

Hospice Curriculum / Didactic Guide

Curriculum

1. Definition of Palliative Care

- a. WHO definition
- b. Other definitions including Center of Advanced Palliative Care, and National Consensus Project
- c. Definition of hospice care

2. General Principles of Assessment

- a. Common tools
 - i. Edmonton Symptom Assessment Scale (ESAS 0-10)
 - ii. Memorial Delirium Assessment Scale (MDAS 0-30)
 - iii. Functional scale
 1. Zubrod (0-5)
 2. Karnofsky performance scale (0-100)
 - iv. Prognostication
 1. Palliative Performance Scale (PPS)
 2. Functional Assessment Staging (FAST)

3. Physical Symptoms

- a. Pain
 - i. Definition
 - ii. Pain pathways
 - iii. Physiology of pain – cancer and other terminal diseases
 - iv. Receptors and neurotransmitters
 - v. Assessment tools
 1. Visual Analog Scale (VAS 0-100)
 2. Numeric Rating Scale (NRS 0-10)
 3. Brief Pain Inventory (BPI)
 4. FACES
 5. Pain assessment in patients with dementia
- b. Types of pain
 - i. Nociceptive
 1. Somatic
 2. Visceral
 - ii. Neuropathic
 1. Central
 2. Peripheral
- c. Pain syndromes
 - i. Anatomical
 - ii. Etiological
 - iii. Pathological

- d. Pharmacological management of pain – WHO ladder, NCCN guidelines
 - i. Opioids
 - 1. Types
 - 2. Pharmacodynamics and pharmacokinetics
 - 3. Side effects including neurotoxicity and management of side effects
 - 4. Opioid rotation
 - 5. Drug-drug interactions
 - 6. Opioids in renal and hepatic disease
 - 7. Opioid regulations
 - 8. Risk Evaluation and Mitigation Strategies (REMS)
 - ii. Adjuvant medications
 - 1. Types – NSAIDs, steroids, anti-depressants, anti-epileptics, topicals, local anesthetics, bisphosphonates, NMDA receptor antagonists
 - 2. Pharmacodynamics and pharmacokinetics
 - 3. Side effects
 - 4. Drug-drug interactions
 - 5. Adjustment in renal and hepatic disease
 - 6. Cost considerations
 - 7. Evidence
 - iii. Non-pharmacological management
 - 1. Anesthetic procedures
 - a. Principles
 - b. Indications
 - c. Evidence
 - d. Types of blocks – common blocks including trigger point injections, celiac plexus, stellate ganglion, intercostal, neurolytic blocks, radiofrequency lesions, vertebroplasty, kyphoplasty
 - e. Principles of spinal delivery of analgesics
 - f. Appropriate referral to pain service
 - g. Cost considerations
 - 2. Neurosurgical procedures
 - a. Principles
 - b. Indications
 - c. Evidence
 - d. Types of procedures – common procedures including dorsal root entry zone lesions (DREZ), myelotomy, cordotomy
 - e. Cost considerations
 - 3. Cognitive behavioral therapy (CBT)
 - 4. Acupuncture
 - 5. Transcutaneous electrical nerve stimulation (TENS)
 - 6. Physical and occupational therapy techniques

- e. Nausea/vomiting
 - i. Anatomy of pathways and nausea/vomiting centers, including chemoreceptor trigger zone (CTZ) and their interrelationship
 - ii. Pathophysiology of nausea/vomiting
 - iii. Causes
 - iv. Assessment
 - v. Management
 - 1. Pharmacological
 - a. Dopamine antagonists – haloperidol
 - b. Prokinetic agents – metoclopramide, domperidone
 - c. Phenothiazines – prochlorperazine, chlorpromazine, olanzapine
 - d. Anti-histamines – cyclizine, diphenhydramine, promethazine
 - e. Anti-cholinergics – hyoscine
 - f. 5-HT₃ antagonists – ondansetron, granisetron
 - g. Substance P/NK₁ antagonist – aprepitant
 - 2. Non-pharmacological – cognitive behavioral therapy, TENS, acupuncture/acupressure
- f. Constipation/diarrhea
 - i. Constipation
 - 1. Definition – ROME criteria
 - 2. Pathophysiology
 - 3. Causes – opioid-induced constipation (OIC)
 - 4. Assessment – history, physical exam including rectal, imaging
 - 5. Management
 - a. Prophylactic treatment
 - b. Pharmacological treatment – stool softeners, stimulants, enemas, opioid antagonists, natural products
 - c. Non-pharmacological treatment – hydration, exercise
 - ii. Diarrhea
 - 1. Definition
 - 2. Causes
 - 3. Assessment – history, physical exam, imaging/investigations
 - 4. Management
 - a. Symptomatic
 - i. Absorbent agents – bulk-forming
 - ii. Adsorbent agents – kaolin, chalk
 - iii. Prostaglandin inhibitors
 - iv. Opioid agents
 - v. Anti-cholinergics
 - vi. Somatostatin analogues - octreotide
 - b. Specific

g. Dyspnea

- i. Anatomy
- ii. Physiology of Respiration and neural mechanisms
- iii. Receptors
- iv. Chemical control mechanisms – peripheral chemical receptors, central chemical receptors
- v. Definition of dyspnea
- vi. Incidence
- vii. Causes
- viii. Assessment of dyspnea – verbal numeric scale, modified Borg questionnaire
- ix. Oxygen cost diagram
- x. Lung function tests
- xi. Treatment
 1. General principles
 2. Treatment of reversible causes
 3. Symptomatic treatment
 - a. Pharmacological – bronchodilators, corticosteroids, opioids, oxygen
 - b. Non-pharmacological – relaxation techniques, fan ventilation of the room

h. Delirium

- i. Causes
- ii. Assessment – Memorial Delirium Assessment Scale (MDAS), mini-mental state exam (MMSE), CAM
- iii. Treatment
 1. Treat reversible causes (eg, antibiotics)
 2. Opioid rotation
 3. Simplifying polypharmacy
 4. Treat metabolic abnormalities (eg, hypercalcemia)
 5. Symptomatic treatment
 - a. Pharmacological – anti-psychotics (eg, haloperidol, olanzapine, quetiapine, chlorpromazine), benzodiazepines
 - b. Non-pharmacological – quiet room, caregiver presence, safety measures, counseling family members

i. Anorexia/cachexia

- i. Definition
- ii. Causes – metabolic, inflammatory
- iii. Assessment – cachexia panel (including anthropometric measures), markers (c-reactive protein, ESR)

j. Fatigue

- i. Definition
- ii. Differential diagnoses – fibromyalgia, chronic fatigue syndrome, post-traumatic stress disorder

- iii. Pathophysiology
- iv. Causes
- v. Treatment
 1. Specific – underlying cause (eg, anemia)
 2. General measures
 - a. Pharmacotherapy – amphetamines, steroids, anti-cholinergics
 - b. Non-pharmacological – exercise, light therapy
- k. Wounds
 - i. Types
 1. Fungating wounds
 2. Pressure ulcers
 - ii. Assessment and diagnosis
 - iii. Causes
 - iv. Treatment
 1. General measures – prevention, wound irrigation, debridement, dressing, treatment of infection
 2. Pharmacological – antibiotics, dressings (alginate hydrofiber or foam dressings for high-volume exudate wounds)
 3. Non-pharmacological – hyperbaric oxygen therapy, vacuum-assisted wound closure therapy
- l. Pruritus
 - i. Causes – localized and generalized
 - ii. Pathophysiology
 - iii. Neural pathways
 - iv. Assessment
 - v. Causes
 - vi. Management
 1. General measures – hydration, exposure to UV light, cognitive behavioral treatment (CBT), acupuncture, topical agents (corticosteroids cream, lidocaine jelly, capsaicin cream, doxepin cream)
 2. Pharmacological / Systemic Agents – H2-receptor antagonists, 5HT3-receptor antagonists, opioid-receptor antagonists, NSAID's, SSRI's, cholestyramine, thalidomide, UVB, psoralen + UVA (PUVA)
 3. Step ladder approach for disease-specific (eg, uremia, cholestatic, paraneoplastic pruritis)
- m. Hiccups
 - i. Pathophysiology
 - ii. Causes
 - iii. Treatment
 1. General / traditional measures – stimulation of soft palate, sucking on a spoon of sugar

2. Pharmacological – metaclopramide, haloperidol, chlorpromazine, baclofen, gabapentin

n. Mucositis

- i. Definition
- ii. Risk factors
- iii. Causes
- iv. Stages
- v. Prevention
- vi. General measures – oral hygiene, hydration, benzydamine swish and spit
- vii. Specific measures – including preventive medications and measures (magic mouthwash)
- viii. Symptom management including pain
- ix. Treatment of infections – bacterial , viral, fungal

o. Cough

- i. Pathophysiology
- ii. Causes
- iii. Assessment
- iv. General measures – treat the cause, physiotherapy, positioning of patient
- v. Pharmacotherapy – decongestants, anti-histamines, bronchodilators, proton pump inhibitors, antibiotics, nebulized saline, nebulized local anesthetics, corticosteroids, anti-cholinergics, cough suppressants (opioids, detromethorphan, benzonatate, sodium cromoglycate), expectorants (mucoactive agents, e.g. guifenesin), mucolytics (N-acteylcysteine)

4. Neurological disorders

a. Causes

- i. Stroke
- ii. Multiple sclerosis
- iii. Amyotrophic lateral sclerosis
- iv. Parkinson’s disease
- v. Huntington’s disease
- vi. Dementia

1. Types

b. Pathophysiology

c. Treatment

- i. General measures
- ii. Pharmacological
- iii. Advanced planning – feeding, control of secretions and spasticity
- iv. Hospice indications, benefits

5. COPD

- a. Definition
- b. Pathophysiology
- c. Treatment

- i. General measures
- ii. Pharmacological – bronchodilators, oxygen, inhaled steroids, antibiotics
- iii. Advanced planning – counseling, DNR

6. CHF

- a. Definition
- b. Classification
- c. Disease course and epidemiology
- d. Pathophysiology
- e. Treatment – ACE inhibitors, beta-blockers, vasodilators, diuretics
- f. Management of defibrillators
- g. Advanced planning – DNR

7. Neuropsychiatric Symptoms

- a. Anxiety
 - i. Assessment
 - ii. Causes
 - iii. Treatment
 - 1. Pharmacological – benzodiazepines, anti-depressants, neuroleptics, beta-blockers
 - 2. Non-pharmacological – expressive supportive counseling, relaxation techniques, meditation
- b. Depression
 - i. Assessment – DSM IV criteria, two-point questionnaire, HADS
 - ii. Causes
 - iii. Risk factors
 - iv. Treatment
 - 1. Pharmacological – TCA's, SSRI's, SNRI's, anti-psychotics, psychostimulants
 - 2. Non-pharmacological – expressive supportive counseling, cognitive behavioral therapy (CBT), guided imagery, relaxation training, individual and group therapy, structured counseling
- c. Adjustment disorder
 - i. Assessment
 - ii. Causes
 - iii. Disease course
 - iv. Treatment
- d. Sleeping disorders
 - i. Assessment – DSM IV criteria
 - ii. Types – primary sleep disorders (dissomnias, parasomnias), secondary sleep disorders (due to general medical conditions, substance-induced)
 - iii. Causes
 - iv. Assessment – history, EEG
 - v. Treatment

1. Non-pharmacological – sleep hygiene measures, behavioral interventions (stimulus control, imagery training, progressive muscle relaxation, sleep deprivation methods, light therapy)
 2. Pharmacological – hypnotics, anti-depressants, neuroleptics
- e. Personality disorders – Axis II
 - f. Coping skills
 - g. Hope in end-of-life care

8. Palliative Care Emergencies

- a. Spinal cord compression
 - i. Symptoms
 - ii. Diagnosis
 - iii. Treatment
 1. Pharmacotherapy – steroids, opioids
 2. Radiation/Surgery
- b. Hypercalcemia
 - i. Causes
 - ii. Clinical presentation
 - iii. Treatment – fluids, steroids, bisphosphonates, calcitonin, other agents
- c. Hemorrhage
 - i. Causes
 - ii. Treatment
 - iii. Pharmacotherapy – benzodiazepines, anti-fibrinolytics, thrombin, hemostatic agents (epinephrine)
 - iv. Non-pharmacotherapy – bleeding pack, pressure, stents, posture,
 - v. Surgery/radiation
- d. Seizures
 - i. Causes – cancer-related, non-cancer causes
 - ii. Treatment
 1. Pharmacological
 - a. General measures
 - b. Specific drugs – benzodiazepines, anti-epileptics drugs, steroids
 2. Surgery/radiation (gamma-knife)
 - iii. Prognostication
 - iv. Goal setting
- e. Suicide
 - i. Risk factors
 - ii. Assessment – active with plan, ideation without plan
 - iii. Strategies of management
 - iv. Request for assisted suicide
 - v. Desire for hastened death
 - vi. Euthanasia – Death with Dignity Act of Oregon

9. The Dying Patient and Family

- a. Signs and symptoms of impending death
- b. Assessment
- c. Family counseling
- d. Bereavement issues with family
- e. Funeral arrangements

10. Procedures in Palliative Care – Paracentesis, Thoracentesis, Interventional Pain Techniques

11. Pharmacology and Therapeutics

- a. Pharmacodynamics of commonly used drugs in palliative care including pediatrics
- b. Pharmacokinetics of opioids and non-opioids
- c. Metabolites and implications of opioids and non-opioids
- d. Organ failure and medications with reference to opioids
- e. Common drug-drug interactions

12. Psychological Care and Interventions

- a. Anxiety, depression, adjustment reaction, sleeping disorders,
- b. Treatment
 - i. Pharmacotherapy
 - 1. Benzodiazepines
 - 2. Anti-depressants
 - 3. Anti-psychotics
 - ii. Non-Pharmacotherapy
 - 1. Counseling
 - 2. Psychotherapy
 - 3. Group Therapy
 - 4. Natural agents

13. Social and Family Relationships

- a. Family care
 - i. Defining the family
 - ii. The family's needs
 - 1. Family pain management
 - 2. Information needs
 - 3. Physical care needs
 - 4. Family communication and family functioning issues
 - iii. Social and financial pressures
- b. Children of palliative care patients

14. Communication Techniques

- a. Components of good physician-patient communication
- b. Information needs of palliative care patients
- c. Current practice in information provision in palliative care and oncology
- d. Interventions to help meet patients' information needs and promote involvement in the consultation

15. Grief and Bereavement

- a. Grief
 - i. Anticipatory grief
 - ii. Phases and duration of grief
 - iii. Normal vs. pathological grief
- b. Bereavement
 - i. Emotional support
 - ii. Interventions – support services, preventative intervention program, psychotherapeutic interventions, pharmacological therapies

16. Cultural and Ethnicity Aspects

- a. Socioeconomic factors, level of education
- b. Cultural sensitivity regarding customs, decision making

17. Spirituality and Religiosity

- a. Religion and medicine
- b. Spiritual needs
- c. Religious psychology
- d. Hospital chaplains
- e. Religious studies
- f. Cultural aspects and specific rituals

18. Medical Ethics – Withholding and Withdrawing Treatment

19. Legal Implications in Palliative Care – DNR, Assisted Suicide, Euthanasia

20. Procedure After Death – death certificate, autopsy, medical examiner, cremation regulation, rituals, postmortem organ donation

21. Physician-Patient Relationship

- a. Share decision making

22. Leadership Skills and Teamwork

- a. Team dynamics
- b. Leadership styles
- c. Conflict resolution

23. Adult Learning Techniques and Various Teaching Methods

- a. One minute preceptor
- b. Small group didactics
- c. Personal learning style and reflective practice
- d. Roles of mentor and mentee

24. Basic Research Techniques

- a. Challenges of research in palliative care
- b. Defining the patient population
- c. Study designs
- d. Outcomes measurement
- e. Ethics in palliative care research

25. Pediatric Palliative Care

- a. Diseases in pediatric palliative care

- b. Symptom assessment
- c. Communicating at level of development of the child
- d. Bereaved family and needs of siblings

26. Hospice

- a. Philosophy
- b. Medicare Hospice benefit, reimbursement, cost containment
- c. Administrative structure
- d. Staffing
- e. Eligibility criteria for hospice admission
- f. Interdisciplinary team interactions including bereavement counselor and volunteers

27. Community Healthcare Settings

- a. Admission criteria and logistics of community-based nursing home, skilled nursing facility, and long-term acute care facilities for chronic debilitating illness
- b. Continuity across clinical settings
- c. Access to palliative care in the community

28. Quality Improvement in Palliative Care

- a. Auditing
- b. National guidelines and care standards
- c. Clinical quality improvement and audit initiatives

Didactics

Core Curriculum Conference Schedule

The curriculum is comprehensive, and designed to reach all milestones of palliative medicine specialist training. Building on the core of patient care, training includes didactic core lectures, case conferences, journal club, opportunity for research, and close faculty tutoring.

Didactic Sessions

A weekly fellows' conference is held for palliative care and its trainees that includes book chapter review, board-review questions, and fellows' presentations on cases, quality improvement and research topics.

- Frequency – Every week 1-1.5 hrs

Topics of Discussion, Complex Case Reviews, Intra/Interdisciplinary Conferences, board reviews

- Palliative care assessment tools and scales
- Pharmacology of analgesics—opioids
- Pharmacological and non-pharmacologic management of pain
- Opioid Rotation
- Case Studies for opioid conversion
- Adjuvant medications

- GI symptoms management in palliative care
- Palliative sedation
- Interventional pain medicine procedures
- Prognostications
- Hospice
- Administrative aspects of hospice and regulations to know
- Billing Lecture
- Cardiology-heart failure prognostication
- Neurology-stroke prognostication
- Ethics
- Palliative care in critically ill patients
- Integrating palliative care and geriatric Medicine
- Pediatric palliative care
- Ethical and legal issues in Palliative Care
- Pediatric pain management
- Cystic fibrosis
- Noninvasive ventilation
- Delirium-psychiatry
- Depression-psychiatry
- Prognostication in dialysis patients
- End stage liver disease
- Palliative interventions in GI
- Spiritual care at bedside
- Communication/breaking bad news
- Communication with dying patients and their families and surrogates
- Care Of imminently dying
- End stage Dementia and Palliative Care
- Caregiver: The Hidden Patient

- Bereavement
- Goals of care including understanding of developing a and dissemination of the plan to clinicians
- Palliative Care Research

Journal Club

Each fellow selects, reviews, and presents a journal club article at least every other month at the journal club, detailing the importance of the chosen paper, its impact on clinical practice, and the pros/cons of the study design.

- Frequency – every week 1-1.5 hrs

Spiritual Care/Grief Sessions

- Seven-week summer series
- Time: 10:30 am-Noon every Friday

Palliative Medicine CME

- Full-day course
- Once-a-year

Board Review Sessions

- Frequency – at least once a month 1-1.5 hrs

References:

1. Seasons Hospice and Palliative Care (Des Plaines, IL)
2. The University of Texas MD Anderson Cancer Center Hospice and Palliative Care Program
3. Geisinger Health Hospice and Palliative Care Program
4. Albert Einstein College of Medicine Department of Family and Social Medicine, Palliative Care Services