Palliative Care and Symptom Management

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Preface

Palliative Care perspectives: “MEETING PEOPLE WHERE THEY ARE”

Timothy G. Ihrig, M.D., M.A.

Editorial from The Messenger November 2012

I am a Palliative Care physician. Daily I am asked to define and describe what exactly that is – Palliative Care. Simply put, palliative care/palliative medicine is the practice of meeting people where they are at. It is combining the science and art of medicine to look at the forest through the trees. It is taking the time with the patient to put the puzzle together so that the patient can understand not only the specifics of his/her disease(s), but the complex inter-relationships of their diagnosis with respect to their values and goals.

If someone has not been informed of the range of possibilities of their given disease, they may be unaware of the realities of their disease(s) and of the power – or lack thereof, of the medical world they are faced with. How can we (physicians) know what is best for anyone if we are unaware as to their knowledge, beliefs, values, hopes, fears and desires with respect to their disease, their family, their faith, their meaning of life? I offer, as a medical provider, that my time with patients should be about truth, about complete transparency, not about what we can do, but rather what we should do to meet the goals of our patients. Then and only then, will the patient be empowered to make choices about their illness, diagnosis and treatment alternatives, and will finally be able to see the “forest through the trees.”

Gone should be the days of the physician who hands a map of care to a patient. Instead we need be held to our oath as physicians and navigate a path consistent with where a patient is at any given moment in their journey. We are obliged to engage with a broader sense of the human spectrum rather than our own. Only then can we be a profession that responds to the needs, concerns, hopes, fears and expectations of other human beings.
Introduction

What is Palliative Care?

Palliative care is the care of patients with active, progressive, far-advanced disease, for whom the focus of care is the relief and prevention of suffering and the quality of life.

1. Active disease and progressive disease can be confirmed and measured objectively by clinical examination and investigation

2. Far-advanced disease is more difficult to define, but examples include:
   - Extensive metastatic cancer
   - refractory cardiac failure
   - total dependency in neurodegenerative conditions

3. A focus on the quality of life is the key feature of the definition:
   - It is person-oriented, not disease-oriented
   - Focused on quality-of-life rather than with life prolongation goals
   - It is holistic in approach
   - Aims to address all of the patient’s problems
     - Both physical and psychosocial

The message of palliative care is that whatever the disease, however advanced it is, whatever treatments have already been given, there is always something which can be done to improve the quality of the life remaining for the patient.

A Formal Definition of Palliative Care

Palliative Care is a medical specialty that provides comprehensive, interdisciplinary care for patients of all ages with serious illnesses and their families with emphasis upon the quality of life and relief of suffering. Palliative Care is provided throughout the course of a disease process without regard to prognosis and can be provided in concert with curative care, as well as near end of life. The Palliative Care Team works with patients in conjunction with their primary care physician and other specialists to address any physical, psychosocial, emotional or spiritual issues the patient may experience. Through understanding the totality of the disease process and prognosis, Palliative Care empowers individuals to live their lives regardless of age, diagnosis or life expectancy.
Palliative Care Diagram

Old

Life Prolonging Care

Medicare Hospice Benefit

New

Life Prolonging Care

Hospice Care

Palliative Care

Dx  Death

Bereavement
Role of the Healthcare Team in Palliative Care

Successful palliative care requires attention to all aspects of a patient’s suffering, which requires input or assistance from a range of medical, nursing and allied health personnel—a multidisciplinary approach. The patient may be considered a ‘member’ of the team (although they do not participate in team meetings), as all treatment must be with their consent and in accordance with their wishes. The members of the patient’s family can be considered ‘members’, as they have an important role in the patient’s overall care and their opinions should be included when formulating a plan of management.

The optimal multidisciplinary team may include: Medical staff, Nursing staff, Social worker, Physiotherapist, Pharmacist, Occupational therapist, Dietician, Psychologist, Chaplain (or pastoral care worker), Volunteers, Family members, and Patient.
Communication in Palliative Care

SPIKES Protocol: Breaking Bad News

S
SETTING up the interview

P
Assessing the Patient’s PERCEPTION

I
Obtaining the Patient’s INVITATION

K
Giving KNOWLEDGE and Information

E
Addressing the Patient’s EMOTIONS with empathic responses

S
STRATEGY and SUMMARY

Condensed, it is:

Setup
Patient’s Perception
Invitation reception
Knowledge provided
Engage patient’s Emotions with Empathic responses
Strategy and Summary
Family Meetings: Preparation

To prepare for the family meeting, use the following steps:

1. Create an agenda
   • Consider a pre-meeting with the health care team
2. Why are you meeting?
3. Get a room that is comfortable with circular seating
4. Who needs to be there?
   • Patient
   • Decision makers
   • Family
   • Social support
   • Key health care professionals

Family Meetings: Introduction and Relationship Building

Family Meetings Agenda

1. Introduce self and others
2. Establish ground rules
3. Determine what the patient and family knows
4. Review medical status with patient and family
   • If bad news was presented, allow silence to occur
5. Establish patient centered goals:
   • What are you hoping for?
   • What do you need to accomplish?
6. Explore and address family concerns and questions
7. Recommend a care plan or frame recommendations based on patient/family goals
8. If family is making the decisions, ask them to consider what the patient would want, use “substituted judgment”
9. If you have an opinion, state your opinion clearly and explain why.
   • Be sure to explain what values your opinions are based on
Family Meetings: Responding to Emotion

1. Acknowledge emotion that is being expressed:
   - *I can see this is really affecting you.*

2. Legitimize the appropriateness and normalcy of the emotion:
   - *Anyone receiving this news would feel devastated.*

3. Explore more about what is underneath the emotion:
   - *Please, tell me more about that.*

4. Empathize:
   - *This seems really unfair*

5. Explore strengths/coping strategies:
   - *In past circumstances, what has helped?*

Family Meetings: Wrapping up

1. Summarize the meeting
2. Caution against unexpected outcomes
3. Identify family spokesperson
4. Document in chart
5. Schedule follow-up and maintain continuity by contacting family and team

20 Questions to Assess Suffering, Hope, and Dignity

Some sample questions to assess for suffering:

1. In what way are you suffering?
2. Has this illness affected parts of your life you did not expect? (Most people find that a serious illness affects their lives in unexpected ways)
3. What are some of the ways this illness is affecting your life?
4. What are some of your main concerns, worries, and fears about the future?
5. How has this illness affected you physically?
   • Emotionally?
   • Spiritually?

6. Have you been sad?
   • Frightened?

7. What are some of the main problems you are facing now?

8. How has this illness affected your relationships with your family?
   • Your friends?

9. How has this illness affected your financial situation?

10. What do you miss most as a result of this illness?

11. How well do you think you are functioning?

12. Do you think about what caused your illness?

13. What are some of your ideas?

14. Is something bothering you that you are uncomfortable discussing?

15. What are some of the things you wish you could talk about?

16. Who do you wish you could talk to?

17. What are some of your family’s biggest concerns, worries, or fears?

18. How do you deal with their concerns?

19. In the past, what has given you the strength to cope with difficult situations?

20. Do you have spiritual or religious beliefs that will influence your decisions about medical care?
Hope Messages Commonly Expressed by Dying Patients

Consider administering Herth Hope Index.

Consider asking about hope for the following common themes:

• I hope a cure is possible.
• I hope I will feel better soon.
• I hope I will still have pleasurable experiences in my life.
• I hope people will deal with me honestly.
• I hope people will recognize there are times when I don’t want to talk about dying.
• I hope treatments will be explained and I will be included in treatment decisions.
• I hope my life has meaning.
• I hope I can still meet some of the goals that are important to me.
• I hope I can get help with the practical things I need to do before I die.
• I hope someone will listen to my fears and help me face them. I
• hope I will be remembered fondly by my family and friends.

Dignity Psychotherapy Question Protocol

From: JCO 2005; 23(24):5520-5525.

1. Tell me a little about your life history; particularly the parts that you either remember most or think are the most important.

2. When did you feel most alive?

3. Are there specific things that you would want your family to know about you, and are there particular things you would want them to remember?

4. What are the most important roles you have played in your life (family roles, vocational roles, community-service roles, etc.)?

5. Why were they so important to you, and what do you think you accomplished in those roles?

6. What are your most important accomplishments, and what do you feel most proud of?
7. Are there particular things that you feel still need to be said to your loved ones or things that you would want to take the time to say again?

8. What are your hopes and dreams for your loved ones?

9. What have you learned about life that you would want to pass along to others?

10. What advice or words of guidance would you wish to pass along to your (son, daughter, husband, wife, other(s))?

11. Are there words or perhaps instructions that you would like to offer your family to help prepare them for the future?

12. In creating this permanent record, are there other things that you would like included?

**Communication Phrases**

Although not meant to be a script, these phrases may be helpful in communicating with patients and their families.

*Reflect thoughts, emotions or behaviors*

It seems like you are having a hard time deciding between “X” and “Y”. You have been feeling “X”. I see that you are crying. You seem very “X”.

*Affirmation and respect*

Thank you for describing your feelings and thoughts. I can do a better job as your doctor when I know how you are feeling. Please tell me more about the sadness you are feeling.

*Dealing with anger*

It sounds/appears that you are angry? You appear angry. Can you tell me what is upsetting you? So, you are telling me that you are angry about “X”, is that correct? I wish things were different. How can we move forward? How can I help?
**Advance Care Planning**

I’d like to talk with you about possible future health care decisions. This is something I do with all my patients so that I know and can follow your wishes. Have you ever completed an Advance Directive? What do you understand about your health situation? If you were unable to make your own medical decisions, who would you like to make them for you? Have you spoken to this person? When you think about dying, have you thought about what the end would be like? Have you discussed your wishes with your family?

**Talking with Surrogate Decision Makers**

These decisions are very hard. If “Patient’s Name” were sitting with us today, what do you think he/she would say? Can you tell me why you feel that way? How will the decision affect you and other family members?

**Determining Decision Making Capacity**

Please describe your current condition? What have the doctors told you? Tell me the options for treating “X” that we have just discussed. Explain to me why you feel that way?

**Breaking Bad News**

What do you understand about your condition? I’m afraid I have some bad news. I wish things were different, but the test results are not good. The”Test” showed “X”. I want to be sure you understand what we have talked about; can you summarize what we have discussed? Write down any questions that come to mind, let’s to plan to meet again on “Date” at “Time”.

**Quality of Life**

How has your disease interfered with your daily activities? Have you been feeling worried or sad about your illness? What symptoms bother you the most? What concerns you the most? How have your religious beliefs been affected by your illness? Many patients wonder about the meaning of all this, do you?

**Prognosis**

Tell me how you spend your day? How much time do you spend laying down or resting? Is it more or less than 50% of the time? Has this changed recently? Has anyone talked to you about what to expect? Do you have a sense of how much time is left? Is this something you would like to talk about? Although I can’t give you an exact time, in
general, patients with your condition live “Range”. Based on what you have told me, and what I see, I believe you are dying.

**Discussing Artificial Feeding/Hydration**

What do you know about artificial ways to provide food? All dying patients lose their interest in eating in the days to weeks leading up to death. This is the body’s signal that death is coming. I am recommending that the (tube feedings, hydration, etc.) be discontinued (or not started) as these will not improve his/her living. These treatments, if used, may only prolong his/her dying. Your “Family member” will not suffer. We will do everything necessary to ensure comfort. Your “Family member” is dying from “Disease”. He/She is not dying from dehydration or starvation.

**Goal Setting**

Knowing that time is short, what goals do you have for the time you have left, what is important to you? What do you need to do in the time you have left? What are your goals for this last phase of your life?

**Summarize/paraphrase**

We have been talking for awhile about how things are going for you. Let me see if I can summarize what you have said, then you can let me know if I’m on track.

**Make a plan**

How can I help? or, What, if anything, would make a difference for you? I would like to check in with you next week and see how things are going. In the mean time, please let me know if you need to talk before then.

**Cross-Cultural**

I know different people have very different ways of understanding illness. Please help me understand how you see things. Tell me what you think the illness does. What do you think the natural course of the illness is? Who do you turn to for help? Who should be involved in decision making? How do you think the sickness should be treated? How do want us to help you? Some people like to know everything about their disease and be involved in all decision making. Others do not want all the news and would rather the doctor talk to “X”? Which kind of person are you? How involved do you want to be in these decisions?
Discussing Palliative Care or Hospice Referral

To meet the goals we’ve discussed, I’ve asked the Palliative Care Team to visit with you. They are experts in treating the symptoms you are experiencing. They can help your family deal with the changes brought on by your illness. You’ve told me you want to be as independent and comfortable as possible. Hospice care is the best way I know to help you achieve those goals. Hospice is a program that helps the patient and family achieve the goals you’ve just described. It’s a team of people that help meet the patient’s and family’s physical, psychological, social and spiritual needs.

Death Pronouncement

I’m very sorry for your loss. This must be very difficult for you. Is there anyone I can call for you? In the days to weeks to come, please contact me if I can answer any questions.

(Overall goals of therapy in the palliative care patient [EPERC: 033, 034, 035])
Symptom Treatment in the Palliative Care Patient

Pain

The International Association for the Society of Pain defines pain as “An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”

But in reality: “Pain is whatever the patient says it is.”

nonmalignant vs malignant pain

It is important for providers to distinguish “nonmalignant” painful conditions from pain associated with an underlying life-threatening condition, because effective treatment strategies differ depending on the pathophysiology of the pain. Clinicians must consider the patient's preferred treatment of a long-standing painful condition and its general efficacy. Humans’ adaption (or lack thereof) to long-standing pain is often complex and involves numerous physiologic and psychologic interactions. Understanding a palliative care patient's adaptation mechanisms to a long-standing painful condition will inform the care being provided to that patient and family, especially as the patient nears death.
The modifier “nonmalignant” has been used in the clinical literature to describe pain that is not associated with a life-threatening condition such as cancer. Although the majority of the evidenced based literature on pain treatment comes from the oncology population, lessons from cancer pain management have been applied to pain associated with numerous other serious conditions. Pain remains medically undertreated for several reasons. Patients’ and families’ concerns about opioid analgesics, lack of professional education, and professionals’ fear of regulatory agency influence all contribute. Analgesic drug availability is also a significant problem as studies have shown that potent oral opioids are often not stocked by community pharmacies, due to fear of diversion or robbery. The direct costs of unrelieved pain are measured in lost productivity and in the many lives lost to suicide. Pain costs an estimated $100 billion each year in the United States alone. Loss of functional status and poor quality of life are frequent, intangible costs of unrelieved pain.

Non-malignant pain (NMP) is highly prevalent, and 75 million Americans suffer from chronic pain. Headache and lower back pain are the most common types in developed countries. More than 25 million Americans suffer from migraines, and 9 of every 10 Americans have nonmigraine headaches each year. More than 26 million Americans between the ages of 20 and 64 years experience frequent back pain, and two thirds of American adults will have back pain during their lifetime. Other common conditions include arthritis, jaw, and lower facial pain (temporomandibular dysfunction, temporomandibular joint syndrome); neuropathic pain syndromes; and fibromyalgia (a complex condition involving generalized body pain and other symptoms). Chronic painful conditions in the developing world are more likely to be related to malnutrition, infectious diseases, and trauma, including limb amputation.

Definitions of Related Terms

**Dysesthesia** – An unpleasant abnormal sensation, whether spontaneous or evoked.

**Allodynia** – Pain due to a stimulus which does not normally provoke pain, such as pain caused by light touch to the skin

**Hyperalgesia** – An increased response to a stimulus which is normally painful

**Assessment and pain history**

A thorough evaluation of the patient with pain MUST included a comprehensive history, physical examination, and review of diagnostic information. The “gold standard” of pain assessment is patient self-report. The clinician may use several schema to assure a complete patient report of pain. Among the most common systems includes using the “PQRST” mnemonic to elicit a complete pain history. Pain intensity rating scales establish a baseline against which the efficacy of analgesic interventions may be judged. Many patients must be encouraged to verbalize their pain, and most need to learn means of reporting pain intensity. When patients are unable to communicate,
behavioral observations may substitute for self-report of pain intensity. Standardized tools can assess preverbal children and impaired adults.

Characteristics of neuropathic pain should be elicited. Typically, patients describe burning or lancinating components. Some offer unusual complaints, such as painful numbness, itching, or crawling sensations. After amputation or evisceration, patients may complain of phantom pain referred to the lost body part.

Sensations of lost visceral organs may be accompanied by functional urges, such as nausea or the urge to defecate or urinate.

“PQRST” Pain Assessment Mnemonic

P  PALLIATIVE, PROTECTIVE factors: What makes the pain better or worse?

Q  QUALITY: i.e., word descriptors, such as “burning” or “stabbing”

R  REGION, RADIATION REFERRAL: Where does it hurt? Does the pain move or travel?

S  SEVERITY: pain intensity rating scales or word descriptors

T  TEMPORAL factors: i.e., onset, duration, daily fluctuations: When did it start? Is it constant and/or intermittent? How long does it last? Is it better or worse at certain times of the day?

It is important to identify prior or current psychological dependency on illicit or licit drugs, including alcohol. Prior pain treatments, including prescription and nonprescription medications, and their relative efficacies should be recorded.

Physical Examination

It is important to assess the patient’s general physical condition and identify physical findings to identify pain pathophysiology. The physiological signs of acute pain—elevated blood pressure, respiratory rate, and pulse rate—are unreliable in subacute and chronic pain. A detailed neurological examination should be performed, especially
if neuropathic pain is suspected. Pain in an area of reduced sensation, allodynia (normal stimuli are painful), and hyperalgesia or summation of painful stimuli indicate neural dysfunction. Complex regional pain syndrome or sympathetically maintained pain is suggested if signs of marked sympathetic dysfunction accompany diffuse burning or deep aching pain. A careful mechanical evaluation, including active and passive joint motion, weight bearing, and gait, may also reproduce the pain. In the soft tissues, one may palpate muscle spasms or discrete trigger points which, when stimulated, refer pain to another site.

4 Steps of Physical Examination Protocol

I. General Inspection
   1. Patient's appearance and vital signs
   2. Evidence of abnormalities such as weight loss, muscle atrophy, deformities, trophic changes

II. Pain Site Assessment
   1. Inspect the pain sites for abnormal appearance or color of overlying skin, change of contour, visible muscle spasm
   2. Palpate the sites for tenderness and texture
   3. Use percussion to elicit, reproduce, or evaluate the pain and any tenderness on palpation
   4. Determine the effects of physical factors such as position, pressure, and motion

III. Neurological Examination
   1. Mental status: level of alertness, higher cognitive functions, affect
   2. Cranial nerves
   3. Sensory system: light touch and pin prick test to assess for allodynia, evoked dysesthesia, hypoesthesia/hyperesthesia, hypoalgesia/hyperalgesia, hyperpathia
   4. Motor system: muscle bulk and tone, abnormal movements, manual motor testing, reflexes
   5. Coordination, station, and gait
IV. Musculoskeletal Examination

1. Body type, posture, and overall symmetry
2. Abnormal spine curvature, limb alignment, and other deformities
3. Range of motion (spine, extremities)
4. For muscles in neck, upper extremities, trunk, and lower extremities: observe for any abnormalities such as atrophy, hypertrophy, irritability, tenderness, and trigger points

General Pain Management Strategies

The successful management of NMP is dependent on an individualized plan of care. Clinicians working with patients on a long-term basis follow several clinical variables to judge the efficacy of the pain management plan. These include patient self-report of pain intensity, pain relief, side effects of treatment, adverse events, quality of life, and functional status. In the palliative care patient, it can be expected that, as the life-threatening disease progresses, quality of life goals will supersede functional goals of pain treatment. In most cases a completely pain free state at all times is an unrealistic goal in non-malignant pain; rather the goal should be the ability to carry on the patient’s activities without excess interference from pain. In malignant pain or towards the end of life this goal can be liberalized.

<table>
<thead>
<tr>
<th>Level of Pain</th>
<th>NSAIDS/APAP</th>
<th>Opioids</th>
<th>Adjuvants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain Rating 1-4 = Mild</td>
<td>YES</td>
<td>Sometimes</td>
<td>YES</td>
</tr>
<tr>
<td>Pain Rating 5-6 = Moderate</td>
<td>YES</td>
<td>Usually</td>
<td>YES</td>
</tr>
<tr>
<td>Pain Rating 7-10 = Severe</td>
<td>Sometimes</td>
<td>Always</td>
<td>YES</td>
</tr>
</tbody>
</table>
Non-opioids and Adjunctive Medications

Acetaminophen (APAP) (especially given as a scheduled regimen) is very reasonable for mild pain and may have adjunctive analgesic properties in more severe pain. Maximum dose of APAP is 4 grams/daily. LESS (probably 2-3 grams daily) in the elderly or those with preexisting liver disease. Make sure you and the patient are aware of the amount of acetaminophen in all drug preparations the patient is receiving (including combination drugs) as well.

Nonsteroidal Antiinflammatories (NSAIDs). Are effective for mild to moderate pain, especially those of an inflammatory nature. They are also effective as an adjunctive to opioid therapy in many situations. No data suggests that any one NSAID is superior to another in treating pain, therefore a “trial and error” approach may be needed to find an effective agent. NSAIDs may be useful in more severe pain as an adjunctive agent (e.g. bone pain in cancer patients). Be cautious of the renal toxicities (renal failure, fluid retention, increased blood pressure) and Gastrointestinal (peptic ulcers, etc) toxicities that can occur with these drugs, especially in the elderly. Elderly patients or those at high risk of gastropathy should be considered for gastroprotection such as the addition of a proton pump inhibitor. Several NSAIDs have been implicated in increased cardiovascular events. Ketorolac and Ibuprofen are intravenous NSAIDs that have all the inherent toxicities of the class, but may be more potent than oral NSAID formulations. Topical NSAIDs are now available in the U.S. (particularly diclofenac), their full safety profile has yet to be fully elucidated.

No data suggests that celecoxib is a more effective pain reliever than traditional NSAIDs.
Non-Opioid Analgesics

<table>
<thead>
<tr>
<th>Drug/Class</th>
<th>Starting Dose</th>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>Up to 4g daily scheduled</td>
<td>Relatively safe and inexpensive</td>
<td>Hepatotoxicity</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>Various</td>
<td>Effective for moderate pain and as an adjunctive anti-inflammatory</td>
<td>Gastropathy, Kidney damage</td>
</tr>
<tr>
<td>Lidocaine Patch</td>
<td>One patch to effective area (change up to every 12 hrs)</td>
<td>Few systemic adverse effects, may be adjunctively effective with opioids</td>
<td>Low level of evidence to support use</td>
</tr>
<tr>
<td>TCAs</td>
<td>Nortriptyline or desipramine: 10mg QHS</td>
<td>Inexpensive, can titrate every 2-3 days</td>
<td>Anticholinergic adverse effects</td>
</tr>
<tr>
<td>Gabapentin/Pregabalin</td>
<td>Various</td>
<td>Can titrate every 2-3 days, strong data to support use</td>
<td>Ataxia, drowsiness and edema major adverse effects</td>
</tr>
<tr>
<td>Duloxetine</td>
<td>60mg daily</td>
<td>Effective for depression and neuropathic pain</td>
<td>Hepatotoxicity reported, expensive</td>
</tr>
<tr>
<td>Carbamazepine/Valproic Acid</td>
<td>Various</td>
<td>May be effective in refractory neuropathic pain</td>
<td>Numerous adverse effects and drug interactions</td>
</tr>
</tbody>
</table>

Treatment of Neuropathic Pain

Capsaicin is over-the-counter in the U.S. and is topical, but causes local burning, which may be severe; it should be applied several times daily for approximately 6 weeks for full effectiveness.

Lidocaine patches may be useful for the treatment of postherpetic neuralgia and other cutaneous dysesthesias.

The tricyclic antidepressants (TCAs), e.g., amitriptyline, desipramine, doxepin, and nortriptyline are effective against neuropathic pain. Desipramine and nortriptyline are preferred in the elderly as they cause less anticholinergic ADRs.

Baclofen may be used in the treatment of lancinating, paroxysmal neuropathic pain. It also may help to reduce painful spasticity. Consider starting at 5 mg at night, titrate to a maximum of 20 mg 4 times daily; side effects may include nausea, dizziness, confusion, drowsiness, hepatotoxicity.
Gabapentin, an antiepileptic, is effective at treating neuropathic pain. Gabapentin can be titrated rapidly, as often as every 24-48 hours. Titration should be stopped when benefit is achieved or side effects become a problem.

In patients with normal renal function start gapapentin at 300 mg nightly for two days then double the dose every two day until pain is controlled or side effects (primarily drowsiness or dizziness) occurs. The usual effective total daily dose is 900-3600 mg, administered in three divided doses per day. Titration should proceed more slowly in elderly patients. Watch for the development of peripheral edema at higher doses.

Duloxetine and venlafaxine are serotonin and norepinephrine reuptake inhibitors that may help with neuropathic pain. Pregabalin is an analog of gabapentin use for neuropathic pain but has a much quicker titration schedule—it is also more expensive than generic gabapentin.
Opioids

Opioid Dose Adjustment

In general, patients do not notice a change in analgesia when dose increases are less than 25% above baseline. However, there is a paucity of clinical trial data on this subject. A common formula used by many practitioners is:

1. For ongoing moderate to severe pain increase opioids doses by 50-100%, irrespective of starting dose.
2. For ongoing mild to moderate pain increase by 25-50%, irrespective of starting dose.

Methadone

Compared to morphine, methadone is inexpensive, may provide improved analgesia in neuropathic pain and will provide a longer duration of action. HOWEVER, dosing of methadone is complex, and should be done by those providers experienced in its use. Dosing intervals at the start of treatment are q 4-6 hours, and may increase over time to q 6-12 hours.

Methadone is not indicated in poorly controlled pain where rapid dose adjustments are needed; do not increase oral methadone more frequently than every 4 days. Dose conversion to and from other opioids and methadone is complex; consultation with pain or palliative specialists familiar with methadone use is recommended. Patient and family education is essential as they may misinterpret prescription of methadone to mean that their physician believes that they are an addict.

Conservative Approach to initiating methadone for analgesia:

1. Begin fixed dose methadone 5 or 10 mg orally bid or tid for 4-7 days.
2. If incomplete pain relief, increase the dose by 50% and continue for 4-7 days.
3. Continue increasing dose every 4-7 days until stable pain relief achieved.
4. Breakthrough pain: use an alternative short acting oral opioid with short half life (e.g. morphine 10 mg) every 1 h PRN for breakthrough pain and to provide pain relief during titration phase.
   - This dose too may need to be titrated based on efficacy.
Opioid Pearls

Cancer and other severe pain almost always requires around the clock (ATC) dosing of an opioids with an immediate release drug needed for breakthrough

More than 2-3 doses of breakthrough usually signal a need to increase the dose of the “basal” opioid.

Fentanyl patches are difficult to titrate and are expensive. Oral dosage forms are preferable in many cases, unless swallowing or compliance is difficult. Additionally remind patients to dispose of the “used” patches appropriately.

Opioid Side Effect Treatment

Constipation ALWAYS should be anticipated with chronic opioids. Tolerance does NOT develop to this. A combination of stool softener and stimulant laxative is usually needed (e.g. Senna-S: 1 tablet bid).

Nausea with oral morphine products is common, but usually transitory. IF persistent a switch to oral oxycodone may be beneficial.

Itching to morphine usually abates in several days.

If the patient has renal failure (CrCl < 30 ml/min) hydromorphone or fentanyl may be preferred to morphine which has an active metabolite.

In a hemodynamically unstable patient intravenous fentanyl given by continuous drip may be preferred to morphine.

Respiratory depression is always concomitant with CNS depression. Writing “Hold if sedated” in scheduled opioid orders allows nursing staff to assess the patient’s level of consciousness and to temporarily withhold treatment if necessary.

In patient with good pain control, but excessive drowsiness, try switching to another opioid. If this fails a stimulant such as methylphenidate may be useful.

Tramadol is a weak mu-opioid receptor agonist and serotenergic agonist. It may be useful for such diseases as fibromyalgia. However it can cause addiction and can cause most of the usual opioids adverse effects. Additionally it can lower the seizure threshold.

Tapentadol is a chemical derivative of tramadol, but is more potent at mu opioid receptors, making it a more potent drug. It is controlled substance Schedule II.
Myoclonus – the uncontrollable twitching and jerking of muscles or muscle groups – usually occurs in the extremities, starting with only an occasional random jerking movement. A patient's spouse may be the first to recognize this symptom. This symptom may resolve on its own or may require a switch to a different opioid or the addition of a low dose benzodiazepine or baclofen.

Opioid Withdrawal

Signs and symptoms of the opioid withdrawal syndrome include: yawning, sweating, lacrimation, rhinorrhea, anxiety, restlessness, insomnia, dilated pupils, piloerection, chills, tachycardia, hypertension, nausea/vomiting, cramping abdominal pains, diarrhea, and muscle aches and pains. Unlike withdrawal from alcohol or benzodiazepines, opioid withdrawal is not life threatening. Emergence of withdrawal symptoms varies with half-life of the particular opioid; within 6-12 hours after the last dose of a short-acting drug or 72-96 hours following methadone. Duration and intensity of withdrawal are related to clearance of the drug such that withdrawal is shorter (5-10 days) and more intense for opioids like morphine and less severe and more protracted with methadone.

Prevention

Opioid withdrawal syndrome should always be prevented whenever possible. Patients treated with opioids for more than one to two weeks should be instructed to gradually reduce the opioid before discontinuing use. In general, dose reductions of about 20-25% every twenty-four to forty-eight hours should help prevent signs and symptoms of withdrawal. An alternative recommendation is to give half the previous dose for the first two days and then reduce the dose by 25% every 2 days. When the dose reaches the equivalent of approximately 30mg/day of PO morphine, this dose is given for 2 days, and then the drug is discontinued. It is important to continue to provide around-the-clock opioids to prevent withdrawal in the patient at end-of-life who is no longer able to communicate or take oral opioids.

Treatment

Clonidine 0.1-0.2mg PO Q 4-6 hours PRN or by transdermal patch (clonidine transdermal 0.1mg/24hr patch which provides 0.1mg a day for 7 days) can be used to treat autonomic hyperactivity symptoms (however, it will not relieve insomnia). The clonidine patch has a very slow onset and may take 2-3 days to achieve therapeutic levels. The major drawback of clonidine therapy is the tendency to cause hypotension in some patients. Other agents used for control of withdrawal symptoms include: diphenoxylate/atropine for diarrhea, hydroxyzine for itching, piloerection, trazodone, and dicyclomine or hyoscamine for abdominal cramping and diarrhea.
Screening for Opioid Misuse or Abuse

The Opioid Risk Tool (ORT) is a 5-item yes/no tool which predicts the probability of opioid misuse or abuse among patients being considered for opioid therapy for chronic pain. This measure is based on several risk factors including: family history of substance abuse, personal history of substance abuse, age (16-45 years is a risk factor), history of pre-adolescent sexual abuse, and psychological disease. This tool categorizes patients as low, medium or high risk for aberrant behavior. The sensitivity and specificity for the test for patients who score at least ‘medium risk’ is 99% and 16%, respectively. For those with ‘high risk’ scores, the test sensitivity is 53% and specificity 96%. Because clinicians administering the ORT could be misled by patients with a history of opioid use who downplay past behavior, it is best to apply the tool in lower-risk clinical settings such as primary care rather than in higher risk settings.

For an electronic version of the ORT, tap/click here
# Opioid Analgesic Converter

*Note: oxymorphone, and propoxyphene have been eliminated from table.*

<table>
<thead>
<tr>
<th>Drug</th>
<th>Duration</th>
<th>Half-life</th>
<th>Route</th>
<th>Equianalgesic Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codeine</td>
<td>4–6 hrs</td>
<td>3 hrs</td>
<td>IM/IV/SC PO</td>
<td>120mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>200mg</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>1–2 hrs</td>
<td>1.5–6 hrs</td>
<td>IM/IV Transdermal</td>
<td>0.2mg Transdermal = 25mcg patch</td>
</tr>
<tr>
<td></td>
<td>72 hrs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>4–6 hrs</td>
<td>3.3–4.5 hrs</td>
<td>PO</td>
<td>20–30mg</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>4–5 hrs</td>
<td>2–3 hrs</td>
<td>IM/IV/SC PO</td>
<td>1.3–1.5mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.5mg</td>
</tr>
<tr>
<td>Levorphanol</td>
<td>6–8 hrs</td>
<td>12–16 hrs</td>
<td>IM/IV/SC PO</td>
<td>2mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4mg</td>
</tr>
<tr>
<td>Meperidine*</td>
<td>2–4 hrs</td>
<td>3–4 hrs</td>
<td>IM/IV/SC PO</td>
<td>75mg</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>300mg</td>
</tr>
<tr>
<td>Methadone</td>
<td>4–6 hrs</td>
<td>15–30 hrs</td>
<td>IM/IV/SC PO</td>
<td>1–10mg#</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2–20# Short</td>
</tr>
<tr>
<td>Morphine</td>
<td>3–6 hrs</td>
<td>1.5–3 hrs</td>
<td>IM/IV/SC PO</td>
<td>10mg Short</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>4–6 hrs</td>
<td>NA</td>
<td>PO</td>
<td>15–30mg (20mg)</td>
</tr>
</tbody>
</table>
When converting from one opioid to another in a patient with adequate pain control, consider reducing the dose of drug by 25-50% to account for incomplete cross-tolerance between drugs. Monitor need for breakthrough and re-titrate the dose up if necessary.

Propoxyphene HCL: 130mg; Napsylate: 200mg: Not recommended for chronic pain management.

§: Many equianalgesic tables underestimate methadone potency - more studies are needed.  

**Parenteral:** Program utilizes 10mg for short-term dosing and 2 mg for chronic dosing.  

**Oral:** Program utilizes 20mg for short-term dosing and 3 mg for chronic dosing.

æ Meperidine should be used for acute dosing only and not used for chronic pain management (meperidine has a short half-life and a toxic metabolite: normeperidine). Its use should also be avoided in patients with renal insufficiency, CHF, hepatic insufficiency, and the elderly because of the potential for toxicity due to accumulation of the metabolite normeperidine. Seizures, confusion, tremors, or mood alterations may be seen. Anything more than single dose meperidine should be avoided.
Guide to Using the Rectal Route

<table>
<thead>
<tr>
<th>Opioid Analgesics</th>
<th>NSAID's</th>
<th>Laxatives</th>
<th>Opioid Analgesics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morphine*</td>
<td>Acetaminophen*</td>
<td>Glycerin*</td>
<td>Phenobarbital</td>
</tr>
<tr>
<td>Hydromorphone*</td>
<td>Diclofenac</td>
<td>Sodium phosphates*</td>
<td>Pentobarbital</td>
</tr>
<tr>
<td>Methadone</td>
<td>Indomethacin*</td>
<td>Mineral oil*</td>
<td>Phenytoin</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>Ibuprofen</td>
<td>Bisacodyl*</td>
<td>Carbamazepine</td>
</tr>
<tr>
<td>Codeine</td>
<td>Naproxen</td>
<td>Docusate*</td>
<td>Valporic Acid</td>
</tr>
<tr>
<td>Tramadol</td>
<td>Aspirin</td>
<td></td>
<td>Lamotrigine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corticosteroids</td>
<td>Anxiolytics</td>
<td>Anti-Emics</td>
<td></td>
</tr>
<tr>
<td>Hydrocortisone</td>
<td>Diazepam*</td>
<td>Prochlorperazine*</td>
<td></td>
</tr>
<tr>
<td>Prednisolone</td>
<td>Lorazepam</td>
<td>Promethazine*</td>
<td></td>
</tr>
<tr>
<td>Dexamethasone</td>
<td>Midazolam</td>
<td>Chlorpromazine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clonazepam</td>
<td>Metoclopramide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ondansetron</td>
<td></td>
</tr>
</tbody>
</table>

1. Rectum should be emptied prior to insertion as stool interferes with drug absorption.
2. Insert the drug about a finger’s length into the rectum (about 3 inches).
3. Although somewhat counter-intuitive, suppositories work the same if they are administered base or tapered end first. Some have actually advocated giving suppositories “base first” as this may facilitate retention.
4. 10 mL warm water can be inserted via syringe to assist dissolution of the rectal product.

5. Remember that although some experts have used a 1:1 conversion when giving oral opioids rectally, both morphine and oxycodone extended release tablets may actually have increased absorption from the rectal vault and significant patient variability exists when giving oral medications rectally.

**Bottom Line** – The rectal route can be an effective alternative to the oral route in a number of palliative care medications to patients with a compromised oral route.

**Nausea and Vomiting and Hiccups**

Nausea and Vomiting can occur from numerous causes in patients, especially in those at the end of life. Vestibular causes, infection, medication effects, constipation, tumor effects in the abdomen or brain are just a few of the causes of nausea and vomiting.

The **VOMIT** mnemonic can be used to assess causes of Nausea and Vomiting:

**Cause - Vestibular**
- Receptors Involved - Cholinergic, Histaminic
- Drug Class Useful - Anticholinergic, Antihistaminic
- Drug Treatment Examples - Scopolamine patch, Promethazine

**Cause - Obstruction of Bowel by Constipation**
- Receptors Involved - Cholinergic, Histaminic, likely 5HT3
- Treatment Useful - Stimulate myenteric plexus
- Drug Treatment Examples - Senna products

**Cause - DysMotility of upper gut**
- Receptors Involved - Cholinergic, Histaminic, 5HT3, 5HT4
• Drug Class Useful - Prokinetics which stimulate 5HT4 receptors
• Drug Treatment Examples - Metoclopramide

**Cause - Infection, Inflammation**

• Receptors Involved - Cholinergic, Histaminic, 5HT3, Neurokinin 1
• Drug Classes Useful - Anticholinergic, Antihistaminic, 5HT3 antagonists, Neurokinin 1 antagonists
• Drug Treatment Examples – Promethazine (e.g. for labyrinthitis), Prochlorperazine

**Cause - Toxins stimulating the chemoreceptor trigger-zone in the brain such as opioids**

• Receptors Involved - Dopamine 2, 5HT3
• Drug Class Useful - Antidopaminergic, 5HT3 Antagonists
• Drug Treatment Examples - Prochlorperazine, Haloperidol, Ondansetron

**Notes**

5HT3, 5HT4 refer to the serotonin receptors, subtypes 3 & 4. Promethazine and prochlorperazine are very different drugs. Promethazine is most useful for vertigo and gastroenteritis due to infections and inflammation. Prochlorperazine is preferred for opioid related nausea.
<table>
<thead>
<tr>
<th>Class of medication</th>
<th>Common uses</th>
<th>Common side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticholinergic (scopolamine)</td>
<td>Possible adjunct for cytotoxic chemotherapy, prophylaxis and treatment of motion sickness</td>
<td>Drowsiness, dry mouth, vision disturbances</td>
</tr>
<tr>
<td>Antihistamines (diphenhydramine, meclizine)</td>
<td>Migraine, motion sickness, vertigo</td>
<td>Drowsiness</td>
</tr>
<tr>
<td>Butyrophenones (droperidol, haloperidol)</td>
<td>Anticipatory and acute chemotherapeutic nausea and vomiting, postoperative nausea and vomiting</td>
<td>Agitation, restlessness, sedation</td>
</tr>
<tr>
<td>Cannabinoids (dronabinol)</td>
<td>Refractory chemotherapy-related nausea and vomiting</td>
<td>Ataxia, dizziness, euphoria, hypotension, sedation</td>
</tr>
<tr>
<td>Corticosteroids (dexamethasone)</td>
<td>Adjunct for chemotherapy-related symptoms</td>
<td>Increased energy, insomnia, mood changes</td>
</tr>
<tr>
<td>Phenothiazines (prochlorperazine, promethazine)</td>
<td>Migraine, motion sickness, postchemotherapy nausea and vomiting, postoperative nausea and vomiting, severe episodes of nausea and vomiting</td>
<td>Extrapyramidal symptoms (e.g., dystonia, tardive dyskinesia), orthostatic hypotension, sedation</td>
</tr>
<tr>
<td>Serotonin 5-hydroxytryptamine antagonists‡ (dolasetron, odansetron, granisetron,)</td>
<td>Postchemotherapy nausea and vomiting, severe nausea and vomiting</td>
<td>Asthenia, constipation, dizziness, mild headache</td>
</tr>
<tr>
<td>Substituted benzamides (metoclopramide [Reglan],)</td>
<td>Diabetic gastroenteropathy, gastroparesis (Data to support use in standard doses for N/V is sparse)</td>
<td>Extrapyramidal side effects (e.g., akathisia, dyskinesia, dystonia, oculogyric crises, opisthotonos), fatigue, hyperprolactinemia</td>
</tr>
</tbody>
</table>
Nausea and Vomiting Receptor Chart

The Lower the Number, the higher the affinity for that receptor

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dopamine</th>
<th>Musc. Chol.</th>
<th>Histamine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scopolamine</td>
<td>&gt;10,000</td>
<td>0.08</td>
<td>&gt;10,000</td>
</tr>
<tr>
<td>Promethazine</td>
<td>240</td>
<td>21</td>
<td>2.9</td>
</tr>
<tr>
<td>Prochlorperazine</td>
<td>15</td>
<td>2100</td>
<td>100</td>
</tr>
<tr>
<td>Chlorpromazine</td>
<td>250</td>
<td>130</td>
<td>28</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>270</td>
<td>&gt;10,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>4.2</td>
<td>&gt;10,000</td>
<td>1,600</td>
</tr>
</tbody>
</table>

Treatment Algorithm

1. Match probable cause to treatment
2. Due to safety and efficacy ondansetron is usually considered a first line agent for symptom treatment. There are no data to support more than a single dose for acute treatment of N/V
3. Go to Prochlorperazine next
4. Consider Haloperidol (2-5 mg IV q4h), which is a very effective anti-emetic
5. Add Dexamethasone if needed
6. P-6 Acupuncture point stimulation is approved for PONV
7. Gastroparesis induced nausea and vomiting is difficult to control. If the above measures (+/- metoclopramide) do not work, case reports have suggested that mirtazapine or aprepitant may be of benefit
Hiccup Management

Although not completely understood, the hiccup reflex is thought to be composed of three major parts including an afferent limb, a central mediator, and an efferent limb (e.g., phrenic nerve). The main efferent limb of the diaphragmatic spasms is mediated by motor fibers of the phrenic nerve. The glottis closes to prevent inspiration 35 msec after electrical activity rises above the baseline in the diaphragm and respiratory muscles.

Treatment of hiccups is largely empirical

1. Non-pharmacologic therapies such as vagal maneuvers can be tried first.

2. Gastroesophageal reflux can be responsible for hiccups and should be treated with anti-secretory therapy (e.g. proton-pump inhibitor) if suspected.

3. Both chlorpromazine (25-50mg qid) and baclofen (5-10mg bid or tid) have been considered first line agents for pharmacologic treatment of hiccups.

4. Some case reports suggest that adding gabapentin may be helpful.

Itching

Pruritus (itching) is a common distressing symptom especially near the end of life. The itch sensation may arise from stimulation of the skin itch receptor or from a central phenomenon without skin involvement (e.g. opioid induced pruritus). Histamine plays a central role in many cases of itching, but is not the implicated in all causes of pruritus. Other mediators of itching include serotonin, prostaglandins, and kinins (e.g. bradykinin).

Common Causes

- Dermatological (dryness, wetness, irritation, eczema, psoriasis)
- Metabolic (hepatic failure, renal failure, hypothyroidism)
- Hematologic (iron deficiency, other mineral deficiencies, polycythemia, thrombocytosis, leukemia, lymphoma)
- Drugs (opioids, aspirin, Type I and Type IV drug hypersensitivity reactions)
- Infectious (e.g. candida, lice)
- Allergy (urticaria, contact dermatitis)
Managing Itching

Management of pruritus involves eliminating the cause when possible. Symptomatic strategies include:

1. **Moisturizers**: Dryness (xerosis) is very common and may exacerbate other causes of itching. The mainstay of treatment is skin hydration. Preferred agents are those that contain Ceramides, Dimethicone and glycerin. Urea containing products are also effective but can sting cracked skin. Both over-the-counter and prescription preparations exist that contain the above. Severe dryness often requires emollients (such as petroleum jelly) that patients find oily or greasy. Nevertheless, they may applied after bathing, over damp skin, to preserve skin hydration.

2. **Cooling agents** (e.g. Calamine and/or Menthol in aqueous cream, 0.5%-2%) are mildly antipruritic. A potent way to anesthetize the skin is with the eutectic mixture of local anesthetics lidocaine and prilocaine (EMLA cream, generics).

3. **Antihistamines** are considered first line treatments for most cases of itching. Both first generation (e.g. diphenhydramine) and second generation (e.g. fenofexadine) can be used. Although a common perception is that older drugs are more effective, they also cause more drowsiness and anticholinergic effects. Although there is not much supporting research, many report benefits of combining H1 and H2 receptor subtype antihistamines. These may have central effects as well as peripheral antihistaminergic effects. (e.g diphenhydramine 25-50 q4h + Famotidine 20mg po BID).

4. **Topical steroids** may be helpful in the presence of skin inflammation. These are best applied in ointment rather than cream formulations to alleviate dryness. Systemic steroids have been used in refractory cases.

5. **Other**: An old-fashioned but effective remedy is immersion in an oatmeal bath (e.g. Aveeno).

**Refractory itching management options**

Doxepin (10-30 mg PO at bedtime), a tricyclic antidepressant, is a very potent antihistamine and may help in more refractory cases.

Consider cholestyramine for cholestatic pruritis,

Some case reports have examined the following in refractory itching: ondansetron, paroxetine or naloxone.
Excess Secretions/Salivation

As the level of consciousness decreases in the dying process, patients lose their ability to swallow and clear oral secretions. This often results in noisy ventilation with each breath, described as ‘gurgling’ or ‘rattling noises.’ Sometimes termed the “death rattle” it is not inherently harmful but may be bothersome to patients or, more frequently, family members or caregivers who fear the patient is choking. Excessive or thick respiratory secretions are common in patients with pulmonary and neurologic diseases and for many patients in the last few days of life.

Non-Pharmacologic Treatments

1. Position the patient on their side or in a semi-prone position to facilitate postural drainage.

2. Gentle oropharyngeal suctioning is used although this can be ineffective when fluids are beyond the reach of the catheter. Frequent suctioning is disturbing to both the patient and the visitors.

Pharmacologic Therapy

<table>
<thead>
<tr>
<th>Drug</th>
<th>Trade Name</th>
<th>Route</th>
<th>Starting Dose</th>
<th>Onset</th>
</tr>
</thead>
<tbody>
<tr>
<td>scopolamine (hyoscine)hydrobromide</td>
<td>Transderm Scope</td>
<td>Patch</td>
<td>One 1.5mg Patch</td>
<td>~12 h (24 h to steady state)</td>
</tr>
<tr>
<td>hyoscine</td>
<td>Levsin</td>
<td>PO, SL</td>
<td>0.125mg</td>
<td>30min</td>
</tr>
<tr>
<td>glycopyrrolate</td>
<td>Robinul</td>
<td>PO</td>
<td>0.4mg</td>
<td>30min</td>
</tr>
<tr>
<td>glycopyrrolate</td>
<td>Robinul</td>
<td>SubQ, IV</td>
<td>0.4mg</td>
<td>1min</td>
</tr>
<tr>
<td>atropine sulfate</td>
<td>Atropine</td>
<td>SubQ, IV</td>
<td>0.1mg</td>
<td>1min</td>
</tr>
<tr>
<td>atropine sulfate</td>
<td>multiple</td>
<td>Sublingual</td>
<td>1gtt (1% ophth. soln)</td>
<td>30min</td>
</tr>
</tbody>
</table>

Note that all drugs may cause anticholinergic adverse effects such as dry mouth, dry eyes and drowsiness. Also note that the scopolamine patch takes up to 24-hours to be effective, thus it should not be used for acute symptoms.
Constipation and Diarrhea

Constipation is an unglamorous symptom, but it is common, uncomfortable and deserves treatment. About 10% of healthy individuals have constipation during their lifetime and the likelihood is higher for females and increases with age in both genders.

Many major illnesses make constipation worse. Constipation is especially common in people terminally ill with cancer and may exceed 50% of patients. Some surveys have suggested that constipation is at least as distressing to cancer patients as pain is.

Diarrhea is reported by 6-10% of hospitalized patients and again is higher in cancer patients, although it is less common than constipation. An exception is patients with symptomatic human immunodeficiency virus (HIV), where diarrhea is a common complaint.

Causes of Constipation in the Palliative Care Patient

Debilitation-Related Effects
- Inadequate food intake
- Low fiber diet
- Weakness
- Inactivity
- Dehydration
- Depression
- Unfamiliar toilet arrangements

Drugs
- Opioids
- Drugs with anticholinergic activity
- Phenothiazines
- Tricyclic antidepressants
- Antiparkinsonian agents

Antacids
- Calcium channel blockers
Iron preparations (may also cause diarrhea)

Malignancy

- Intestinal obstruction
- Bowel wall tumor
- External compression
- Damage to intrinsic or extrinsic innervation of the bowel
- Hypercalcemia

Concurrent Disease

Diabetes (central neuropathy)

- Hypothyroidism
- Hypokalemia
- Distortion of rectal anatomy
- Anorectal pain (e.g., fissure)
- Colitis

Treatment of Acute Constipation (disimpaction) — see notes on drugs below

Oral Agents or Rectal Agents may be used based on clinical condition. For refractory impaction both routes may be used simultaneously:

Oral
First Line: MOM 30 ml BID or ½-1 bottle Mag Citrate (150-300 ml) X1
Second Line: ADD Senna preparation for stimulation

Rectal
First line: Bisacodyl 10mg PR X 1-2
Second Line: Sodium Phosphate enema (Fleet’s) X 1
Refractory Treatment

PEG-3350 (GoLytely) may be given as 120 ml aliquots q 30 mins until evacuation occurs. Tap water enema (often mixed with a small amount of liquid soap [a “soap suds enema”]) can be used. Consultation of a gastroenterologist may be considered.

Chronic Treatment of Constipation

After treatment of acute constipation occurs chronic treatment may be necessary.

For treatment of outpatient constipation (evacuation occurs over several days):

**First Line**: Bulk Forming/Fiber laxatives: TITRATE UP TO 20G + FULL GLASS OF WATER

In palliative care patients saline (Miralax) or stimulant laxatives (senna) are reasonable to use first line

**Second Line**: Osmotic/Sugar Laxative: Mom 15-30 ml/d OR Sorbitol 30 ml/d OR Lactulose 15-30 ml/d OR PEG 3350 w/o electrolytes (MIRALAX) 17g/daily or BID

**Third Line**: Add Senna preparation (senna based laxatives are usually FIRST LINE in patients taking chronic opioids). Consider Lubiprostone or methylnaltrexone (especially in refractory opioid induced constipation).

Consultation of a gastroenterologist may be considered
<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bulk Laxatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psyllium, Methycellulose</td>
<td>Up to 20g/d</td>
<td>Take with plenty of water. Gas, bloating common ADRs, Citrucel may cause less of the above</td>
</tr>
<tr>
<td><strong>Osmotic Laxatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MOM, Mag citrate</td>
<td>See above</td>
<td>Avoid chronic use in CKD</td>
</tr>
<tr>
<td>Sodium Phosphate PO/PR</td>
<td>See Above</td>
<td>Avoid ALL use in CKD/Children</td>
</tr>
<tr>
<td>Lubiprostone</td>
<td>8 mcg po bid (24 mcg bid for CP-IBS)</td>
<td>Chloride channel agonist that acts locally to increase intestinal fluid secretion. N/V/D main ADRs. NOT safe in pregnancy</td>
</tr>
<tr>
<td>Linaclotide</td>
<td>145mcg/day (290 mcg/day for CP-IBS)</td>
<td>cGMP agonist that increases intestinal fluid secretion. Ongoing studies in gastroparesis. N/V/D main ADRs to date</td>
</tr>
<tr>
<td><strong>Poorly Absorbed Sugars</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactulose, Sorbitol</td>
<td></td>
<td>Gas/bloating common ADRs, Lactulose Rx only</td>
</tr>
<tr>
<td>PEG 3350 W/Electrolytes</td>
<td>As Above</td>
<td>Not for chronic use</td>
</tr>
<tr>
<td>PEG 3350 W/O Electrolytes</td>
<td>17g/d</td>
<td>Takes several days to work, Is now OTC</td>
</tr>
<tr>
<td><strong>Stimulant Laxatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senna, Cascara, Bisacodyl</td>
<td>As above</td>
<td>Long term use may cause melanosis coli (benign), rebound constipation is stopped suddenly. Oral bisacodyl associated with severe abdominal cramping, avoid chronic use</td>
</tr>
<tr>
<td>Stool Softeners</td>
<td>Docusate/Mineral Oil</td>
<td>Efficacy data lacking, not effective for opioid constipation alone. Avoid mineral oil b/c of risk of lipid pneumonitis</td>
</tr>
<tr>
<td><strong>Opoid Induced Constipation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metylnaltrexone</td>
<td>8-12 mg SQ Every Other Day</td>
<td>Peripheral mu-opioid receptor blocker. Does not penetrate into CNS. N/V/D main ADRs to this point. Approved for severe opioid induced constipation, in palliative care situations</td>
</tr>
<tr>
<td>Alvimopan</td>
<td>12 mg po pre-op and then bid for up to 12 days post-op</td>
<td>Approved for prevention/treatment of post-op ileus. Should not use in patients with pre-op use of opioids. CV safety. Expensive.</td>
</tr>
</tbody>
</table>
Symptomatic Treatment of Diarrhea

ALWAYS check for Clostridium Difficile Infection

1. Fat malabsorption: pancreatic enzyme supplementation with meals (may be more effective if H2 antagonist given first)
2. Cholestatic diarrhea or radiation diarrhea may respond to cholestyramine
3. Carcinoid Syndrome may respond to cyproheptadine or octreotide

There are numerous nonspecific antidiarrheal agents, with the most commonly used agents probably being the peripheral opioid agonists. Such agents may make illness due to Shigella and C. difficile worse and should be used with caution if these organisms are present, there is blood in the stool, or the patient has fever.

Nonspecific antidiarrheal agents are numerous and are absorbent, adsorbent, mucosal prostaglandin inhibitors, opioids, or somatostatin derivatives. These agents may make illness due to Shigella and C. difficile worse and should be used with caution if these organisms are present, there is blood in the stool, or the patient has fever.

Nonspecific Treatments for Diarrhea

1. Absorbent agents: pectin
2. Adsorbent agents: kaolin, attapulgite
3. Opioids: diphenoxylate (usually combined with atropine), loperamide (usually used first)
4. Somatostatin analogues: octreotide

Refractory diarrhea may respond to tincture of opium.
Dyspnea

The causes of dyspnea include a wide spectrum of serious lung or heart conditions, anemia, anxiety, chest wall pathology, electrolyte disturbances.

Looking for simple problems is always warranted: is Oxygen prescribed? Is it being used correctly? Is pulmonary edema occurring due to too much intravenous fluids? Is pain or anxiety the cause of the dyspnea?

Understanding 1) where patients are at in the dying trajectory, and 2) their identified goals of care, is essential to guide the extent of workup to discover reversible causes. If the patient is clearly dying and the goals of care are comfort, then such modalities pulse oximetry, arterial blood gases, EKG, or imaging are not indicated.

Treatment

General measures Positioning (sitting up), increasing air movement via a fan or open window, and use of bedside relaxation techniques are all helpful. In the imminently dying patient, discontinuing parenteral fluids is appropriate.

Opioids are the drugs of choice for dyspnea symptoms at the end of life. In the opioid naive patient, low doses of oral (10-15 mg) or parenteral morphine (2-5 mg), will provide relief for most patients; higher doses will be needed for patients on chronic opioids. When dyspnea is acute and severe, parenteral is the route of choice: 2-5 mg IV every 5-10 minutes until relief. Nebulized morphine does not seem to be more beneficial than giving the drug systemically and is not recommended.

Oxygen is often, but not universally, helpful. When in doubt, a therapeutic trial, based on symptom relief, not pulse oximetry, is indicated. Patients generally prefer nasal cannula administration than a mask, especially in setting of imminent death when agitation from the mask is commonly seen. There is little reason to go beyond 4-6 L/ min of oxygen via nasal cannula in the actively dying patient.

Important Note: There is no evidence that proper symptom management for terminal dyspnea hastens death, however confusion may exist that such treatment is the same as euthanasia or assisted suicide. Thus the treatment plan should be fully communicated to caregivers and family members before it is started.
Anxiety and Depression

Anxiety

Generalized anxiety and its related disorders is very common in the palliative care population. The overall prevalence of these disorders vary somewhat depending on underlying conditions and diagnostic criteria (e.g for axis I disorders (SCID-I) as defined by the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)) But can range from 25% in cancer patients up to 70% in patients with chronic lung disease. Associated symptoms such as dyspnea and even pain can be seriously exacerbated by the presence of anxiety.

Treatment of Anxiety

Medical management of anxiety typically employs benzodiazepine drugs for acute symptoms or for chronic management. Lorazepam or oxazepam are often recommended for their relatively short duration and lack of active metabolites agents. Serotonin reuptake inhibitors (notably citalapram and paroxetine) and buspirone, which are effective in psychiatric settings, can be considered in palliative care, but they have a delayed onset of up to 3 to 4 weeks, which may be problematic in treating acute distress. For patients with a longer life expectancy, lorazepam or clonazepam combined with slower-onset agents can be considered.

Various complementary therapies, including music therapy, and aromatherapy with massage, have some evidence of effectiveness in managing anxiety. Studies have shown small, transient effects but such adjunctive therapies have few adverse effects (besides cost of therapy) and are certainly reasonable to try. Pastoral care or working with a counseling professional can also be helpful.

Depression

Depression is a common problem in palliative care patients, and it tends to be underdiagnosed and undertreated. Sadness and anticipatory mourning in a patient with a terminal illness is usually expected and clinician’s must be skilled in differentiating existential distress from clinical depression. Multiple studies demonstrate that depression can have a profoundly negative effect on quality of life, including the capacity for a patient to derive pleasure, meaning, and connection with others. Some data suggest in end of life patients the rate of DSM-IV defined major depression may approach 60% with other studies suggesting rates of closer to 15-20%
Nonpharmacological measures and supportive care

Nonpharmacological interventions are critical and must be considered. The patient's relationship with the primary medical caregiver has been identified as an important psychotherapeutic tool for many depressed patients, and it should not be underestimated. Working with trained counselors, pastoral caregivers, or other interventions aim to help patients understand and work through their feelings related to their disease and to help promote active coping strategies to maintain functional status. Support groups can also be very helpful for adjunctively helping with major depressive symptoms. Among the numerous techniques advocated such modalities as relaxation and guided imagery can be particularly helpful. Frequent counseling with professionals and/or pastoral care are important facets to depression treatment and should be utilized early in the palliative care treatment plan.

Antidepressants in Palliative Care

All antidepressants are about equally effective (about 70-80%) in causing a positive response (a “response” usually defined in clinical studies as an improvement on a standardized scale of depression symptoms such as the Hamilton Depression Rating Scale (HAM-D)). However significant differences exist in adverse reactions, and drug interaction potential exist. Additionally they often require up to 6 weeks to see the full effect of the medication which may not be practical in palliative care patients (see below for using psychostimulants in this population). Traditionally, Selective Serotonin Reuptake Inhibitors (SSRIs) are considered the drugs of first choice. They can also treat a wide variety of other psychiatric disorders including obsessive compulsive disorder, post-traumatic stress disorder and, panic disorder, and general anxiety. General adverse effects include:

- Sexual dysfunction
- Hyponatremia
- EPS
- Bruxism
Selective Norepinephrine Reuptake Inhibitors such as venlafaxine and duloxetine are reasonable to try in SSRI failures. Adverse effects are similar to SSRIs with dry mouth being common. Higher doses tend to block reuptake of norepinephrine more than serotonin and may be needed to effectively treat depression.

Both drugs may be effective in treating neuropathic pain as well (see above section) In patients where appetite stimulation is desired, mirtazapine may work to increase appetite as well as treat depression. It may cause excess sedation.

<table>
<thead>
<tr>
<th>SSRI</th>
<th>TYPE</th>
<th>ADRs</th>
<th>DI Potential</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluoxetine (Prozac)</td>
<td>“E”</td>
<td>Nervousness, Insomnia, EPS</td>
<td>HIGH</td>
<td>Long T1/2, Active Metabolite</td>
</tr>
<tr>
<td>Sertraline (Zoloft)</td>
<td>“E”</td>
<td>Nervousness, Insomnia, EPS</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td>Paroxetine (Paxil)</td>
<td>“S”</td>
<td>Sedation, Dry mouth, Wt.gain</td>
<td>HIGH</td>
<td>Most sedating/Wt. Gain. Biggest withdrawal risk</td>
</tr>
<tr>
<td>Citalopram (Celexa)</td>
<td>“S”</td>
<td>Sedation</td>
<td>LOW</td>
<td></td>
</tr>
<tr>
<td>Escitalopram (Lexapro)</td>
<td>“S”</td>
<td>Sedation</td>
<td>LOW</td>
<td>Claims of faster onset</td>
</tr>
</tbody>
</table>

E = Energizing actions (more energy, wakefulness) are more common
S = Sedating actions (Drowsiness, etc) are more common
Use of Psychostimulants in Palliative Care

Both fatigue and depression can be treated with one of the psychostimulants: dextroamphetamine, or methylphenidate. Psychostimulants act rapidly and are well-tolerated. These medications have 6 potentially beneficial effects for patients with terminal illness: Mood elevation, Improved energy, Potentiate analgesic effect of opioids, Counter opioid-induced sedation, Increase appetite, and Improve cognition.

Practical Tips for Depression

Psychostimulants are the drug of choice for patients with a relatively short life expectancy of weeks to months because they act quickly, usually within 24-48 hours. Psychostimulants are generally safe. However, they should be used with caution in patients with heart disease or cognitive disturbances (e.g. delirium). Some patients with severe depression and a longer life expectancy benefit from starting a psychostimulant and then transitioning to a selective SSRI. In the patient near the end of life, dependence on these medications should not be a concern. The drug of first choice is usually Methylphenidate 5mg given at 0800 and 1300. Doses can be increased gradually to 30mg total daily. Prescribers should be aware of the legal restrictions of these medications (most are controlled substance Schedule II).

Delirium

Some degree of loss of cognitive function occurs in most patients in the week or two before death. Studies have confirmed the high prevalence of delirium in palliative care, ranging from 25% at admission to 85% in the last weeks of life.

Key points to remember about delirium in the palliative care patient:

1. The term “confusion” is not an accurate descriptive term—it can mean anything from delirium, dementia, psychosis, obtundation, etc. Patients need a focused assessment, including a brief mini-mental examination. Clinicians should use one of several validated delirium assessment tools to help quantify and document cognitive function.

2. Delirium can be either a hyperactive/agitated delirium or a hypoactive delirium. The hallmark of delirium is an acute change in the level of arousal; supporting features include altered sleep/wake cycle, mumbling speech, disturbance of memory and attention, and perceptual disturbances with delusions and hallucinations.
3. The most common identifiable cause of delirium in the hospital setting is drugs: anti-cholinergics (e.g. anti-secretion drugs, anti-emetics, anti-histamines, tricyclic anti-depressants, etc.), sedative-hypnotics (e.g. benzodiazepines), and opioids. Unfortunately many of these drug classes are commonly used in palliative care patients and cannot be easily discontinued. Other common causes include metabolic derangements (elevated sodium or calcium, low glucose or oxygen); infections; CNS pathology; or drug/alcohol withdrawal.

Prevention of Delirium

If at all possible non-pharmacologic measures to prevent delirium are preferred to treating it once it has happened. Depending on the patient situation and resources several measures have been shown in certain populations (often dementia or intensive care patients) to help prevent delirium. These include:

• Frequent re-direction/orientation to place, date, time
• “Reminiscing” about pleasant memories with the patient
• Normalize Sleep/Wake Cycle (without drugs if possible)
• Cognitive stimulation, puzzles, games, etc.

If possible avoid benzodiazepines, or anticholinergic drugs because of their deliriogenic potential.

Pharmacologic Management of Delirium

Antipsychotics are commonly used to treat delirium in the palliative care patient despite a paucity of data for their use. Haloperidol is the best studied such drug and is often considered the drug of first choice as it can be given orally, intermuscularly, subcutaneously or intravenously. Starting doses are 0.5 – 1 mg PO or IV (the intramuscular route is also available).

Titration can occur by 2 – 5 mg every 1 hour until a total daily requirement is established, which is then administered in 2-3 divided doses per day. Intravenous haloperidol may cause less extrapyramidal symptoms than oral haloperidol. In higher doses prolongation of the QT interval can occur with this and other neuroleptics The newer, ‘atypical’ neuroleptics olanzapine (Zyprexa), quetiapine (Seroquel), and risperidone (Risperdal) may be helpful in the management of confusional states.
Evidence supporting usage these drugs is scant, so they should not be considered a first-line treatment. However, these agents are associated with fewer drug-induced movement disorders than haloperidol, and may be agents of choice in patients with Parkinson’s disease and related neuromuscular disorders.

The starting dose for olanzapine is 5 mg PO every day; after one week, the dose can be raised to 10 mg a day and titrated to 20 mg a day. Quetiapine is initially given 25 mg PO twice a day which can be raised by 25 – 50 mg per dose every 2 – 3 days up to a target of 300 – 400 mg a day, divided into 2 – 3 doses. Risperidone is given 1 – 2 mg PO at night and is gradually raised 1 mg every 2 – 3 days until an effective dose (usually 4–6 mg PO hs) is reached.

Several of these agents are also available as an oral disintegrating tablet for those who cannot swallow. Risperadone may be preferred for hypoactive delirium, while quetiapine has potential applicability in treating agitated delirium, especially at the end of life.
Medicine Reconciliation

Many patients nearing the end of life have several (or sometimes numerous) comorbid conditions, which often require medication for treatment. As the decision is made to transition to palliative care with its focus on patient care, symptom control and comfort, the continued use of certain chronic medications may no longer be important. A Dutch retrospective review found that a significant percentage of palliative care patients were receiving what the investigators defined as “futile” medications. Investigators defined “futile” as: unnecessary (when no short-term benefit to patients with respect to survival, quality of life, or symptom control was anticipated) or duplicate (two or more drugs from the same pharmacological class). Keep in mind that many well accepted treatments for chronic diseases (e.g. statins in treatment of dyslipidemia) have a treatment benefit “window” of months to years. Such treatment may not benefit palliative care patients and is not in keeping with the goals of palliative care. Continuing such medications may contribute to adverse effects and costs to the patients with no symptom/comfort benefit.

Examples of Medications that may be Discontinued in Palliative Care Patients

There is no standard list of medications that may be discontinued in palliative care patients. Each patient’s medication profile should be reviewed with an eye toward the goals of improving symptoms and comfort. In some cases a “chronic” medication may be continued with those goals in mind, where in other cases no symptom improvement would mean the medication could be stopped. For example two palliative care patients are taking the same ACE-I inhibitor: lisinopril 10mg daily. The first patient has end-stage systolic heart failure, where this drug is likely to contribute to improved symptoms, whereas the second patient with end-stage Alzheimer’s dementia would be unlikely to have any symptom benefit and the drug can be appropriately discontinued.

Goals of Therapy in Patients in Palliative Care

In patients who have entered palliative care, aggressive disease management goals may no longer be appropriate. For example the American Diabetes Association in their latest guidelines have suggested that a higher than standard goal glycosylated hemoglobin is appropriate in the extreme elderly or others at risk of hypoglycemic episodes. This line of thinking should hold true as a patient nears the end of life. Again remember that the goals of palliative care is symptom improvement an comfort. A palliative care patient who is elderly and with diabetes may be allowed to have
“permissive” hyperglycemia (e.g. serum blood glucoses between 120 and 200 mg/dl) to prevent symptoms of either hypoglycemia or severe hyperglycemia.

Examples of Medications that may be Appropriate to Discontinue Near the End of Life

1. **Statins**: There is little evidence that statins are beneficial within weeks to months. The best study that showed possible early benefit after a heart attack (PROVE IT – TIMI 22) excluded patients who were likely to die within 2 years. There is also no evidence that stopping statins in patients with chronic cardiac disease increases mortality or any other outcome except higher LDLs.

2. **Multi-Vitamins**: there is little proven effectiveness that this extends life or improve symptoms in the short term.

3. **Aspirin**: Risks of GI bleed increases as patients near the end of life and the short term consequences of stopping aspirin have not been fully established.

4. **Alpha blockers** in patients for prostatic hypertrophy and urinary catherization when there is no intent to remove the catheter.

5. **Bisphophonates** in osteoporosis treatment: long window for effectiveness.
Physiology at the End of Life

A. Expected changes
B. Goals and realistic expectations
C. Tube feeding/enteral feeding

Numerous observational studies have demonstrated a high incidence of aspiration pneumonia in those who have been tube fed. Reduction in the chance of pneumonia has been suggested for non-bed-ridden post-stroke patients in one prospective, non-randomized study. For bedridden post-stroke patients, no reduction was observed.

Three retrospective cohort studies comparing patients with and without tube feeding demonstrated no advantage to tube feeding for this purpose.

Swallowing studies, such as videofluoroscopy, lack both sensitivity and specificity in predicting who will develop aspiration pneumonia. Croghan's (1994) study of 22 patients undergoing videofluoroscopy demonstrated a sensitivity of 65% and specificity of 67% in predicting who would develop aspiration pneumonia within one year. In this study no reduction in the incidence of pneumonia was demonstrated in those tube fed.

Swallowing studies may be helpful in providing guidance regarding swallowing techniques and optimal food consistencies for populations amenable to instruction.

Life Prolongation via Caloric Support

Individual patients may have weight stabilization or gain with tube feeding. However, when cohorts of patients have been studied in non-randomized retrospective or prospective studies, no survival advantage between tube fed and hand fed cohorts has been demonstrated.

Tube feeding may be life-prolonging in select circumstances:

- Patients with good functional status and proximal GI obstruction due to cancer
- Patients receiving chemotherapy/XRT involving the proximal GI tract.
- Selected HIV patients
- Patients with Amyotrophic Lateral Sclerosis
Most actively dying patients do not experience hunger or thirst. Although dry mouth is a common problem, there is no relation to hydration status and the symptom of dry mouth.

A recent literature review using palliative care and enteral nutrition as search terms found no studies demonstrating improved quality of life through tube feeding (results were limited to a few observational studies).

**Summary**

Although commonly used, current data does not provide much support for the use of artificial enteral nutrition in advanced dementia, or in patients on a dying trajectory from a chronic illness. A recommendation to use, or not use, tube feeding should be made only after first establishing the overall goals of care.

**Medical Futility**

The term ‘medical futility’ is commonly used by health professionals to discuss the appropriateness of a medical treatment option. Texas and California have defined statewide ‘futility’ policies and increasingly hospitals and nursing homes are developing their own futility policies.

*The Problem with ‘Futility’*

The public, policymakers, ethicists, and the medical profession have been unable to agree on a clear, concise definition of futility that can be applied to all medical situations. One commonly used definition is that a futile intervention is one that a) is unlikely to be of any benefit to a particular patient in a particular medical situation, and b) will not achieve the patient’s intended goals. The sticking point in all futility definitions is the concept of benefit, as the perception of benefit is highly subjective. Physicians, patients and families often have very different views on what is potentially beneficial. For example, although a physician may believe that renal dialysis in an elderly demented patient is futile, the family that views preservation of life at all costs as part of their cultural ethos, may view dialysis as an important intervention to continue life. Furthermore, medical futility can be easily misunderstood as health care rationing. While economic issues may impact shared decision making, the ultimate question is not “How much does this therapy cost?” Rather, it should be “Do the advantages of this therapy outweigh the disadvantages in a given patient?”
Types of ‘Futility’

Two types of futility have been described. Quantitative futility refers to the intervention that has a very small chance of benefiting the patient; the most commonly used number is less than 1% chance of success. The term qualitative futility describes a situation in which the quality of benefit an intervention will produce is exceedingly poor. However, neither approach is adequate as there is no consensus on either numeric thresholds for quantitative futility nor shared understanding of what constitutes qualitative benefits.

Physician Obligations

Physicians are not legally, professionally or ethically required to offer medically futile treatments, as defined by the standard of care of the medical community. Ethics committees, hospitals, and local/state medical organizations can provide resources to understand medical futility and professional responsibilities in one’s practice area.

Suggestions

Check with your health care institution regarding the presence of an existing futility policy.

Avoid using the term ‘futility’ in discussion with patients/families. Rather, speak in terms of ‘benefits’/‘burdens’ of treatment and patient or family-specific goals of care.
References

The University of Wisconsin End-Of-Life/Palliative Care resource center is an outstanding resource for palliative care clinicians [http://www.mcw.edu/palliativecare/EPERC.htm](http://www.mcw.edu/palliativecare/EPERC.htm)

GlobalRPh.com has a comprehensive Opioid conversion calculator: [http://www.globalrph.com/opiidconverter2.htm](http://www.globalrph.com/opiidconverter2.htm)

Walsh: Palliative Medicine, 1st edition, 2009; Saunders-Elsevier (Philadelphia, PA) is a excellent general handbook for palliative care clinicians

McPherson ML: *Demystifying Opioid Conversion Calculations*. 2010, ASHP (Bethesda, MD). Probably the overall best print book on this subject. It covers nearly all possible scenarios involving opioid dosing


