Overview and Objectives:
- The broad objectives of this course are to provide trainees with an overview of the basic and clinical sciences underlying the professional care of dying patients, and to introduce them to the primary reference sources in the field of palliative medicine.
- The course will be taught in a small-group, discussion format, with faculty drawn from content-experts throughout the medical center. Discussions will combine analysis of the evidence base for a wide range of palliative care interventions with clinical case discussions. Cases will be drawn from the literature, faculty experience, and current clinical activities of the trainees themselves.

Responsibilities:
- Readings assigned to each session

Course Requirements:
- See individual session requirements
- Complete CLRES 2602

Attendance Policy:
- Students are expected to sign-in on the attendance record for each class.

Evaluation:
- There will be a take home examination at the end of the course (after 2601 and after 2602) that will present complex cases for analysis based on the concepts covered in the course.

Required Textbook(s):

These books are available at the Health Center Book Store.

The complete course syllabus will be available online on Blackboard https://courseweb.pitt.edu/webapps/login/

Academic Integrity:
Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity (http://www.provost.pitt.edu/info/ai1.html). Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators.
Session 1: Communication: Giving Bad News

At the conclusion of this lecture, the student will be able to:
1. Define bad news and what makes it bad.
2. Identify barriers to giving bad news to patients and family.
3. List and explain the 6 step model SPIKES for giving bad news.

Required Reading(s):
   [http://www.bmj.com/cgi/content/full/321/7270/1233?maxtoshow=&hits=10&RESULTFORMAT=1&autho r1=anonymous&andorexacttitle=and&andorexacttitleabs=and&andorexactfulltext=and&searchid=1&FIR SINDEX=0&sortspec=date&volume=321&fdate=1/1/1981&resourcetype=HWCIT]
   [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1071708/]
   [http://theoncologist.alphamedpress.org/content/16/3/342.full.pdf+html]
   [http://theoncologist.alphamedpress.org/cgi/content/abstract/5/4/302]
6. Breaking Bad News: What poetry has to say about it; The Pharos/Winter 2011 
At the conclusion of this lecture, the student will be able to:

1. Describe the Following Conditions of Participation (COPs) as relates to the Medicare Hospice Benefit (MHB): Certification periods, interdisciplinary team members, levels of care and covered services.
2. List and describe at least 3 roles and responsibilities of a Hospice Medical Director.
3. Identify 3 key components of hospice eligibility as defined by Medicare Local Coverage Determinations (LCD’s) and describe the relevance of functional status assessment.

Required Reading(s):

1. NHPCO facts figures (2015):

Recommended Reading(s):

1. Local Coverage Determination (LCD): Hospice - Determining Terminal Status (L33393):
At the conclusion of this lecture, the student will be able to:

1. Describe the physiologic difference between chronic pain and acute pain (central sensitization, etc.).
2. List six key characteristics of the patient’s pain experience important to include in a pain history.
3. Describe at least two pain assessment scales for the non-verbal adult.

Required Reading(s):

1. The Oxford Textbook of Palliative Medicine: 9.2 Pathophysiology of pain in cancer and other terminal illnesses
Session 4: Interventional Pain Management Techniques

At the conclusion of this lecture, the student will be able to:

1. Describe the indications for the use of the following interventional methods to treat refractory pain: intrathecal pump and regional nerve blocks.
2. Describe the strength of evidence to support the administration of celiac plexus block for pancreatic cancer pain.

Required Reading(s):

1. Evidence-Based Practice of Palliative Medicine
   a. Chapter 18: When should epidural or intrathecal opioid infusions and pumps be considered for pain management
   b. Chapter 19: When should nerve blocks be used for pain management?
2. The Oxford Textbook of Palliative Medicine
   a. 9.8 Interventional approaches for chronic pain
   b. 9.9 Neurostimulation in pain management

Recommended Reading(s):

1. Celiac Plexus Block for Pancreatic Cancer Pain, Cochrane Review 2011
At the conclusion of this lecture, the student will be able to:

1. Describe three common factors which influence prognosis across common illness.
2. Describe the most common trajectories for cancer and non-cancer illnesses.
3. Describe how to prognosticate in one common life limiting disease.
4. Describe a method for discussing prognosis with patients and their families.
5. Describe the data concerning how (a) physicians prognosticate and (b) discuss prognosis with patients.

Required Reading(s):

12. www.eprognosis.org
Session 6: Opioid Misuse and Addiction

At the conclusion of this lecture, the student will be able to:

1. Define dependence, addiction and tolerance.
2. Use common screening tools for risk of opioid misuse.
3. Interpret a urine drug screen.
4. Use universal precautions for managing opioid therapy in patients who are high risk for opioid misuse.
5. Describe how to approach pain treatment in patients taking methadone or buprenorphine for addiction.

Required Reading(s):

At the conclusion of this lecture, the student will be able to:

1. Describe how cognitive development influences a child’s understanding of death including the concepts of magical thinking, finalism and attribution.
2. Describe the role of the palliative care team for a child with a potentially life-limiting condition and his/her family.
3. Describe the following pain assessment tools for children: CRIES scale, FLACC tool, DEGR scale, Hester's Poker Chips, Bieri Faces scale.
4. Describe emotional, legal, and ethical factors influencing the decision making process in pediatric palliative care including Baby Doe regulations, decision making capacity and presenting benefits and burdens.

Required Reading(s):


Recommended Readings(s):

1. The Oxford Textbook of Palliative Medicine: 16.2 Care of children with advanced illness
At the conclusion of this lecture, the student will be able to:
1. Describe the traditional pain classification system including the difference between nociceptive and neuropathic pain, as well as the problems with this system.
2. Describe the mechanisms of action, indications and side effects of NSAIDs and acetaminophen.
3. Describe three uses for corticosteroids in pain management.
4. List the first line antidepressants, anticonvulsants and local anesthetics used in neuropathic pain management.
5. Describe a therapeutic approach to bone pain.

Required Reading(s):
1. Evidence-Based Practice of Palliative Care Medicine
   a. Chapter 9: When should corticosteroids be used to manage pain?
   b. Chapter 10: When should nonsteroidal anti-inflammatory drugs be used to manage pain?
   c. Chapter 11: What is neuropathic pain? How do opioids and non-opioids compare for neuropathic pain management?

Recommended Reading(s):
****NO CLASS****

ON

LABOR DAY HOLIDAY
At the conclusion of this lecture, the student will be able to:

1. Describe the differential diagnosis for the causes of nausea and vomiting using the VOMIT mnemonic.
2. Describe how the following chemoreceptor pathways (serotonin, dopamine, acetylcholine and neurokinin) mediate nausea and vomiting and name a medication that targets each pathway.
3. List three mechanisms of action for laxatives and give an example of a drug from each category.
4. List three common causes of diarrhea in palliative medicine patients.
5. Describe the appropriate role of surgery and interventional management options for bowel obstruction.

Required Reading(s):

1. Evidence-Based Palliative Medicine
   a. Chapter 24: What medications are effective in preventing and relieving constipation in the setting of opioid use?
   b. Chapter 25: How should medications be initiated and titrated to reduce acute and delayed nausea and vomiting in the setting of chemotherapy?
   c. Chapter 26: How should medications be initiated and titrated to prevent and treat nausea and vomiting in clinical situations unrelated to chemotherapy?
   d. Chapter 27: What interventions are effective for relieving acute bowel obstruction in cancer and other conditions?
2. The Oxford Textbook of Palliative Medicine: 10.3 Constipation and Diarrhea

Recommended Reading(s):

At the conclusion of this lecture, the student will be able to:

1. Name two pharmacologic and two non-pharmacologic strategies in managing anorexia.
2. Describe the physiology of hiccups and 3 treatment approaches.
4. List two pharmacologic and two non-pharmacologic interventions for the management of dyspnea.
5. Describe the role of oxygen in managing dyspnea.
6. Name at least two treatment strategies for oral lesions, mucositis and dry mouth.

Required Reading(s):
Evidence-Based Practice of Palliative Medicine
   a. Chapter 20: What interventions are effective for managing dyspnea in cancer?
   b. Chapter 21: What is the role of opioids in treatment of refractory dyspnea in advanced chronic obstructive pulmonary disease?
   c. Chapter 22: what non-opioid treatments should be used to manage dyspnea associated with chronic obstructive pulmonary disease?
   d. Chapter 23: What interventions are effective for managing dyspnea in heart failure?
   e. Chapter 28: What Medications are Effective in Improving Anorexia and Weight Loss in Cancer?
   f. Chapter 29: What Therapeutic Strategies Are Effective in Improving Anorexia and Weight Loss in Non-Malignant Diseases

2. The Oxford Textbook of Palliative Medicine
   a. 10.1 Hiccups, page 657-659
   b. 8.5 Oral Care

Recommended Reading(s):
At the conclusion of this lecture, the student will be able to:

1. List reversible causes of delirium commonly seen in patients with terminal illness.
2. Compare and contrast particular benzodiazepines and specific neuroleptic medications for the control of delirium.
3. Describe a treatment plan for patients with altered sleep-wake patterns.

Required Reading(s):
1. Oxford Textbook of Palliative Medicine: 17.5 Delirium

Recommended Reading(s):
Session 12: Pain Management: Use of Opioids Part 1

At the conclusion of this lecture, the student will be able to:

1. Describe the pharmacology and pharmacokinetics of the different opiate analgesics and how they differ.
2. Use equivalency tables to convert between equianalgesic doses of commonly used analgesics.
3. State the side effects of the analgesics which are commonly used to manage pain and techniques for alleviating these side effects.
4. Describe how to use opioids in renal and liver failure.

Required Reading(s):

1. Demystifying Opioids Conversation Calculations, A Guide for Effective Dosing
   a. Chapter 1: Introduction to Opioid Conversation Calculations
   b. Chapter 2: Converting Among Routes and Formulations of the Same Opioid
   c. Chapter 3: Converting Among Routes and Formulations of the Different Opioids
2. Evidence-Based Practice of Palliative Medicine: Chapter 6: Which opioids are safest and most effective in renal failure?

Recommended Reading(s):

At the conclusion of this lecture, the student will be able to:

1. Explain the differences between sadness, adjustment disorder, and depression.
2. Summarize the physical and psychological symptoms of major depression.
3. Compare and contrast representative classes of antidepressant medications and their use in management of depression.
4. Describe pharmacologic and non-pharmacologic approaches to the anxious patient.

Required Reading(s):

1. The Oxford Textbook of Palliative Medicine
   a. 17.3 Depression, demoralization, and suicidality
   b. 17.4 Adjustment disorders and anxiety
Session 14: Palliative Care Emergencies: Spinal Cord Compression, Hypercalcemia, Serotonin Syndrome

At the conclusion of this lecture, the student will be able to:

1. List three physical exam findings present in a patient with spinal cord compression.
2. Describe appropriate pharmacologic and procedural management of spinal cord compression.
3. Describe at least two symptoms and the management of malignant hypercalcemia
4. List three signs/symptoms of serotonin syndrome and list at least three commonly contributing medications
5. Describe management options of serotonin syndrome

Required Reading(s):

1. Evidence-Based Practice of Palliative Medicine
   a. Chapter 66: What are the signs and symptoms of spinal cord compression
   b. Chapter 67: What are the best pharmacological and surgical treatments for patients with spinal cord compression?

At the conclusion of this lecture, the student will be able to:

1. Describe the disease trajectory and prognosis in patients with advanced cardio-pulmonary-renal disease.
2. Describe illness trajectories for patients living with chronic illness.
3. List three symptoms common to patients with cardio-pulmonary-renal disease and describe the management of each.
4. Describe the role of palliative care and hospice in caring for these patients.

Required Reading(s):


Recommended Readings(s):

At the conclusion of this lecture, the student will be able to:

1. Differentiate somatic pain from neuropathic pain.
2. Describe the theoretical justification for using methadone in neuropathic pain.
3. Describe the unique pharmacokinetics of methadone and how to go from other opiates to equal analgesic doses of methadone.

Required Reading(s):
1. Evidence-Based Practice of Palliative Medicine
   a. Chapter 7: How should methadone be started and titrated in opioid naïve and opioid tolerant patients?
   b. Chapter 8: What special considerations should guide the safe use of methadone?

Recommended Readings(s):