Palliative Care in the Hospital Setting

Definition and Epidemiology

- Palliative care is a specialized medical approach focused on improving quality of life for patients with serious, life-limiting illnesses by managing physical symptoms, addressing psychosocial needs, and facilitating advance care planning. It is provided alongside curative treatments or as the primary focus in end-of-life care.
- Prevalence ~20-30% of hospitalized patients meet criteria for palliative care consultation, with higher rates in ICU (50-70%) and oncology wards (60-80%). Over 1 million U.S. patients receive palliative care annually.
- Risk Factors Advanced cancer, heart failure (HF), COPD, dementia, frailty, age >80.
- Rare Demographics Pediatric palliative care (congenital disorders), young adults with rare diseases (e.g., cystic fibrosis), culturally diverse populations with unique spiritual needs.

Pathophysiology

- Mechanisms Serious illnesses cause symptom burdens (pain, dyspnea, nausea) through nociceptive, neuropathic, or inflammatory pathways. Psychosocial distress (anxiety, existential suffering) arises from loss of autonomy, fear of death, or family conflict. Palliative care targets these via multimodal interventions.
- Effects Uncontrolled symptoms impair quality of life, increase hospital length of stay, and exacerbate caregiver burden. Inadequate advance care planning leads to aggressive, non-beneficial interventions.
- Molecular Pathways Pain involves TRPV1 (nociceptive) and Nav1.7 (neuropathic) channels. Dyspnea in HF/COPD activates chemoreceptors (pCO_2, pO_2). IL-6 and CRF drive cancer-related fatigue and cachexia.
- Key Pathway Disease progression → Symptom activation (nociceptive, inflammatory) → Physical/psychosocial distress → Reduced quality of life.

Causes

Category	Common Indications	Rare Indications	Notes
Oncologic	Metastatic cancer (lung, breast)	Rare tumors (sarcoma, GIST)	Cancer: 50% of palliative care referrals
Cardiopulmonary	HF (EF <40%), COPD (FEV1 <1 L)	Pulmonary fibrosis, Eisenmenger's	Dyspnea, fatigue common
Neurologic	Dementia, ALS, stroke	Huntington's, PSP	Cognitive decline, swallowing issues
Renal/Hepatic	ESRD, cirrhosis	Hepatorenal syndrome, ALF	Symptom burden despite dialysis
Infectious	Advanced HIV/AIDS	Multidrug-resistant TB	Opportunistic infections, pain
Pediatric	Congenital anomalies	Metabolic disorders (e.g., Tay-Sachs)	Family-centered care critical

Clinical Presentation

Symptoms

- Pain (nociceptive, neuropathic, 60-80% of patients)
- Dyspnea (HF, COPD, cancer)
- Nausea, fatigue, anorexia (cancer, ESRD)
- Rare Existential distress, spiritual suffering, delirium

Exam

- Cachexia, muscle wasting (cancer, HF)
- Respiratory distress, cyanosis (COPD, pneumonia)
- Altered mental status, agitation (delirium)
- Rare Ascites (cirrhosis), jaundice (liver failure), myoclonus (opioid toxicity)
- Red Flags Uncontrolled pain (>7/10), respiratory failure, family distress, POLST absence

Labs and Studies

Labs

- CMP Hypoalbuminemia (<3 g/dL, cachexia), Cr (>1.5 mg/dL, ESRD), LFTs (cirrhosis)
- CBC Anemia (chronic disease), leukocytosis (infection)

- Electrolytes K+ (arrhythmias), Ca2+ (hypercalcemia in cancer)
- Advanced Cortisol (stress response), IL-6 (cachexia), procalcitonin (infection)

Imaging

- CXR Pulmonary edema (HF), masses (cancer)
- CT/MRI Tumor progression, ascites, brain lesions (delirium workup)
- Echocardiogram EF <30% (HF), pericardial effusion
- Advanced PET-CT (tumor activity), EEG (delirium, seizures)

Other

- Palliative Performance Scale (PPS) PPS <50% indicates poor prognosis
- Delirium Assessment CAM-ICU, Nu-DESC for ICU patients
- Advanced Spiritual assessment (FICA tool), caregiver burden scale (Zarit)
- Labs often minimized; focus on symptom-driven testing

Diagnosis

- Criteria Serious illness (e.g., cancer, HF) with symptom burden (pain, dyspnea) or limited prognosis (e.g., <6 months) + need for symptom management or goals-of-care discussion.
- Differential Delirium (reversible vs. terminal), depression (treatable), uncontrolled comorbidities (e.g., CHF exacerbation).

Flowsheet

- Step 1 History/Exam Symptom burden (pain, dyspnea), prognosis (PPS, ECOG), POLST status
- Step 2 Assessment PPS, CAM-ICU, spiritual needs; family dynamics
- Step 3 Labs CMP, CBC if infection or organ failure suspected; avoid over-testing
- Step 4 Imaging CXR/CT only if symptom-driven (e.g., dyspnea, tumor obstruction)
- Step 5 Goals of Care Discuss DNR, hospice; align treatment with patient values

Treatment

General Principles Relieve symptoms, support psychosocial needs, and align care with patient goals using interdisciplinary teams (MD, RN, chaplain, social worker).

Supportive Care

- Communication Family meetings, advance directives (POLST, DNR)
- Psychosocial Chaplaincy, social work, grief counseling
- Monitoring Symptom scores (ESAS), PPS q24-48h

Specific Therapies

- Pain Morphine 2-5 mg IV q4h PRN (nociceptive), gabapentin 300 mg PO TID (neuropathic)
- Dyspnea Oxygen 2-4 L/min, morphine 1-2 mg IV q4h, furosemide 20 mg IV (HF)
- Nausea Ondansetron 4 mg IV q8h, haloperidol 0.5 mg IV q6h (chemical nausea)
- Delirium Haloperidol 0.5-1 mg IV q6h, quetiapine 25 mg PO qHS (terminal)
- Advanced Methadone 2.5 mg PO q8h (complex pain), ketamine 0.1 mg/kg IV (refractory pain)
- Rare Indications Pediatric (fentanyl patches), cultural-specific rituals (e.g., smudging)
- Hospice Referral PPS <50%, prognosis <6 months, patient/family agreement

Monitoring

- Daily ESAS (Edmonton Symptom Assessment System)
- Weekly caregiver burden, spiritual distress
- Adjust opioids q24h based on pain scores, monitor for neurotoxicity

Complications

Acute

- Opioid-Induced Neurotoxicity Myoclonus, delirium (5-10% on high-dose opioids)
- Respiratory Depression Rare with proper titration (<1% with morphine)
- Delirium Terminal delirium in 30-50% of end-of-life patients

Long-Term

- Caregiver Burnout 20-30% of families report severe stress
- Ethical Dilemmas Conflicts over DNR, feeding tubes (10-15% of cases)
- Rare Palliative sedation complications (paradoxical agitation), cultural misunderstandings

Clinical Scenarios

Case 1 Metastatic Lung Cancer

- Presentation 65 y/o M with stage IV NSCLC, severe dyspnea, pain. Vitals BP 110/70, HR 100, SpO2 90%, RR 24. Exam Cachexia, crackles.
- Labs/Studies CXR Tumor progression, PPS 40%. CMP Albumin 2.5 g/dL.
- Interpretation Advanced cancer, poor prognosis, high symptom burden.
- Management Morphine 2 mg IV q4h, O2 4 L/min, lorazepam 0.5 mg IV q6h. Family meeting, DNR established. Hospice referral. Symptoms controlled by day 3.

Case 2 End-Stage Heart Failure

- Presentation 80 y/o F with HF (EF 20%), dyspnea, edema. Vitals BP 100/60, HR 90, SpO2 92%, RR 22. Exam JVD, pitting edema.
- Labs/Studies BNP 1500 pg/mL, Cr 2 mg/dL, PPS 50%. Echo No reversible cause.
- Interpretation End-stage HF, palliative care indicated.
- Management Furosemide 40 mg IV q12h, morphine 1 mg IV q4h, haloperidol 0.5 mg IV for nausea. POLST completed, no ICD deactivation. Comfort achieved by day 4.

Case 3 Pediatric Palliative Care (Rare)

- Presentation 10 y/o M with Tay-Sachs, seizures, feeding intolerance. Vitals BP 90/60, HR 110, SpO2 96%, RR 18. Exam Spasticity, cachexia.
- Labs/Studies EEG Multifocal seizures, albumin 2 g/dL. PPS 30%.
- Interpretation Terminal genetic disorder, pediatric palliative care.
- Management Levetiracetam 20 mg/kg IV q12h, fentanyl patch 12 mcg/h, NG feeding. Family counseling, spiritual support. Hospice transition by week 2.

Expert Tips

- Use ESAS for systematic symptom tracking; reassess q12-24h
- Start low-dose opioids for dyspnea (morphine 1 mg IV); titrate cautiously
- Address spiritual needs early (FICA tool); reduces existential distress
- Avoid aggressive interventions (e.g., TPN) in PPS <50%; focus on comfort
- Monitor for opioid neurotoxicity (myoclonus); rotate to methadone if present
- Pitfall Misinterpreting delirium as pain; use CAM-ICU to differentiate
- Advanced Palliative sedation (midazolam 1-5 mg/h IV) for refractory symptoms; cultural competence training for diverse populations

Key Pearls

- Palliative care focuses on quality of life, not just end-of-life; start early
- Morphine is first-line for pain/dyspnea; gabapentin for neuropathic pain
- Goals-of-care discussions prevent non-beneficial treatments
- PPS <50% or prognosis <6 months triggers hospice referral
- Rare pediatric cases require family-centered, culturally sensitive care

References

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