression, as well as headache from brain tumors. As an adjunct, a trial of dexamethasone 2–4 mg twice daily is a reasonable starting point.

Peripheral neuropathy or nerve root impingement is a common source of discomfort in patients with or without cancer. Neuropathic pain may be constant or episodic and is usually characterized as burning, tingling, stabbing, or shooting. Several therapies are effective for neuropathic pain, including opioids. Tricyclic antidepressants, venlafaxine, and duloxetine may be especially useful in patients with both neuropathic pain and depression. Gabapentin and pregabalin are also effective for neuropathic pain. A reasonable initial trial might begin with nortriptyline 10 mg nightly increasing by 10 mg every 3–5 days up to 50 mg nightly. If tolerated, this can be increased to 100 mg nightly, or if side effects develop (e.g., anticholinergic), a second agent, such as gabapentin or pregabalin, may be tried. Slow titration of medications is encouraged in elderly patients or in patients who previously experienced side effects due to rapid titration.

Lastly, bone metastases represent a special situation in which other adjunct measures, such as radiation therapy, corticosteroids, bisphosphonates, or interventional procedures (e.g., cryoablation or radiofrequency ablation) may provide additional pain relief.

What treatments are most effective for relieving dyspnea?

Dyspnea is common in palliative care and is often caused directly by cardiac or pulmonary processes. However, it may also be associated with debilitation; wasting syndromes; neurodegenerative disorders; or progressive, chronic disease.

Potential, reversible causes, including symptomatic pleural effusions, pneumonia, severe anemia, and ascites, should be treated. The patient's subjective report of dyspnea, not only the oxyhemoglobin saturation, should prompt treatment. Dyspnea severity often correlates poorly with respiratory rate, arterial blood gas, oxyhemoglobin saturation, or use of accessory musculature.

The gold standard pharmacologic treatment for dyspnea is low-dose oral morphine, given as a cumulative dose of 10–20 mg per day (4, 5) and has the best proven efficacy in patients with chronic respiratory disease. Although opioids may cause respiratory depression if the dosage is increased too quickly in an opioid-naïve patient, several studies have shown such treatment for dyspnea does not lead to a decreased respiratory rate, increased carbon dioxide retention, or earlier death. Indeed, the American College of Chest Physicians has advocated for aggressive treatment of dyspnea, including with opioids, and their consensus statement discusses how this can be done safely (6). When opioids are selected and dosed according to the patient's renal and hepatic function as well as opioid tolerance, the discomfort of dyspnea is palliated without resultant respiratory depression. Other opioids aside from morphine (e.g., fentanyl, hydromorphone) have not been as well-studied but may be considered when morphine is contraindicated.

In an observational study of 83 opioid-naïve patients receiving palliative care (54% with chronic obstructive pulmonary disease [COPD]), sustained-release oral morphine was started at 10 mg/24 hour and up-titrated as needed to a maximum dosage of 30 mg/24 hours. Sixty-two percent of patients had at least a 10% reduction in reported dyspnea with daily morphine, 70% of whom required only 10 mg of sustained-release morphine daily (number needed to treat, 1.6; number needed to harm, 4.6). Although arterial blood gas

testing was not believed to be appropriate in this sample, no episodes of respiratory depression were observed and no patient required hospitalization associated with morphine. One in three patients continued to derive benefit at 3 months (5).

In contrast to opioids, benzodiazepines are not consistently useful for treating dyspnea, but may be beneficial in patients whose dyspnea is worsened by anxiety. Supplemental oxygen may be useful in relieving dyspnea in terminally ill patients with hypoxemia, but is no better than medical room air in patients without hypoxemia (7).

A double-blind, randomized, placebo-controlled study of 239 patients with refractory dyspnea and baseline arterial oxygen partial pressure > 55 mm Hg compared 7 days of oxygen or room air at 2 liters per minute via nasal cannula. No difference between the 2 groups was observed in the relief of dyspnea (7).

Nonpharmacologic interventions, such as fans, have been suggested to help with breathlessness.

A systematic review of 47 studies evaluating nonpharmacologic interventions for breathlessness concluded that breathing training, gait aids, neuroelectrical muscle stimulation, and chest wall vibration were effective for relieving breathlessness, whereas data were insufficient to support music therapy, relaxation, fan use, counseling, or psychotherapy (8)

How should clinicians select antiemetics in patients with nausea?

Nausea may be caused by several processes, and understanding its origin helps to guide effective therapy. Most recommendations come from small studies or expert opinion based on putative neurotransmitters (9). Opioid-induced nausea may respond best to alterations of dopaminergic signaling with either metoclopramide or prochlorperazine. Chemotherapy-induced nausea is more often responsive to serotonin antagonists (e.g., ondansetron, granisetron). Corticosteroids may be helpful adjuvants to other antiemetics in chemotherapy

regimens and are the primary treatment for nausea due to increased intracranial pressure. For incomplete mechanical bowel obstruction, the standard of care is dexamethasone, octreotide, and metoclopramide; for higher grade obstructions, venting gastrostomy tubes in addition to octreotide may be required. Reduced motility may be best relieved by metoclopramide, whereas radiation-induced nausea responds best to serotonin antagonists. Anticholinergic antihistamines (e.g., scopolamine, meclizine, and diphenhydramine) are most helpful in the setting of motion-associated nausea and vomiting, or when lesions are present in the posterior fossa (e.g., cerebellar stroke or metastases) (9). If nausea or vomiting is persistent, an agent from a different class that may work synergistically should be added, rather than another one with a similar mechanism of action that may increase side effects.

How should agitation and distress be evaluated and treated?

When they are seriously ill, patients may be agitated for various reasons, including delirium, pain, anxiety, or dyspnea. Assessing patients for reversible causes of agitation, such as pain, urine retention, or fecal impaction, is important to ensure symptom palliation and comfort first, before assuming delirium is the underlying cause. Patients distressed may result in hyperactivity or apathy and withdrawal; moaning or grunting; use of accessory muscle for breathing; or tachypnea, tachycardia, or diaphoresis. Unfortunately, these signs and symptoms are nonspecific, do not always correlate with distress, and warrant further evaluation and appropriate intervention. Irregular breathing patterns (e.g., Cheyne-Stokes respirations, tachypnea after a stroke or in the setting of acidosis) and tracheal secretions (“death rattle”) may be interpreted by loved ones as distress or struggling. The clinician

7. Abernethy AP, McDonald CF, Frith PA, Clark K, Herndon JE 2nd, Marcello J, et al. Effect of palliative oxygen versus room air in relief of breathlessness in patients with refractory dyspnoea: a double-blind, randomised controlled trial. *Lancet*. 2010;376:784-93. [PMID: 20816546]
8. Bausewein C, Booth S, Gysels M, Higginson I. Nonpharmacological interventions for breathlessness in advanced stages of malignant and nonmalignant diseases. *Cochrane Database Syst Rev*. 2008;CD005623. [PMID: 18425927]
9. Wood GJ, Shega JW, Lynch B, Von Roenn JH. Management of intractable nausea and vomiting in patients at the end of life: “I was feeling nauseous all of the time . . . nothing was working”. *JAMA*. 2007;298:1196-207. [PMID: 17848654]
10. Witlox J, Eurelings LS, de Jonghe JF, Kalisvaart KJ, Eikelenboom P, van Gool WA. Delirium in elderly patients and the risk of postdischarge mortality, institutionalization, and dementia: a meta-analysis. *JAMA*. 2010;304:443-51. [PMID: 20664045]
11. Lawlor PG, Gagnon B, Mancini IL, Pereira JL, Hanson J, Suarez-Almazor ME, et al. Occurrence, causes, and outcome of delirium in patients with advanced cancer: a prospective study. *Arch Intern Med*. 2000;160:786-94. [PMID: 10737278]

plays a key role in educating these persons regarding normal and expected signs of death and dying versus the atypical signs noted above that may require intervention. When patients are actively dying (last 24–48 hours of life), prophylactic anticholinergics (e.g., scopolamine) can be given to reduce or prevent distressing tracheal secretions. Although standard of care, the evidence on this practice is equivocal.

How should delirium be managed in seriously ill patients?

Delirium is common in terminally ill patients and is associated with worse outcomes (survival and morbidity) in elderly patients (10) as well as in those with advanced cancer (11), although the mechanism is not well-understood. Delirium, an acute change in mental status, may present with agitation or hypoactivity and must be distinguished from dementia, a chronic change in cognitive function. Delirium, whether agitated or hypoactive, must be treated to ensure patient comfort and safety, and management may be essential in relieving the distress of loved ones. It is important for clinicians to recognize delirium and identify potentially reversible causes (e.g., side effects of psychoactive drugs such as benzodiazepines, untreated pain, urinary obstruction or bowel impaction, sensory deprivation from missing eye glasses or ear wax).

A meta-analysis of 42 "high-quality" observational studies of elderly patients evaluated "poor outcomes" as defined as mortality, institutionalization, or dementia. The authors concluded that delirium was associated with poor outcome independent of other factors, such as age, sex, or comorbid conditions (10).

Delirium in terminally ill patients can generally be treated with small doses of haloperidol. Agitation and restlessness that does not respond to haloperidol will typically respond to the more sedating chlorpromazine 10–25 mg PO or SQ.

Benzodiazepines are less effective than neuroleptic agents in the treatment of delirium and are associated with a greater incidence of paradoxical reactions, including worsened delirium (12). Non-pharmacologic methods, such as reorientation, are also useful.

Is depression a normal part of serious illness and when should it be treated?

Depression may be present in terminally ill patients, and physicians should have a low threshold to assess and consider therapy. A demoralized or transiently depressed mood lasting a few days to a few weeks may be normal in patients facing serious, life-threatening illness. Symptoms persisting for several weeks and meeting diagnostic criteria for depression, however, are neither normal nor expected (see the Box). Treatment of depression with selective serotonin reuptake inhibitors is usually safe, but drug–drug interactions should be considered. Psychostimulants, such as methylphenidate, are safe, fast-acting, and effective in medically ill populations without major contraindications (e.g., unstable angina, malignant hypertension, tachyarrhythmia). Prognosis should also be considered, because treatment may require several weeks to achieve effect (13). Mirtazapine at low and high doses may help treat depression in patients with concomitant insomnia or anorexia, respectively. Tricyclic antidepressants, duloxetine, or venlafaxine may be good choices for depression with concomitant neuropathic pain.

Seriously ill patients with active suicidal ideation, such as through a request for aid in hastening death, often have fears of unmanageable symptoms, loss of control, or other stressors. Suicidal ideation and its symptoms or underlying concerns should be assessed immediately, and referral to an appropriate mental health or palliative care professional should be considered (13).

12. Breitbart W, Marotta R, Platt MM, Weisman H, Derevenco M, Grau C, et al. A double-blind trial of haloperidol, chlorpromazine, and lorazepam in the treatment of delirium in hospitalized AIDS patients. *Am J Psychiatry*. 1996; 153:231-7. [PMID: 8561204]
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15. Loprinzi CL, Kugler JW, Sloan JA, Mailliard JA, Krook JE, Wilwerding MB, et al. Randomized comparison of megestrol acetate versus dexamethasone versus fluoxymesterone for the treatment of cancer anorexia/cachexia. *J Clin Oncol*. 1999;17:3299-306. [PMID: 10506633]

Indicators of Depression in Seriously Ill Patients*

Psychological symptoms

- Dysphoria
- Depressed mood
- Sadness
- Tearfulness
- Anhedonia
- Hopelessness
- Helplessness
- Social withdrawal
- Guilt
- Suicidal ideation

Other indications

- Intractable pain or other symptoms
- Somatic preoccupation
- Poor compliance or refusal of treatment
- Treatment with corticosteroids, interferon or other agents

Historical indicators

- Personal or family history of psychiatric illness
- Pancreatic cancer

*Data from reference 13.

When and how should providers approach treatment of anorexia in patients with serious illness?

Reduced appetite and weight loss are common in patients dying of cancer or chronic disease. As eating and enjoying food are essential components of social interaction, a lack of interest in food and poor nutrition are distressing to many families. Pressure may be placed on the patient to eat larger portions even if it is uncomfortable. Caregivers may accuse patients of “giving up” by not forcing themselves to eat. Further, patients may feel guilty by their lack of desire or ability to eat and at causing family members to worry. Educating patients and caregivers on how disease processes cause anorexia and cachexia is helpful in relieving guilt and promoting acceptance of a dying patient’s altered eating habits. A realistic discussion regarding nutrition and hydration in advance directives is also useful. Caregivers should make every effort to allow the patient to participate in the social aspects of meals, realizing that the patient may just enjoy a bite or two of a favorite food.

If prognosis is uncertain and death is not imminent, appetite stimulants may be considered. In cancer-related anorexia, the most commonly studied medications are progestins, such as megestrol (in doses of 400–800 mg/d PO) or medroxyprogesterone (typically 500 mg twice daily by mouth). In a systematic review, some of these medications improved anorexia and promoted weight gain but had no impact on mortality and an uncertain effect on quality of life (14). Side effects include an increased incidence of thromboembolic disease, hyperglycemia, adrenal suppression, and vaginal bleeding. Prokinetic agents, such as metoclopramide (10 mg 4 times daily by mouth at meals and at bedtime), can reduce nausea but do not facilitate weight

gain or relieve anorexia. Short-term corticosteroids (e.g., dexamethasone 2–4 mg PO before breakfast and at midday) have improved nausea and anorexia in patients with advanced cancer in several trials, but few data have been published on their use in palliative care populations. Data on whether dronabinol, fish oil supplements, ghrelin, melatonin, nandrolone, oxandrolone, and NSAIDs are beneficial are limited.

A randomized study of 475 patients with cancer anorexia/cachexia showed that megestrol acetate and dexamethasone were associated with similar appetite enhancement and nonfluid weight gain, both more than flouxymesterone. Dexamethasone was stopped more commonly because of steroid toxicity; megestrol acetate had a higher rate of venous thromboembolism (5% vs. 1% for dexamethasone) (15).

Does artificial nutrition and hydration help patients to feel better or live longer?

Use of enteral and parenteral feeding in terminally ill patients is controversial. Nutritional benefits, such as increasing weight or strength, are most pronounced in patients with good functional status (ECOG PS 0–1) or when nutritional intake is limited in aerodigestive malignancies (e.g., esophageal cancer for which the patient is undergoing concurrent radiation and chemotherapy).

Evidence suggests that enteral feeding has no benefit in patients with advanced dementia in terms of survival, quality of life or decreased risk for aspiration pneumonia. Parenteral nutrition carries such risks as line-associated infection, hyperglycemia, electrolyte imbalances, and fluid overload. There is no evidence that either enteral or parenteral nutrition prolongs or improves the quality of life for patients in the last weeks of life and some evidence suggests harm. Discussing a patient’s nutritional preferences before extreme weight loss and anorexia occur is important and

16. McMahon MM, Hurley DL, Kamath PS, Mueller PS. Medical and ethical aspects of long-term enteral tube feeding. *Mayo Clin Proc.* 2005;80:1461-76. [PMID: 16295026]
17. Hanson LC, Ersek M, Gilliam R, Carey TS. Oral feeding options for people with dementia: a systematic review. *J Am Geriatr Soc.* 2011;59:463-72. [PMID: 21391936]
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19. Smith TJ, Dow LA, Virago E, Khatcheressian J, Lyckholm LJ, Matsuyama R. Giving honest information to patients with advanced cancer maintains hope. *Oncology (Williston Park).* 2010;24:521-5. [PMID: 20568593]

may help to prevent emotional stress for the patient and family later (16). Oral nutritional supplements

may be considered if consistent with the patient's goals of care (17, 18).

Management of Common Symptoms... Moderate to severe pain, particularly in the setting of cancer, is best managed with opioids. Dyspnea is also effectively treated with opioids. In both settings, opioids that are monitored, selected, and dosed appropriately can be used without significant risk for respiratory depression. Treatment of nausea is most effective when tailored to the putative associated neurotransmitters. Anxiety can be problematic for patients, but somatic and nonsomatic contributors to distress should be investigated before pharmacotherapy is instituted. Delirium in EOL scenarios is common and distressing and should be recognized early and treated with neuroleptics over benzodiazepines. Depression is not a normal part of serious illness, and persistent symptoms of depression warrant treatment with psychostimulants or selective serotonin reuptake inhibitors, even in a terminal situation. Anorexia/cachexia is a multifactorial neurohormonal process, and efforts at encouraging oral intake for promoting patient comfort and enjoyment should take preference over parenteral or enteral nutrition, particularly in late-stage disease.

CLINICAL BOTTOM LINE

How should clinicians approach EOL discussions?

Seriously ill patients are commonly reluctant to initiate discussions about goals of care, prognosis, and what to expect with their families and medical providers. They may fear physician abandonment, withdrawal of supportive measures and treatments, and the emotional reactions from loved ones if such concerns are addressed. Physicians should facilitate conversations among patients, families, and other providers to address the patient's wishes and concerns. Such conversations may be emotionally charged and protracted, and may require a series of visits to appropriately address all issues, including preferences for life-sustaining treatments, supportive technologies, and desire for care at home vs. the hospital (see the Box).

Many physicians and families incorrectly believe that initiating conversations on goals of care "takes away hope." Patients need to be assured that these discussions do not imply "giving up," "losing hope," or that there is "nothing left to do." Reminding patients that "hope" is

relative to one's current situation and can be preserved by setting achievable goals (e.g., to control pain, to allow walks in one's neighborhood or other activities that provide enjoyment) often alleviates anxiety and fosters further discussion. Studies suggest that hope is maintained when patients are given truthful prognostic information and treatment options, even when the news is bad (19). Inappropriately avoiding such discussions may limit a patient's ability to fully benefit from treatments of burdensome symptoms or evaluation of emotional concerns. Such avoidance may further rob a patient of the opportunity to complete important tasks of life closure.

A multisite, prospective, longitudinal cohort study of 332 patients and associated caregivers demonstrated that only 37% of patients reported having EOL discussions before baseline assessment, and that EOL discussions were associated with fewer aggressive interventions near death. A key conclusion was that aggressive care was associated with worse patient quality of life and bereavement adjustment for family members (20).

Communication, Psychosocial, and Ethical Issues

Comprehensive discussions on goals of care should include:

- Assessing patient and caregiver understanding of illness and disease-directed treatment options
- Evaluating patient and caregiver appreciation of prognosis, either broadly or detailed, as appropriate
- Developing strategies to treat and address both current and anticipated physical changes, including declining in functional status and new or worsening symptoms
- Chronically patient and caregiver goals, fears, anxieties, and hope
- Assuring that patient and caregiver know what to expect in the normal course of disease

How can physicians assist with advance care planning, including advance directives?

In addition to assessing goals of care and ensuring proper symptom management, a patient's preferences regarding care measures and surrogate decision-making should be addressed. State laws vary regarding default surrogate decision-makers if one was not previously specified by the patient—an advance directive that appoints a durable health care power of attorney or health care proxy may prevent later conflict or confusion. Surrogates should be informed of and agree to support a patient's wishes regarding symptom management and important care preferences as the disease progresses. Surrogates should also know what to do if the patient's condition suddenly deteriorates. Lastly, surrogates should be assured that their role is not to choose or determine the patient's outcome but rather to represent the patient's expressed wishes when he or she can no longer do so. The surrogate experience can be positive, therapeutic, and less stressful when they are empowered to execute a patient's wishes (21). Patients with medical devices (e.g., pacemakers, cardioverter-defibrillators) or who receive chronic life-sustaining treatments (e.g., hemodialysis) require special consideration and

careful advanced care planning to prevent undue medical burden when the harms of these interventions outweigh the benefits.

Ideally, discussions on treatments that no longer achieve the goals should take place when the patient's functional status and quality of life are intact but declining, but before the patient loses the ability to express preferences. Some physicians may feel uncomfortable honoring a patient's request to discontinue treatment (e.g., hemodialysis) for a disorder not related to the underlying cause of death (e.g., cancer). A clinical ethics committee may be helpful in such situations.

What are the legal and ethical differences between withholding or withdrawing life-sustaining treatments and euthanasia or assisted suicide?

Goal-directed, voluntary withdrawal of medical technology is ethically and legally supported, and is not the same as physician-assisted suicide or euthanasia (Table 3). The U.S. Supreme Court and lower courts have consistently articulated that there is no moral, legal, or ethical difference between withdrawing life-sustaining treatments and having never started such treatments. As patients ultimately die of their underlying illness, withholding or withdrawing interventions, such as mechanical ventilation, feeding tubes, and hemodialysis, are considered legally allowable and ethically neutral.

Physician-assisted suicide (also called physician aid in dying) is morally different. Physician-assisted suicide or euthanasia involves the introduction of an external factor that has a primary goal of hastening death independent of the underlying disease process. Euthanasia, or the administration of a lethal drug directly by a clinician, is not legal in the United States. Currently,

Table 3. Legal and Ethical Differences Among Withholding and Withdrawing Life-Sustaining Treatment, Palliative Sedation, Physician-Assisted Suicide, and Euthanasia*

Variable	Withhold Life-Sustaining Treatment	Withdraw Life-Sustaining Treatment	Palliative Sedation and Analgesia	Physician-Assisted Suicide	Euthanasia
Cause of death	Underlying disease	Underlying disease	Underlying disease†	Intervention prescribed by physician and used by patient	Intervention used by physician
Intent/goal of intervention	Avoid burdensome intervention	Remove burdensome intervention	Relieve symptoms	Termination of life	Termination of life
Legal?	Yes‡	Yes‡	Yes	In Oregon and Washington; pending in Montana	No

*Data from reference 22.

†Note "double-effect" (see text).

‡Several states limit the power of surrogate decision-makers regarding life-sustaining treatments.

only 3 states (Oregon, Washington, and Montana) have provisions allowing physician aid in dying. Requests from patients regarding assisted dying should prompt a palliative care evaluation in an attempt to better understand the reasons for the request.

Is palliative sedation ever acceptable?

Palliative sedation is acceptable and justified when the intent of a treatment plan is to alleviate symptoms that cannot be managed in any other way, even though the treatment may unintentionally hasten death due to possible side effects (22). This is often referred to as “double-effect” (Table 3). The intent of palliative treatments should

be congruent with patient wishes to relieve symptoms, must follow standards of care, and must be documented alongside the patient’s or surrogate’s understanding of the potential risks.

Benzodiazepines or anesthetic agents are often used when sedation is required in patients with symptoms or distress refractory to usual measures. This type of sedation is neither experimental nor outside the bounds of the physician’s responsibility to heal. Such use is ethically and legally acceptable, because its primary intent is to relieve suffering. Such care, however, requires the consultation of a palliative care team and often an anesthesia pain service.

Communication, Psychosocial, and Ethical Issues... Early, regular discussions among physicians, patients, and families regarding goals of care and what to expect as the disease progresses are important, help set goals, and help maintain “hope.” It is important to discuss advanced care planning and potential roles for surrogate decision-makers. In cases of intractable suffering, palliative sedation is ethically acceptable. If a patient perceives that the burden of a treatment outweighs its benefits, withdrawing that treatment is the moral equivalent of never having started the treatment.

CLINICAL BOTTOM LINE

What should patients and their families know about palliative care?

Patients and families commonly, and incorrectly, think that hospice and palliative care are the same and that both focus exclusively on the needs of imminently dying patients. They may also incorrectly think that hospice care itself hastens or aims to hasten death. A clinician’s explanation of the rationale for palliative care consultation and explicit statements of the goals of palliative care may allay spoken or unspoken fears, thus allowing for interventions aimed to relieve suffering.

When is the best time to discuss palliative care?

Patient education is a fundamental component of a palliative care

plan. Clinicians should introduce palliative care options long before the patient becomes terminally ill. Such planning helps introduce uncomfortable topics, such as death and dying, and teaches the patients the importance of such planning. There may be opportunities to routinely address advance directives and a durable health care power of attorney document with adults. When clinical situations change, it is key to fully inform patients and their surrogates on the altered condition, prognosis, and treatment options, including comfort measures and the surrogate’s role in supporting the patient’s expressed wishes regarding care decisions.

Patient Education

20. Wright AA, Zhang B, Ray A, Mack JW, Trice E, Balboni T, et al. Associations between end-of-life discussions, patient mental health, medical care near death, and caregiver bereavement adjustment. *JAMA*. 2008; 300:1665-73. [PMID: 18840840]
21. Wendler D, Rid A. Systematic review: the effect on surrogates of making treatment decisions for others. *Ann Intern Med*. 2011;154: 336-46. [PMID: 21357911]
22. Olsen ML, Swetz KM, Mueller PS. Ethical decision making with end-of-life care: palliative sedation and withholding or withdrawing life-sustaining treatments. *Mayo Clin Proc*. 2010;85:949-54. [PMID: 20805544]
23. Schenck AP, Rokoske FS, Durham DD, Cagle JG, Hanson LC. The PEACE Project: identification of quality measures for hospice and palliative care. *J Palliat Med*. 2010;13: 1451-9. [PMID: 21155640]
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25. Reuben DB. Quality indicators for the care of undernutrition in vulnerable elders. *J Am Geriatr Soc*. 2007;55 Suppl 2:S438-42. [PMID: 17910568]
26. Qaseem A, Snow V, Shekelle P, Casey DE Jr, Cross JT Jr, Owens DK, et al; Clinical Efficacy Assessment Subcommittee of the American College of Physicians. Evidence-based interventions to improve the palliative care of pain, dyspnea, and depression at the end of life: a clinical practice guideline from the American College of Physicians. *Ann Intern Med*. 2008; 148:141-6. [PMID: 18195338]

Practice Improvement

What measures do U.S. stakeholders use to evaluate the quality of palliative care?

The most widely used set of quality metrics are the Hospice PEACE set, developed by Hanson and colleagues (23). Covering all 8 domains of palliative care quality established by the National Quality Forum (NQF), this set has served as the model for other supportive oncology (24) and geriatrics metrics (25). Development of NQF-endorsed measures for palliative care are now under way; measures for the Physician Quality Reporting System for the Centers for Medicare & Medicaid Services are expected soon thereafter.

What do professional organizations recommend regarding the provision of palliative care?

In addition to the suggested criteria for palliative care assessment (Table 1), the Center to Advance Palliative Care has reported palliative care service metrics. These include provisions for standardized and regular multisymptom assessments, identifying caregivers, and documenting issues regarding transition management. They also advocate regular

assessment of patient and family satisfaction using suggested tools.

The Carolinas Center for Medical Excellence, with support from the Centers for Medicare & Medicaid Services, recently reported one of the first sets of quality measures for palliative care. Covering eight domains of palliative care, the PEACE measures outline both characteristics of distress assessment and management with a particular focus on symptoms. Additionally, palliative care team structure issues are addressed, with provisions for standardization of assessments among all team members.

The American College of Physicians proposes evidence-based symptom intervention guidelines for EOL care that are valuable for the primary care physician (26). This report provides guidance and evidence review for assessment and treatment of pain, dyspnea, and depression alongside the critical components of advance care planning and utility of collaboration with multidisciplinary palliative care teams.

In the Clinic Tool Kit

Palliative Care

PIER Modules

http://pier.acponline.org/physicians/ethical_legal/el755/el755.html

PIER module on palliative care from the American College of Physicians.

PIER modules provide evidence-based, updated information on current diagnosis and treatment in an electronic format designed for rapid access at the point of care.

Patient Information

www.annals.org/intheclinic/toolkit-palliative-care-2012.html

Patient information that appears on the next page for duplication and distribution to patients.

General Information

www.eperc.mcw.edu/EPERC/FastFactsandConcepts

Fast facts and concepts.

www.cafc.org/reportcard

State-by-state report card on access to palliative care in hospitals.

<http://endoflife.stanford.edu>

Stanford University's End-of-Life Curriculum for learners and providers.

www.globalrph.com/narcoticonv.htm

Opioid conversion calculator.

www.seattleheartfailuremodel.org

Seattle Heart Failure Model (prognostication calculator for advanced heart failure).

www.aahpm.org

American Academy of Hospice and Palliative Medicine.

In the Clinic

THINGS YOU SHOULD KNOW ABOUT PALLIATIVE CARE

In the Clinic
Annals of Internal Medicine

What does "palliative" mean? What is palliative care?

Palliative means "cloaking or protecting." Often, when you or a loved one is experiencing serious illness, focusing on relief from uncontrolled symptoms (like pain, shortness of breath, or tiredness) is a major goal. Feeling supported, having more control over your care, and understanding what to expect in the future are main concerns. Palliative care is a medical specialty that works with your current doctors (such as internists, cardiologists, or oncologists) to assist in these areas, while always respecting what is most important to you.

What do palliative care specialists do?

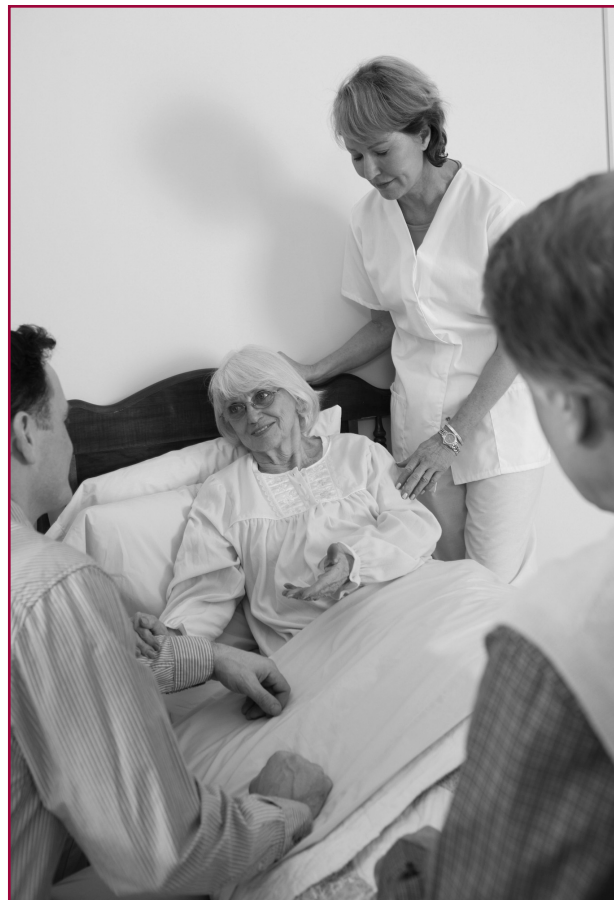
Palliative care experts—including physicians, nurse practitioners, and physician assistants—work with a larger team of nurses, pharmacists, social workers, chaplains, discharge planners, physical therapists, and others to put together a plan that helps you to feel better, to improve your quality of life, and support your family as they support you. They work closely with you and your caregivers to help treat your symptoms, make sure you have the information you want, anticipate and plan for future needs, and ensure that your other providers are aware of your goals, wishes, and needs.

Is palliative care the same as hospice?

No. Hospice requires that a patient has a disease that would be expected to take his or her life in 6 months or less if it progresses in the usual way. Palliative care does not have this type of limitation. All patients with a serious illness who have symptoms and questions about care planning, the future, effects of illness on loved ones, and communication or just want to feel better are eligible for palliative care. Your doctor may believe that seeing a palliative care professional, alongside your other doctors, may be helpful.

Situations When Palliative Care May Help

- Repeated emergency department visits or hospitalizations for a chronic disease.
- Feeling like you don't have all the information you need.
- Worrying about the future.
- Being concerned about the effects of your illness on your loved ones.
- When your medications aren't helping your pain, tiredness, shortness of breath, or other symptoms.
- When you are worried about getting the right treatment if your disease suddenly gets worse.



For More Information

ACP

AMERICAN COLLEGE OF PHYSICIANS
INTERNAL MEDICINE | Doctors for Adults®

www.getpalliativecare.org

A comprehensive resource for determining whether you or a loved one needs palliative care; includes a list of Web sites of organizations that offer support for people with serious illness.

1. An 81-year-old woman with metastatic breast cancer is admitted to the hospital for pleurodesis by tube thoracostomy. Her disease was in remission until 2 months ago, when she presented with several bone metastases; dyspnea; and recurrent malignant pleural effusion, which was treated with thoracentesis. She is considering several palliative therapy options.

The patient lives with her daughter. Prior to the recurrence of her disease, she enjoyed playing with her grandchildren. She used to go to book club meetings but stopped about 2 months ago. The patient appears withdrawn and complains of loss of energy. She has become tearful at times, stating she is a burden on her daughter and that she does not want to go home as she will "just end up in the hospital again." Current medication is oxycodone, which adequately controls her low back pain. Neurologic and mental status examinations are normal. There is dullness to percussion in the left lower thorax.

In addition to the tube thoracostomy and pleurodesis, which of the following is the most appropriate management option for this patient?

- A. Initiate citalopram
 - B. Initiate lorazepam
 - C. Order brain MRI with gadolinium
 - D. Reassess patient after treatment for bone metastases
2. An 86-year-old man with congestive heart failure is evaluated at a follow-up appointment; he is accompanied by his daughter, who reports that he has been in steady decline over the past month. He has anorexia and a 4.5-kg (10-lb) weight loss and has become reliant on her for many routine tasks, including dressing, bathing, and eating. He is unable to ambulate due to dyspnea and fatigue and requires assistance to get out of bed to a chair and to a bedside commode. He has been hospitalized 2 times in the past 3 months for volume overload. The patient has chronic kidney disease and has been on hemodialysis for the past 8 years. The patient wants to discontinue dialysis because the treatments are increasingly unpleasant owing to fatigue, but he denies dialysis-related pain or dyspnea. He says that he is aware that stopping dialysis will result in near-term death. He has an advanced directive that states that he

does not want cardiopulmonary resuscitation, artificial nutrition, or hydration. A depression screen is negative, and a mental status examination is normal. The patient's wife is deceased, and his daughter is the surrogate decision maker.

Which of the following is the most appropriate option regarding continuation of this patient's dialysis?

- A. Consult with psychiatry
 - B. Consult with the patient's daughter
 - C. Coordinate discontinuation of dialysis
 - D. Obtain approval of the patient's nephrologist
3. A 79-year-old woman is evaluated at home by a visiting hospice nurse for dyspnea that began 4 days ago and has worsened in the past 24 hours. The patient has an 80-pack-year history of cigarette use and severe emphysema (FEV₁ 0.6 L). She has executed a do-not-resuscitate order and desires no other interventions. Over the past 6 weeks, her oral intake has decreased and she cannot walk without assistance because of diffuse weakness. She takes extended-release (ER) morphine (15 mg twice daily) for musculoskeletal pain and immediate-release (IR) morphine (20 mg) as needed for breakthrough pain.

The hospice nurse reports that the patient is alert and oriented to person, place, time, and date. Her temperature is normal, pulse is 94/min, respiration rate is 24/min, and blood pressure is 145/88 mm Hg. Oxygen saturation is 97% on ambient air. She has trace expiratory wheezing over both lung fields and a reduced cough effort. She has hyperinflation of the chest and reduced breath sounds in all lung fields. There is no S₃, jugular venous distention, or peripheral edema. Her last dose of ER morphine was 6 hours ago, and her last dose of IR morphine was yesterday.

How should this patient's dyspnea be managed?

- A. A supplemental dose of IR morphine
 - B. Emergency department evaluation
 - C. Initiate furosemide
 - D. Initiate home oxygen therapy
4. A 74-year-old man with metastatic lung cancer to the liver and pelvis is evaluated for low back pain. The pain is localized to the right ischial region and has progressively worsened over the past month, despite the use of IR morphine (15 mg) every 6 hours.

He states that the pain returns about 4 hours after taking his medication. The patient has no fever, no bowel or bladder dysfunction, no radiation of pain, and no motor weakness. He previously had palliative chemotherapy and radiation therapy but stopped because of a steady increase in tumor size. He has declined radiation therapy for his bone lesions.

On physical examination, temperature is 36.6°C (97.8°F), blood pressure is 100/58 mm Hg, pulse rate is 90/min, and respiration rate is 18/min. BMI is 18. Neurologic and mental status examinations are normal.

Which of the following is the most appropriate strategy for managing this patient's pain?

- A. Add gabapentin 3 times daily
 - B. Increase frequency of IR morphine to every 4 hours
 - C. Switch to IR oxycodone every 4 hours
 - D. Add ER morphine twice daily
5. A 69-year-old man is evaluated for low back discomfort. He has a history of primary hypogonadism of the spine without evidence of spinal cord compression. He is ambulatory and functional in all activities of daily living. He recently received his annual infusion of zoledronic acid and has been evaluated for vertebroplasty, which has not been done due to warfarin use for a prosthetic mitral valve. The treatment improved but did not eliminate his discomfort. He rates his discomfort as 5 on a scale of 1 to 10. He denies any radiation of the pain, fever, motor weakness, or difficulties with bowel or bladder control. The patient takes at least 2 naproxen 250-mg tablets daily. The pain medication reduces but does not eliminate his back discomfort. On physical examination, temperature is normal, blood pressure is 150/88 mm Hg, pulse rate is 88/min, and respiration rate is 16/min. BMI is 28. Neurologic and mental status examinations are normal. There is no point tenderness over the lumbar vertebrae.
- Which of the following is the most appropriate strategy for managing this patient's pain?
- A. Add an extended-release opioid
 - B. Add a fentanyl patch
 - C. Add a short-acting opioid
 - D. Discontinue naproxen and substitute ibuprofen

Questions are largely from the ACP's Medical Knowledge Self-Assessment Program (MKSAP, accessed at http://www.acponline.org/products_services/mksap/15/?pr31). Go to www.annals.org/intheclinic/ to complete the quiz and earn up to 1.5 CME credits, or to purchase the complete MKSAP program.