

ELNEC- For Veterans

END-OF-LIFE NURSING EDUCATION
CONSORTIUM

Palliative Care For Veterans

FACULTY GUIDE

Module 3 Symptom Management

The End-of-Life Nursing Education Consortium (ELNEC – For Veterans train-the-trainer program and curriculum was developed by the National ELNEC Project Team, a partnership between the City of Hope (Betty R. Ferrell, PhD, RN, MA, FPCN, FAAN, Principal Investigator) in collaboration with the American Association of Colleges of Nursing with updates undertaken by Carma Erickson-Hurt, DNP, LCDR, USN, RET. Curriculum development and national ELNEC-For Veterans train-the-trainer courses were generously funded by the US Department of Veterans Affairs (original courses and ongoing updates spanning 2009-2023).

Slide 1



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End-of-Life Nursing Education Consortium

Palliative Care For Veterans

Module 3: Symptom Management



- People who receive palliative care have better quality of life and fewer symptoms versus those who do not receive this care (Kavalieratos et al., 2016). Those experiencing serious illness will most likely present with multiple symptoms. Nurses play a critical role in recognizing, assessing, and managing symptoms. Symptoms can be managed effectively, and the nurse plays a key role in communicating these symptoms to the team, so that a plan of care can be developed and implemented respecting the Veteran's wishes.
- Traditionally, symptom management research in palliative care has been related to cancer patients. Though more research is being done with other diseases/populations (i.e., pediatrics, older adults), further work needs to be done in providing data related to symptom management across a wide-array of diseases.
- This module seeks to explore several common symptoms that Veterans with life-threatening diseases experience. As you go through this module, keep in mind that you are caring for the Veteran as well as their family. For caregivers/family members caring for a seriously ill family member at home can be over-whelming and

exhausting. Every effort should be made to support them and acknowledge their good work. A comprehensive review of all possible symptoms is beyond the scope of this curriculum. Symptoms will vary depending on disease, treatments (past and current), and past history, as well as many other factors.

- This module is divided into five sections
 - Section I: Introduction
 - Section II: Respiratory Symptoms
 - Section III: GI Symptoms
 - Section IV: Psychosocial Issues
 - Section V: General/Other Symptoms
 - **Teaching Tips:**
- Due to the length of this module and the many symptoms that must be addressed, the investigators of this curriculum are suggesting two options that you can consider in presenting this material if you have only 45–60 minutes:
 - Give a brief overview of the entire content
 - Present the module in sections over 2–4 different sessions

Key Learning Objectives

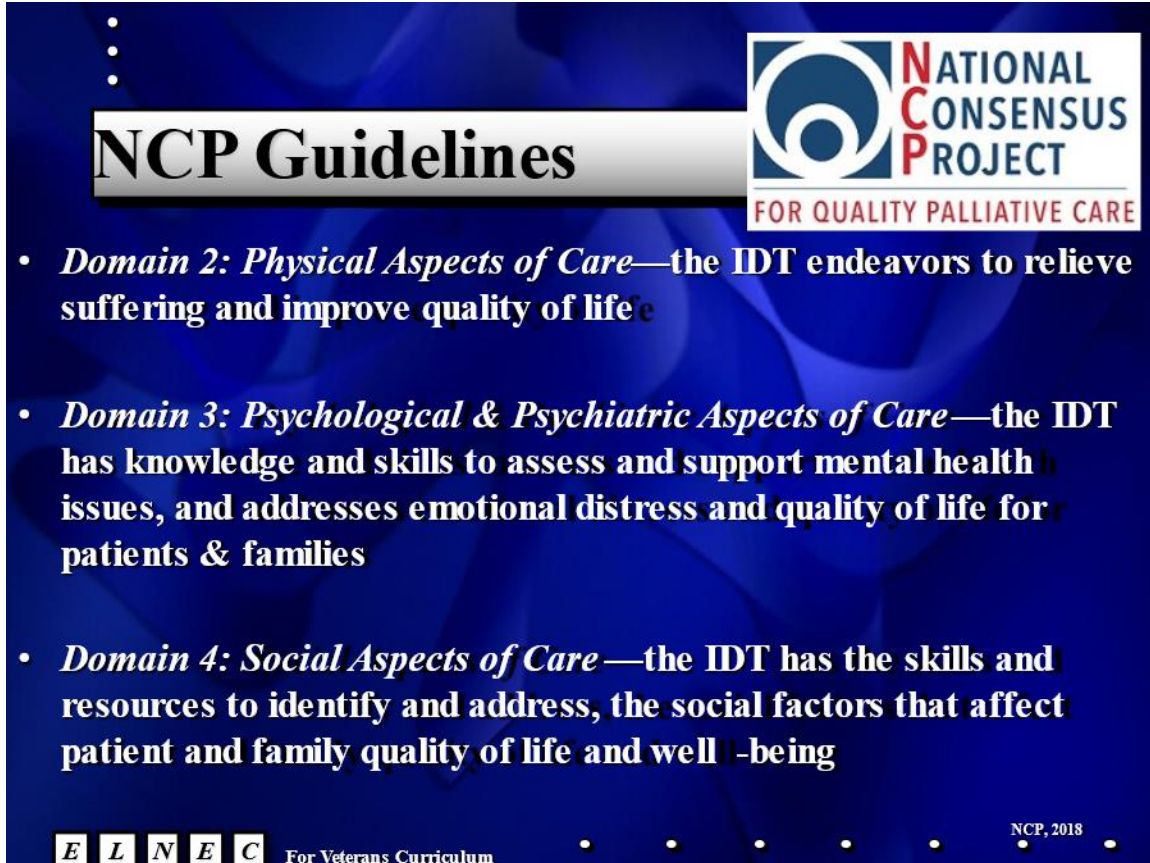
At the completion of this module, the participant will be able to:

1. Identify common symptoms associated with end-of-life processes for Veterans across the life span.
2. Identify potential causes of symptoms seen in myriad serious illnesses and conditions care.
3. Describe assessment of symptoms seen in myriad serious illnesses and conditions.
4. Describe interventions that can prevent or diminish symptoms experienced by those with myriad serious illnesses and conditions.
5. Identify military related exposures and experiences which influence symptom burden in Veterans with serious illnesses and conditions.

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5. Identify military related exposures and experiences which can influence symptom burden in Veterans with serious illnesses and conditions.



The slide features a dark blue background with a white banner at the top left containing the text "NCP Guidelines". To the right of the banner is the logo for the National Consensus Project, which consists of a stylized circular graphic and the text "NATIONAL CONSENSUS PROJECT" in red and white, with "FOR QUALITY PALLIATIVE CARE" in red below it. Three white dots are positioned above the banner. The main content of the slide is a list of three bullet points, each describing a domain of care. At the bottom left, there is a logo for "ELNEC For Veterans Curriculum" and at the bottom right, the text "NCP, 2018".

NCP Guidelines

NATIONAL CONSENSUS PROJECT
FOR QUALITY PALLIATIVE CARE

- ***Domain 2: Physical Aspects of Care***—the IDT endeavors to relieve suffering and improve quality of life
- ***Domain 3: Psychological & Psychiatric Aspects of Care***—the IDT has knowledge and skills to assess and support mental health issues, and addresses emotional distress and quality of life for patients & families
- ***Domain 4: Social Aspects of Care***—the IDT has the skills and resources to identify and address, the social factors that affect patient and family quality of life and well-being

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NCP, 2018

National Consensus Project (NCP) Guidelines (NCP, 2018):

- Domain 2: Physical Aspects of Care
 - *Global*- The IDT endeavors to relieve suffering and improve quality of life.
 - *Screening and assessment*-The IDT assesses physical symptoms and impact on well-being, quality of life, and functional status.
 - *Treatment*-Addresses physical symptoms to maximize functional status, enhance quality of life in context of patient’s goals of care, disease prognosis, functional limitations, culture and care setting.
 - *Ongoing care*-IDT Provides written and verbal recommendations.
- Domain 3: Psychological & Psychiatric Aspects of Care
 - *Global*-The IDT includes a social worker with knowledge and skills to assess and support mental health issues and address emotional distress and quality of life for patients & families.
 - *Screening and assessment*- The IDT screens for, assesses, and documents psychological and psychiatric aspects of care to maximize patient and family coping and quality of life.
 - *Treatment*- IDT manages and supports psych aspects of patient and family care including emotional, psychosocial, or existential distress related to serious illness.

- *Ongoing care*- IDT provides recommendations for monitoring and managing long-term & emerging psych responses.
- Domain 4: Social Aspects of Care
 - *Global*-The IDT has the skills and resources to identify and address, either directly or in collaboration with other service providers, the social factors that affect patient and family quality of life and well-being.
 - *Screening and assessment*- The IDT screens for and assesses patient and family social supports, social relationships, resources, and care environment to maximize coping and quality of life.
 - *Treatment*- In partnership with patient, family, and providers the IDT develops a care plan for social services.
 - *Ongoing care*- A palliative care plan addresses the ongoing social aspects of patient and family care.

Module 1 Suggested Supplemental Teaching Material:

Table 1 (in Module 1 Supplemental Teaching Materials): National Consensus Project Domains and Corresponding National Quality Forum Preferred Practices

Section I: Introduction Essential Elements of Symptom Management

- **Assess, plan, intervene, evaluate**
- **Ongoing assessment and evaluation**
- **Requires Interprofessional teamwork**
- **Reimbursement concerns (affordable options)**
- **Research is Needed**
- **Goal: Improve physical wellbeing, functionality and quality of life**

NCP, 2018


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- Essential elements of symptom management include:
 - Assessment and evaluation of symptoms is an essential element in any care setting. The process is ongoing and involves evaluation of the effectiveness of interventions.
 - The management of symptoms requires cohesive interprofessional teamwork to ensure that optimal care is delivered. Close collaboration between nurses, physicians, and other members of the healthcare team is essential.
 - Reimbursement and other financial concerns may be important factors for some families and should be considered in your overall care plan (McDermott et al., 2018). Criteria for ordering diagnostic tests:
 - Each test ordered should help determine an intervention.
 - If no change in management will result, the test should be questioned for its appropriateness.
- The U.S. has witnessed a tremendous growth in palliative care services over the past 2 decades with the expansion of four delivery models (i.e., acute care, ambulatory care, community based, and hospice) (Mazanec et al., 2019).
- The National Consensus Project *Clinical Practice Guidelines for Quality Palliative*

Care, 4th edition includes a domain entirely focused on physical aspects of care:
Domain 2: Physical Aspects of Care.

- The palliative care interprofessional team endeavors to **relieve suffering and improve quality of life**, as defined by the patient and family, through the safe and timely reduction of the physical symptoms and functional impairment associated with serious illness.
- The goal of symptom management is to **improve physical well-being, functionality, and quality of life** to a level acceptable to the patient, or to the health care surrogate if the patient is unable to report distress.
- The symptoms associated with serious illness and treatments are **anticipated and prevented**.
- The team recognizes that **culture can influence the approach** to illness, reporting of symptoms, preferences around treatment and decision-making process.
- Effective symptom management requires attention to the **physical, emotional, spiritual, and cultural factors, as well as the social determinants of health that contribute to the total pain and suffering** associated with serious illness.

See <https://www.nationalcoalitionhpc.org/ncp/> for details (NCP, 2018).
[Accessed May 19,2022].



Symptoms and Suffering

- Symptoms create suffering and distress
- Psychosocial intervention is key to complement pharmacologic strategies
- Need for interprofessional care
- Ethical emphasis on beneficence and nonmaleficence

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- Similar to pain, other physical and psychological symptoms create suffering and distress. Psychosocial intervention is key to complement pharmacologic strategies.
- Use of chaplains, social workers, and psychologists are necessary to address suffering.
- All suffering, whether it be physical, psychological, social, cultural or spiritual, affects quality of life in all dimensions (Siler et al., 2019).
 - **Could Palliative Care Improve Quality of Life and Increase Survival?** A recent (2019) published study from Tulane University showed that palliative care boosts survival in patients with advanced cancer (Hoerger et al., 2019). The researchers examined 2,307 patient records from nine different studies, and then compared survival and quality of life outcomes between those who were given outpatient specialty palliative care and those who were not. All patients involved had advanced cancer, and the majority of them had either lung cancer or a gastrointestinal cancer.

- Results from those receiving oncology treatments with palliative care:
 - Less depression, nausea, worry
 - More mobility
 - Fewer opted for aggressive chemotherapy, as they became more ill
 - More advance directives
 - This group tended to live almost 4.5 months longer, than those who received oncology treatment alone.

- In providing excellent palliative care, always focus on the patient's goals of care, which includes benefiting the patient (beneficence) and refraining from doing harm (nonmaleficence).

Symptom Management in the Older Adult

- **May have several symptoms with multiple comorbidities**
- **Majority of hospice diagnoses are non-cancer related, associated with heavy symptom burden**
 - **Congestive heart failure**
 - **Chronic obstructive pulmonary disease (COPD)**
 - **Dementia**
 - **Other**
- **Social isolation**



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- In the U.S., 70% of those who die are 65 years of age or older. Most of these deaths are attributed to a long, debilitating chronic illness(es) (Ferrell, 2019).
- Over 50% of all deaths occur in acute care settings, where the majority of those patients are older adults. Their final days are spent in a setting where the main focus is on active and curative treatments and not on assessing and managing symptoms nor establishing goals of care (Whitehead, 2016).
- Their children may live far away. They may be unable to drive. Their living family and friends may be ill, too. There may be a history of turmoil, abuse, and neglect. Social isolation is prevalent.
- Americans are living longer with chronic illness(es), and because of this, the majority of hospice diagnosis are non-cancer related (e.g., CHF, COPD, chronic renal failure, dementia, etc.), association with heavy symptom burden. Be aware that many older adults may have lost their spouse, significant other(s).

Common Symptoms in Serious Illness

- **Respiratory**
 - Dyspnea, cough
- **Gastrointestinal**
 - anorexia/cachexia, constipation, diarrhea, nausea/vomiting, xerostomia
- **Psychological**
 - Depression, anxiety, post-traumatic stress disorder, delirium/agitation/confusion
- **General/Systemic**
 - Fatigue/weakness, wounds, seizures, sleep disturbances, lymphedema, and urgent syndromes

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- The following symptoms have been chosen for review in this curriculum, because they occur frequently in patients with serious and terminal illnesses, and because they are extremely distressing to patients and families. For each of the above-mentioned symptoms, we will review:
 - Definition of the symptom
 - Causes of the symptom
 - Assessment of the symptom
 - Management of the symptom (pharmacological and nonpharmacological)

NOTE: Remember that many people have chronic refractory symptoms that may be totally unrelated to their life-threatening/limiting illness and these should be assessed and managed, as well as symptoms related to their illness (Currow et al., 2015). These include:

- Fatigue (up to 35%)
- Pain (12% - 31%)
- Pain with neuropathic characteristics (9%)
- Constipation (2% - 29%)
- Dyspnea (4% - 9%)

- Cognitive impairment (>10% of people over 65 years old; >30% of people over 85 years old)
- Anxiety (4%)
- Depression (lifetime incidence 2%-15%; one-year prevalence 3%)

Module 3 Suggested Supplemental Teaching Material:

Table 1: Common Symptoms in Serious Illness

Veteran Era Occupational Exposures

Korean War	Vietnam War	Cold War Era	Gulf War	Iraq War OIF, OND	OEF/Afghanistan
<ul style="list-style-type: none"> •Occupational Hazards •Cold injuries •Noise 	<ul style="list-style-type: none"> •Occupational Hazards •Noise •Agent Orange or other herbicides •Hepatitis C •Liver fluke infection 	<ul style="list-style-type: none"> •Occupational Hazards •Noise •Ionizing Radiation •Project 112/Project SHAD •Mustard Gas •Atsugi Waste Incinerator •Herbicide Tests and Storage •Edgewood/Aberdeen Experiments •Camp Lejeune Water Supplies 	<ul style="list-style-type: none"> •Occupational Hazards •Noise •Fort McClellan •Vaccinations Exposures •Oil Well Fires •Chemical and Biological Weapons •Depleted Uranium •CARC Paint •Pyridostigmine Bromide •Pesticides •Sand, Dust & Particulates •Toxic Embedded Fragments •Infectious Disease •Heat Injuries 	<ul style="list-style-type: none"> •Occupational Hazards •Noise •Depleted Uranium •Sand, Dust & Particulates •Toxic Embedded Fragments •Infectious Disease •Heat Injuries •Traumatic Brain Injury •Mefloquine •Sulphur Fire •Burn Pits •Rabies •Chemical Warfare Agents •Chromium 	<ul style="list-style-type: none"> •Occupational Hazards •Cold injuries •Noise •Depleted Uranium •Sand, Dust & Particulates •Toxic Embedded Fragments •Infectious Disease •Heat Injuries •Traumatic Brain Injury •Mefloquine •Burn Pits •Rabies

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- Veterans may have health issues resulting from occupational exposures they experienced during their service. Many of the exposures can cause health issues which do not manifest while they are in the service and may go untreated for years. Because Veterans seek health care in civilian, military and VA health facilities it is imperative for nurses to have a basic understanding of the potential exposures and conditions (Erickson-Hurt & Decker, 2021)
- Deployment activities and experiences are quite unique to each military service. Length and number of times deployed vary and affect exposure risk. In addition to deployment in areas of conflict, the Veterans may have been at risk for hazardous exposure in their everyday work environment, deployments for humanitarian and disaster assistance, peacekeeping missions and other significant events throughout the world.
- Veterans may be eligible to be included in registries specific to exposures. Registries are a way for Veterans to voluntarily document their exposure experiences and health concerns through the use of web-based, self-reported questionnaires. The VA collects data and may contact Veterans when new research is published or when benefits change. It is beneficial for veterans to sign up for the registries they qualify for in order for them to receive the most current information. Many Veterans may not know about the registries as there is no requirement to sign up for the registry, so nurses can be a resource to inform

- Veterans of this valuable resource.
- Current registries through the VA include:
 - Agent Orange Registry
 - Airborne Hazards and Open Burn Pit Registry
 - Gulf War Registry
 - Ionizing Radiation Registry
 - Depleted Uranium Follow-Up Program
 - Toxic Embedded Fragment Surveillance Center (VA, 2021)

***This Concludes Section I**

Section II: Respiratory - Dyspnea



- **Dyspnea**
- **Cough**

Dyspnea: Overview and Incidence

- **Subjective experience**
- **Most reported symptom**
- **Promotes disability, poor quality of life, and suffering**

Broglio 2016 & 2017; Donesky, 2019

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- Definition and overview of dyspnea include:
 - Dyspnea is the awareness that breathing is difficult with descriptors such as “air hunger,” “work,” and tightness” frequently verbalized by patients to describe this symptom (Broglio, 2017; Donesky, 2019). Dyspnea promotes suffering, as it can also cause anxiety, fear, and distress.
 - Most prevalent symptom in patients with chronic obstructive pulmonary disease (COPD) and the third most common symptom in those with congestive heart failure (CHF) (Broglio, 2017; Donesky, 2019).
 - 50% of those with AIDS, COPD, CHF, advanced cancer and renal disease report dyspnea (Broglio, 2017; Donesky, 2019;).
- Breathing can be a conscious or unconscious effort and is used in many spiritual exercises/transformations, relaxation techniques, and mind-body therapies (Donesky, 2019).

Causes of Dyspnea

- **Major pulmonary causes**
- **Major cardiac causes**
- **Major neuromuscular causes**
- **Other causes**

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- There are various causes for dyspnea which include:
 - Major pulmonary causes
 - Tumor infiltration
 - Aspiration
 - Pleural effusion - may be blood, malignant, or nonmalignant fluid
 - Superior vena cava syndrome
 - Pneumonia
 - Pulmonary embolism
 - Chronic obstructive pulmonary disease (COPD)
 - Thick secretions caused by an infectious process or dehydration
 - Bronchospasm
 - Ascites, which can impair diaphragmatic excursion
 - Major cardiac causes
 - Acute myocardial infarction
 - Congestive heart failure
 - Pulmonary edema and pulmonary hypertension
 - Severe anemia
 - Cardiovascular disease
 - Major neuromuscular causes

- Amyotrophic lateral sclerosis (ALS)
 - Muscular dystrophy
 - Myasthenia gravis
 - Cerebrovascular disease
 - Trauma as a result of physical injury
- Other causes may include anxiety, pain, anemia, ascites, metabolic disorder (e.g., alkalosis), obesity, de-conditioning, and spiritual issues (e.g., feelings of guilt and issues of trust).

Assessment of Dyspnea

- **Use subjective report**
 - **Patient experience**
- **Clinical assessment**
 - **Physical exam**
 - **Diagnostic tests**
- **Underlying cause**

Broglia, 2017

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Healthcare providers may equate breathlessness with hypoxia, yet a very poor correlation has been reported between subjective responses by patients and oxygen levels. Veterans may not have symptoms related to hypoxia but may report breathlessness. Assessing dyspnea can be challenging because of its subjectivity. The Veteran's respiratory rate and oxygenation status do not always correlate with the symptom of breathlessness. The intensity of dyspnea may not be related to the extent of the disease.

- Dyspnea assessment is like pain assessment - the subjective report of the Veteran is the only reliable indicator of this symptom.
 - The assessment should include: effect on functional status, factors that improve or worsen this symptom, presence of chest pain and/or other pain or symptoms that may compound the problem, anxiety, assessment of breath sounds, respiratory rate and efforts, and oxygenation status.
 - Descriptors may include feeling frightened/depressed/awful/hungry for air, being worried, suffocating, choking, drowning (Broglia, 2017).
 - Consider what, if any, appropriate diagnostic tests will be useful in treating the underlying cause, keeping in mind their goals of care.
- Impact on function and quality of life

- Evaluate the Veteran's ability to sleep, get dressed, talk, eat, etc.
- The Veteran may report breathlessness in spite of good oxygenation status or limited disease state.
- Anxiety? Financial issues? Spiritual concerns? Issues with anticipatory grief?
- Clinical assessment
 - The purpose of clinical assessment is to determine any underlying pathophysiology in order to develop the most effective treatment plan.
 - The utilization of any test should be weighed on the risk/benefit ratio, patient's wishes, and prognosis.
 - The assessment should include history of acute or chronic dyspnea, history of smoking, heart disease, or lung disease, or concurrent medical conditions.
 - Physical examination: Elevated jugular pressure, pallor, ascites, bilateral crackles, respiratory rate and depth, use of accessory muscles, pain with respiratory movement, functional status, pursed lips, cyanosis, and inability to speak.
 - Diagnostic tests: Chest X-Ray, EKG, PFTs, ABGs, serum K, Mg, phosphate, oxygen saturation, helical CT, CBC, echocardiogram. Keep in mind the stage of the disease and patient's goal of care when ordering/performing these tests. Ask yourself, "***Will we change the course of treatment dependent on the outcome of these tests?***"



Treatment of Dyspnea

- **Treat symptoms or underlying cause**
- **Pharmacologic treatments**
 - **Opioids**
 - **nonopioids**

Broglia, 2017; Hui et al, 2016

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- Treatment(s) for dyspnea should always be focused on improving function and quality of life.
- In end-stage disease one should treat the symptom while assessing whether or not to treat the underlying cause. Attempts to treat an underlying cause would include treating infections or management of tumor progression. When the causes are no longer reversible, then symptom relief is the primary objective of care. Both pharmacological and nonpharmacological management should be initiated concurrently on a case-by-case basis.
- Dyspnea can be managed with a variety of pharmacologic agents. Pharmacological treatments include (Hui, et al, 2021):
 - Opioids (e.g., morphine) are the first line treatment for dyspnea and should not be avoided or underused for fear of respiratory depression. Use breakthrough opioids for acute episode of dyspnea.
 - Relatively small doses of oral or parenteral opioids can significantly be used to treat dyspnea. If Veteran already on opioid titrate the opioid the Veteran is on, as conversion to morphine is not necessary.
 - Dosage? For opioid-naïve patients with dyspnea, start with morphine 0.5

- 1 mg IV every 1-2 hours to 5-10 mg orally every 3-4 hours to 10 mg of extended-release oral morphine daily. Titration to 30 mg/day can be given for chronic dyspnea (Broglia, 2017; Verberkt, et al, 2020).
 - In a recent small pilot study, patients treated with nebulized fentanyl for dyspnea showed a significant decrease in respiratory rate and increase in oxygen saturation. In addition, over 70% of the patients reported improved symptoms of dyspnea (Higgins et al., 2020).
- Non- opioids may include:
 - Benzodiazepines: May be used for dyspnea refractory to opioids or other nonpharmacologic trials. Lorazepam is highly recommended due to its relatively short half-life and is also its availability in liquid form. Dosage: 0.25 mg po/sl q 4 hours. An analysis of seven studies showed that using benzodiazepines in treating dyspnea in patients with advanced cancer and COPD did not indicate significant benefit (Broglia, 2017; Hui et al., 2016). These can also be useful if anxiety occurs due to unrelieved dyspnea.
 - Antibiotics if infection is present
 - Anticoagulants when pulmonary embolism is present
 - Bronchodilators for bronchospasm and asthma exacerbation; although these can elevate heart rate and a sense of anxiety/agitation
 - Diuretics to relieve fluid overload
 - Corticosteroids to relieve inflammation
 - Nebulized saline

Module 3 Suggested Supplemental Teaching Material:

Table 3: Quick Reference Guide for Symptom Management

Figure 3: Nursing Management of Dyspnea - Infographic

Treatment of Dyspnea (cont.)

- **Noninvasive ventilatory support (oxygen, positive pressure ventilation) if hypoxic**
- **Interventional therapies**
- **Counseling**
- **Purse-lipped breathing**
- **Energy conservation**
- **Fans**
- **Positioning, elevation of HOB**
- **Other**



Broglio, 2016; Donesky, 2019

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- There are many nonpharmacologic treatments/techniques available for dyspnea (Broglio, 2017; Donesky, 2019 ; Hui, et al, 2021). They include:
 - Noninvasive ventilator support such as oxygen, used for hypoxia, not breathlessness. A trial of oxygen may be considered if other interventions are ineffective. Oxygen should be used cautiously. If Veterans do not receive relief from dyspnea with oxygen, it should be discontinued.
 - Interventional therapies can also be explored, if accordance with the patient goals of care. Pleurodesis/thoracentesis/tunneled catheter may decrease dyspnea caused by pleural effusions. Bronchial stenting may improve dyspnea caused by obstructions. Radiation may be considered for SVC syndrome.
 - Counseling may include the use of cognitive-behavioral, interpersonal, and complementary strategies.
 - Pursed lip breathing slows respiratory rate and decreases small airway collapse.
 - Energy conservation techniques.
 - Fans, open windows, and air conditioners circulate air.
 - Elevation of the head of the bed and the ability of the patient to sit in a forward and upright position reduces choking sensations and promotes expansion of the lungs.

- Education of patient/family reduces anxiety.
- Music as a form of relaxation and distraction also reduces dyspnea.
- Calm and cool room environment.

NOTE: Assessing dyspnea in the imminently dying patient can be challenging, as patients may be unable to report. Look for grimacing and gasping. Do not confuse Cheyne-Stokes or Kussmaul respirations with rapid rate of breathing.

Cough

- **Overview**
- **Causes**
- **Management**
 - **Treatment of underlying disease**
 - **Suppressant**

Donesky , 2019

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- Cough, like dyspnea can be very frustrating and debilitating for the patient, causing pain, fatigue, vomiting, and insomnia. An ongoing cough is also a constant reminder of the evolving disease process and can cause further social isolation. Cough is frequently present in advanced diseases such as bronchitis, congestive heart failure, HIV/AIDS, and various cancers; however, lung cancer patients most commonly experience this symptom. Unfortunately, there are not any consistently effective interventions in treating a cough (Donesky, 2019; Morice & Shanks, 2017).
- Causes of cough can be numerous. They can result from chemical, inflammatory, mechanical stimuli in ears, nose, throat, trachea, bronchi, lungs, diaphragm, pericardium, or stomach. Possible causes can include post-nasal drip, allergies, bronchitis, obstruction, asthma, pleural effusion, gastroesophageal reflux disease (GERD), pulmonary embolism, pneumothorax, and medications such as angiotensin converting enzyme (ACE) inhibitors, etc.
- Assessment of cough should include (Donesky, 2019):

- A history and physical should be obtained that includes information about precipitating and relieving factors, associated symptoms, presence of sputum production which includes observation of color, consistency, presence of blood.
- It may be appropriate to order chest or sinus X-rays. However, the choice of tests will be determined by prognosis and patient's wishes.
- There are many different pharmacologic interventions used for coughing.
 - Suppressants/expectorants:
 - ◆ Opiates (morphine sulfate)
 - ◆ Local anesthetics
 - ◆ Cough expectorant/antitussive (guaifenesin, dextromethorphan)
 - Antibiotics:
 - ◆ Penicillin
 - Steroids:
 - ◆ Dexamethasone
 - Anticholinergics:
 - ◆ Atropine, hyoscyamine, hydrobromide
- Non-pharmacologic interventions should be considered when treating a cough and they include:
 - Chest PT has ability to help a frail patient mobilize secretions.
 - Humidifier, typically cool, can help comfort a rapid breathing state and thin secretions.
 - Elevating the head of the bed/positioning to allow the patient the ability to clear or manage secretions more effectively.
 - Caffeinated beverages have been reported to have an effect in dilating pulmonary vessels.

Radiation may be utilized, especially with hemoptysis. Consider goals of care.

***This Concludes Section II**

Slide 16

Section III: Gastrointestinal Symptoms

- **Anorexia and cachexia**
- **Constipation**
- **Diarrhea**
- **Nausea/vomiting**
- **Xerostomia & Hiccup**

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- The Gastrointestinal section includes the symptoms along with definitions, causes, assessment and treatments
 - Anorexia and cachexia
 - Constipation
 - Diarrhea
 - Nausea and vomiting
 - Xerostomia & Hiccup

Anorexia and Cachexia

- **Anorexia: loss of appetite, usually with decreased food intake**
- **Cachexia: lack of nutrition and wasting**
- **Cultural Consideration s**
- **Ethical implications**

Schack & Wholihan, 2019

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- Anorexia and cachexia are commonly found in advanced disease, and palliative care services must be prepared for these symptoms.
- Anorexia is:
 - The reduced or loss of desire to eat or a loss of appetite, usually associated with a decrease in food intake. Weight loss usually involves the loss of fat, not muscle (Schack & Wholihan, 2019).
- Cachexia is:
 - A general lack of nutrition and approximately equal loss of fat and muscle, along with significant loss of bone minerals with no response to nutritional supplements or increased intake of nutrition (Schack & Wholihan, 2019).
 - It is a multi-factorial syndrome including not only weight loss, but depletion of muscle, anorexia, asthenia, and fatigue, and occurs in more than 80% of patients with cancer and the primary reason for 20% of deaths in these patients (Schack & Wholihan, 2019).
 - Etiology is rarely reversible in advanced disease.

- Weight loss is present in both conditions. Increases distress, impacts negatively on self-concept and body image; is associated with decreased survival, poor performance, and serves as a constant reminder of the disease process and impending death.
- Decreased appetite can occur very early in some diseases. In some institutions, the leading referral to palliative care consulting teams is related to the issues surrounding nutrition. Unfortunately, aggressive nutritional treatment does not improve survival or quality of life and may actually create more discomfort for the patient. Medically administered nutrition is a medical procedure requiring serious consideration, as it can incur significant morbidity and financial cost. Medically administered nutrition can lead to nausea, vomiting, or diarrhea. This therapy can sometimes provide a false sense of hope to the patient/family, that this therapy will allow them to “get better.”
- Our society generally tries to “fix” many illnesses by feeding someone. Yet, when one is unable to eat, it affects the patient not only physically, but also psychologically, socially, and culturally. Much of the socialization in the US revolves around food and anorexia/cachexia can lead to feelings of isolation. Caring for the patient and family as they deal with the real and symbolic meaning attributed to feeding, requires much reassurance and support.
- What are the ethical implications of not feeding someone?
 - In 2017, the American Nurses Association (ANA) provided a position statement entitled *Nutrition and Hydration at the End of Life*. The position statement states, “Adults with decision-making capacity, and surrogate decision-makers for patients who lack capacity, are in the best position to weigh the risks, benefits and burdens of nutrition and hydration at the end of life, in collaboration with the health care team. The acceptance or refusal of clinically appropriate food and fluids, whether delivered by oral or medically administered means, must be respected, provided the decision is based on accurate information and represents patient preferences” (ANA, 2017).
 - In addition, the Hospice and Palliative Nurses Association (HPNA), provided a position statement in 2020 entitled *Medically Administered Nutrition and Hydration* (MANH) and states, “Caring for patients with serious illness requires familiarity with the trajectory of the advancing condition, particularly as an individual loses interest or ability to eat. MANH is a frequent issue that arises for patients and families. Hospice and palliative nurses must ensure that decisions regarding initiating or withholding MANH are guided by patient autonomy; informed decision-making through knowledge of its benefits and burdens; and adherence to ethical principles based on the patient’s clinical condition, goals, values, beliefs, ethnicity, culture, and religion” (HPNA, 2020).

Causes of Anorexia and Cachexia

- **Disease-related**
- **Psychological**
- **Treatment related**

Schack & Wholihan, 2019


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- Anorexia and cachexia are likely due to the stimulation of pro-inflammatory cytokine production and other metabolic abnormalities.
- There are multiple other causes of anorexia/cachexia in terminally ill patients including:
 - Disease related:
 - Seen most frequently in cancer (up to 86%), congestive heart failure (16-36%), chronic obstructive pulmonary disease (30-70%), HIV (10-35%), renal disease (30-60%) (Schack & Wholihan, 2019).
 - Oral or systemic infection, such as candidiasis, may cause discomfort when eating.
 - Pain associated with eating can occur in certain disease states, such as pancreatitis.
 - Chronic nausea and vomiting can be caused by treatment, medications, or disease progression.
 - Constipation may be caused by tumor burden, medications, decreased fluid intake, and inactivity.
 - Delayed gastric emptying and ulcers may decrease a person's desire to consume food.

- Diarrhea causes increased weakness, and food intake may worsen the symptom.
 - Malabsorption may be a result of medications or disease process.
 - Bowel obstruction may be a result of tumor/disease process.
 - Raised intracranial pressure.
- Psychological:
- Depression exhibits many somatic symptoms, which include anorexia.
 - Change in self-image occurs, as weight is lost and energy decreases (Schack & Wholihan, 2019).
- Treatment related:
- Taste changes and aversions are often a result of treatments such as chemotherapy & other medications.
 - Radiation therapy effects, including bowel strictures and fistulas, can be problematic for patients long after radiation has been completed.
 - Surgery of the bowel can result in short gut syndrome and alterations in the head and neck region/upper aerodigestive tract can alter food intake and digestion.

Assessment of Anorexia and Cachexia

- Physical findings
- Impact on pain, function and QOL
- Calorie counts/daily weights
- Lab tests
- Skin breakdown



Schack & Wholihan 2019

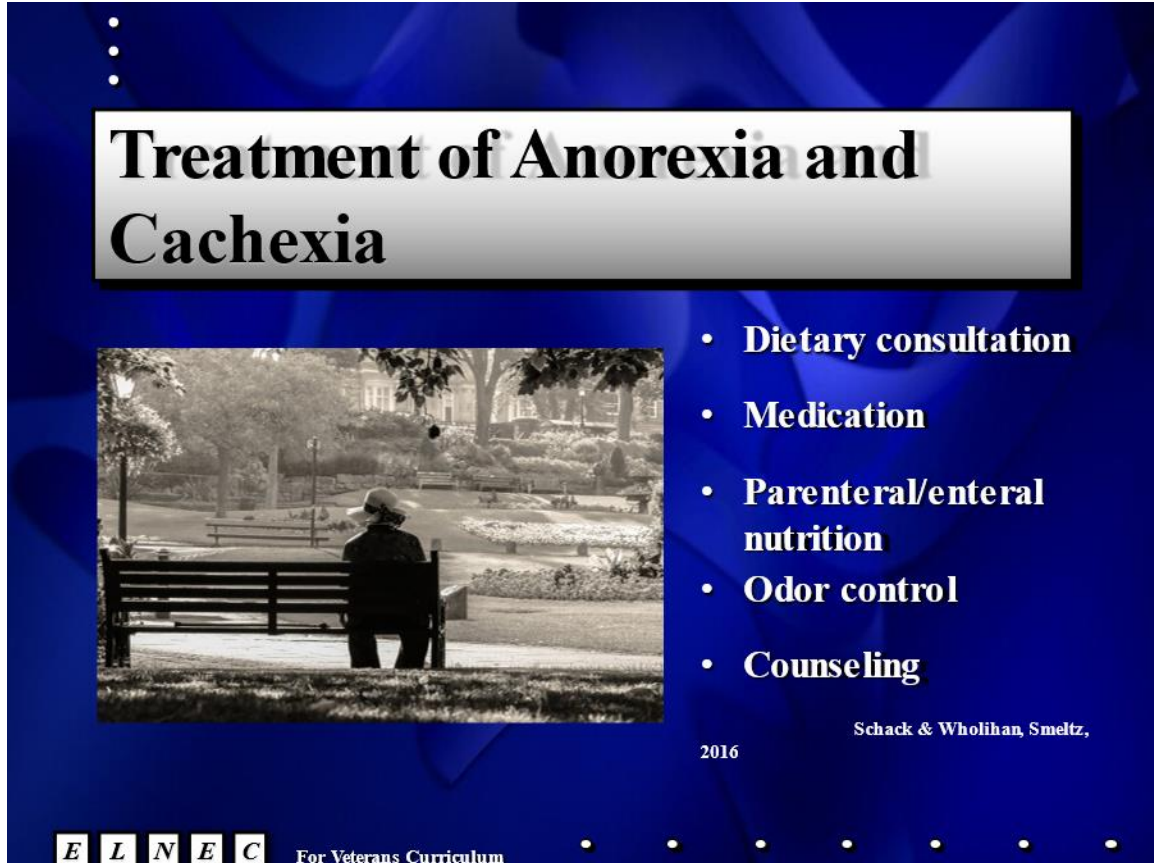
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- Assessment of anorexia and cachexia focuses on understanding the patient's experience and concerns, and determines potentially reversible causes (Schack & Wholihan, 2019).

Patient history is used to identify patients with an involuntary weight loss of >5% within the past 6 months. Identify comorbid conditions (e.g., hyper/hypothyroidism, adrenal disease; diabetes; Vitamin B₁₂; Vitamin D and testosterone deficiencies)? Is the patient experiencing dysphagia (difficulty swallowing) or odynophagia (painful swallowing), ? Is it painful to chew due to trismus (restriction of the range of motion of the jaws) or poor dentition? Assess for the presences of ageusia (loss of taste) or dysgeusia (taste aversions).

- Physical findings – Physical exam includes assessment of weight loss, muscle wasting, gastric stasis, loss of strength, and decreased fat. Note that edema may mask some wasting. Examine oral cavity for painful lesions or candida/thrush.
- Impact on pain, function, and quality of life (QOL):
 - Reduced fat and muscle mass can result in pain due to increased pressure on areas of contact when sitting and lying.

- Evaluate if there is an increase in weakness and/or fatigue.
- Evaluate for signs and symptoms related to depression or confusion.
- Discuss the patient's/family's perception of and response to this symptom and on quality of life. Families may become dismayed and frustrated when their loved one will not eat. "If they would just eat something, they would feel better."
- Calorie counts/daily weights:
 - Evaluate if the patient has experienced decreased food/fluid intake.
 - Daily calorie counts and weights should be considered carefully, depending on the stage of the disease. Will this cause more of a burden to the patient and family? Will the benefit outweigh the burden?
 - The use of these assessments will need to be continuously evaluated, as late in disease, they may be unnecessary and may create burden and distress.
- Laboratory tests: Serum albumin concentration decreases as nutrition status decreases; however, this laboratory value is a late marker. Hence, if low albumin is noted, this problem has existed at least two to three weeks. Low albumin is one measure of a poor prognosis.
- Evaluate for the risk or presence of skin breakdown and address this accordingly.



Treatment of Anorexia and Cachexia

- **Dietary consultation**
- **Medication**
- **Parenteral/enteral nutrition**
- **Odor control**
- **Counseling**

Schack & Wholihan, Smeltz, 2016

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The slide features a dark blue background with a white title box at the top. Below the title is a photograph of a person sitting on a park bench, looking away. To the right of the photo is a bulleted list of treatment interventions. At the bottom left is the ELNEC logo and 'For Veterans Curriculum'. At the bottom right is the citation 'Schack & Wholihan, Smeltz, 2016'. There are three white dots in the top left and five white dots in the bottom right of the slide area.

Interventions regarding anorexia and cachexia must be individualized (Smeltz, 2016). Eating for pleasure should always be the goal. Referrals to a dietician may be appropriate.

- Patients should be encouraged to:
 - Eat favorite foods, foods easy to chew, with sauces/gravy.
 - Dietary restrictions should be eliminated.
 - High calorie foods, in small frequent meals, may improve intake.
 - Food presentation is important, in small quantities, and small frequent meals so as not to overwhelm the patient.
- Medications: No single pharmacological intervention is effective for cachexia; however, improvement has been made over the last decade by incorporating dietary modifications and/or exercise with selected pharmaceutical agents.
 - Appetite stimulants can be used, particularly megestrol acetate (MA), yet studies show a small effect on weight gain (Schack & Wholihan, 2019). Studies show that patients with COPD, cancer, AIDS, in addition to the older adult demonstrated increased appetite and experienced a modest weight gain on megestrol acetate. However, there is an increase in thromboembolic events and mortality (Smeltz, 2016). Other side effects of MA include: hypoadrenalism and

- hypogonadism (Schack & Wholihan, 2019). As a result of these adverse effects, some discourage the use of megestrol acetate.
- Olanzapine or mirtazapine may be helpful in increasing intake.
 - Prokinetics (e.g., metoclopramide) may be helpful in increasing gastric emptying to combat early satiety.
 - Other agents may prove useful such as alcohol (e.g., wine before mealtime), dronabinol, corticosteroids, thalidomide, ARP (adenosine triphosphate), EPA (omega 3 fatty acids), TNF inhibitor (tumor necrosis factor inhibitor), or oxandrolone.
 - Studies with cannabinoids show positive effects by improving appetite and mood but does not provide weight gain. The two most used and approved by the US Food and Drug Administration (FDA) are dronabinol and nabilone. As more states legalize cannabis, patients are turning to cannabis for appetite enhancement. However, as THC, an active ingredient in cannabis, remains a Schedule I Controlled Substance nationally. Medical marijuana is currently not a part of any domestic treatment guideline (Schack & Wholihan, 2019).
- Parenteral or enteral nutrition: In some cases, parenteral or enteral nutrition may prove useful in patients who cannot swallow but continue to have an appetite, such as in esophageal cancer.
 - Problem odors that inhibit eating can be addressed by separating cooking times from eating times or moving the patient away from the kitchen.
 - Counseling:
 - Overall, the problem of cachexia may prove to be one of the most distressing symptoms for patients and families. While support is helpful, there is no conclusive evidence for increased survival, significant weight gain, and/or improved quality of life (Gwaltney, 2017. Smeltz, 2016).
 - Educating patients and family members about anorexia/cachexia is an important nursing rule. Listening to their concerns is respectful and may allow an opening to discuss larger issues around goals of care and prognosis.

Constipation

- **Infrequent or difficult passage of stool**
- **Frequent symptom in palliative care**
- **PREVENTION IS KEY!**

Chow & Koranteng, 2016/ Mooney et al, 2019

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- Unfortunately, constipation is underrecognized, underreported, and undertreated with the consequence of hospitalizations, added caregiver burden, stress, and anxiety.
- Constipation is defined as having less than three bowel movements per week (Mooney et al., 2019). It is primarily a subjective symptom and generally quantified by what patients perceive to be their normal bowel function (Chow & Koranteng, 2017; Mooney et al., 2019). While functional constipation occurs in approximately 14% of the general population, its incidence can be as high as 30% to 100% in the seriously ill adult (Mooney et al., 2019).
- Associated symptoms may include (Mooney et al., 2019):
 - Hard/or small stools
 - Straining or difficulty with evacuation of stool
 - Sensation of bloating or fullness
 - Reduced appetite
 - Nausea/vomiting
- Constipation is a frequent symptom in patients with serious illness, since they may have a low intake of fiber, fluid, food, impaired mobility; as well as the use of opioids and other medications which slow gut mobility, etc. (Refer to National Cancer

Institute PDQ® Cancer Information Summaries: “Gastrointestinal Complications” at: <https://www.cancer.gov/about-cancer/treatment/side-effects/constipation/GI-complications-hp-pdq> [Accessed May 19, 2022]).

- Constipation may be a highly embarrassing issue for the patient, and this situation can frequently evolve to a severe problem. Talking frankly and openly regarding this symptom and encouraging discussion helps prevent significant distress.

PREVENTION IS THE KEY!

Common Causes of Constipation

- **Disease related (e.g., obstruction, hypercalcemia, neurologic, inactivity)**
- **Treatment related (e.g., opioids, other meds)**



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- There are many disease and treatment-related causes of constipation (Mooney et al., 2019).
- Disease related:
 - Intestinal obstruction, whether partial or complete in nature, is related to presence of tumor in or compression of the bowel.
 - Hypercalcemia and hypokalemia can also affect constipation.
 - Spinal cord compression will slow transmission of food via the intestines.
 - Concurrent disease, such as diabetes, can affect gastrointestinal motility through changes in the autonomic nervous system. Other diseases such as colitis, hypothyroidism, diverticulitis, or chronic neurological states, can also impact bowel motility.
 - Surgical adhesions can cause scarring.
 - Dehydration can affect stool consistency, resulting in dry, hard stools.
 - Inactivity, weakness, and loss of privacy can change daily bowel habits.
 - Pain, especially if associated with bowel movement, can also lead to constipation.
 - Decreased abdominal muscle tone can affect mobility.
 - Depression and resultant inactivity can be a contributing factor that leads to constipation.

- Medication related:
 - 72-87% of patients taking opioids report having constipation while undergoing treatment (Chow & Koranteng, 2017).
 - Opiates can suppress peristalsis, increase sphincter tone, increase electrolyte and water absorption, and insensitivity to rectal distention, and decrease the need to defecate.
 - Antidepressants can slow motility, which can precipitate constipation.
 - Antacids, containing aluminum, cause hardening of stool, making defecation more difficult.
 - Chemotherapy drugs such as vinca alkaloids have a neurotoxic effect on the bowel, which increases colonic transit time. Cisplatin, oxaliplatin, and thalidomide can also result in autonomic nervous system changes.
 - Serotonin antagonist antiemetics (e.g. ondansetron) cause significant constipation.

NOTE: Patients who have a history of taking bulk-forming medications (e.g. psyllium, methylcellulose) should discontinue their use. These medications generally do not play a role in palliative care, due to their tendency to form impactions, once patients are unable to drink plenty of fluid. In fact, psyllium is often used to bulk up liquid stools when patients have diarrhea.

Assessment of Constipation

- **Bowel history**
- **Abdominal assessment**
- **Digital rectal assessment**
- **Medication review**

Mooney et al., 2019

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- Assessment is directed at understanding the patient’s definition, experience, and potentially reversible causes key in preventing and treating constipation (Mooney et al., 2019; Davies, A., et al, 2020).
- Bowel history:
 - The assessment of constipation should include a bowel history (i.e., characteristics [appearance and consistency] and frequency of stool, history of use of bowel medications, fluid intake, anorexia, presence of nausea and vomiting associated with constipation, presence of concurrent medical conditions, constipation problems prior to disease).
 - The nurse should be aware that the definition of constipation varies significantly from patient to patient and the goal is to establish what is normal for each patient.
- Abdominal assessment:
 - Perform an abdominal assessment to rule out obstruction, which includes: examination for bloating, palpation, percussion, tenderness, bowel sounds (i.e., hyperactive, hypoactive or absent), percussion, and rectal assessment for impaction.

- Abdominal x-ray may be necessary to rule out bowel obstruction.
- Digital rectal assessment to rule out impaction:
 - The digital rectal exam should be initiated in the neutropenic patient only after careful consideration. The exam may reveal stool, tumor, or perhaps rectocele.
 - A visual inspection should be accomplished examining for hemorrhoids, ulceration, or rectal fissures. Their presence may make defecation painful and/or may be the site of infection.
- Medication review:
 - A careful assessment regarding the use of over-the-counter products and herbal medicines should also be conducted as some, such as mulberry, flax, and rhubarb, have laxative properties.



Treatment of Constipation

- Medications
- Other approaches
- Prevention

Chow & Koranteng, 2016; Mooney et al., 2019

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- Treatment of constipation is multi-faceted (Chow & Koranteng, 2016, 2017; Mooney et al., 2019). Consideration of treatment should include the patient's functional status and potential toleration of the treatment.
- Medications:
 - Maintenance usually requires a prophylactic stool softener and stimulant. This may include senna ± docusate or polyethylene glycol. (Davies, et al. 2020)
 - If the cause cannot be eliminated, then treatment should include a bowel regimen. A minimum goal for a bowel movement is at least every 72 hours regardless of intake.
 - Hard fecal impaction: Use oil retention enema to soften the stool. Use lorazepam or midazolam before digitally removing the impaction.
 - Disimpaction can be severely painful, so the patient should be pre-medicated before the procedure (Chow & Koranteng, 2016).
 - Soft impaction: Bisacodyl suppositories or saline enemas, followed prophylactically by vigorous scheduling of BOTH a stool softener and a stimulant.
- Dietary and fluid interventions:

- Patients should be encouraged to drink plenty of fluids and increase their activity prn. Note that these alone do not affect opioid-induced constipation.
- Many patients have their own bowel regimens, and these should be encouraged as long as they prove effective.
- Additional approaches:
 - Suppositories and/or enemas should be considered, when the patient is no longer able to tolerate oral medications, or they have become ineffective.
 - Magnesium, either as magnesium citrate, magnesium hydroxide (Milk of Magnesia) or magnesium supplements will facilitate a bowel movement.
 - Metoclopramide is a prokinetic drug that is useful in relieving gastric stasis. It increases peristalsis of the duodenum and jejunum and may help relieve constipation. It is also the drug of choice in patients with functional bowel obstruction but not recommended in the presence of complete bowel obstruction and in gastric outlet obstruction.
 - Methylnaltrexone and other opioid antagonists are called peripherally acting mu opioid receptor antagonists (PAMORAs) (Davies et al., 2020); they are only effective in treating constipation due to opioids as they block opioid receptors in the GI tract, without crossing into the CNS and reversing analgesia.
 - Other agents such as linaclotide, lubiprostone or prucalopride are recommended only when other conventional agents are ineffective (Davies, 2020).
- Other approaches (Meyer & Ring, 2019):
 - Biofeedback may be useful.
 - Stools, such as the squatty potty, helps position the hips upward, creating an angle of the rectum that allows stool evacuation with less straining.
- Prevention includes (Davies et al., 2020):
 - Educating patients and family
 - Increasing activity if possible
 - Adequate fiber/fluid intake, if possible
 - Using prophylaxis laxatives when beginning opioids
 - Encouraging mobility when appropriate
 - Providing privacy for defecation

Diarrhea

- **Frequent passage of loose, nonformed stool**
- **Effects (e.g., fatigue, caregiver burden, skin breakdown)**

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- Diarrhea is the frequent passage of loose, non-formed stool (watery) (Mooney et al., 2019). While this problem is much less common in the palliative care setting than constipation, it remains a common symptom. Diarrhea can be defined objectively by having more than three (3) unformed stools in 24 hours (Blush, 2019). (See National Cancer Institute Cancer Information Summaries: “Gastrointestinal Complications” at: <https://www.cancer.gov/about-cancer/treatment/side-effects/constipation/GI-complications-hp-pdq> [Accessed May 19,2022]).
- 20%–47% of patients receiving chemotherapy experience diarrhea, and most common in patients receiving pelvic radiation (Mooney et al., 2019).
- Most common cause of diarrhea in palliative care patients: “imbalance” in use of laxatives (Blush, 2019).
- Diarrhea can:
 - Dramatically affect a person's quality of life.
 - Cause fatigue, dehydration, electrolyte abnormalities, skin breakdown, and depression, if diarrhea continues for long periods of time.
 - Cause patient and family to become more homebound.

- May be embarrassing, time consuming, and lead to problems such as hemorrhoids, skin breakdown and dehydration.
- Burden caregivers with frequent trips to bathroom, assisting with toileting, cleaning linens.

Causes of Diarrhea

- **Disease-related**
- **Malabsorption**
- **Concurrent diseases**
- **Psychological**
- **Treatment related**

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- There are numerous causes of diarrhea in terminal illness (Chow & Koranteng, 2017).
- Disease related:
 - Multiple bacterial and parasitic infections can be the causative agents of diarrhea.
 - Partial bowel obstruction or fecal impaction can lead to diarrhea that sometimes alternates with constipation.
 - The most common cancers that can cause diarrhea are pancreatic, adenocarcinomas, carcinoid, vasoactive intestinal protein-secreting tumors, small intestinal lymphomas, medullary carcinoma of the thyroid, pheochromocytoma, colon cancer, and other gastrointestinal tumors.
- Malabsorption may occur in the presence of pancreatic tumors or following surgery to the GI tract, such as gastrectomy.
- Concurrent diseases, such as gastrointestinal malignancies, hyperthyroidism, and irritable bowel syndrome can be causes of diarrhea.
- Psychological:
 - The occurrence of diarrhea can increase anxiety on the part of the patient,

- particularly in public situations. Fear of loss of control may cause patients to become isolated and homebound.
- The use of adult incontinence products, such as disposable underwear may enable some patients to participate more fully in activities.
- Treatment related:
 - Chemotherapy causes mucositis and immunosuppression, which makes the individual more susceptible to infectious, viral, fungal, and parasitic pathogens that can cause diarrhea.
 - Radiation therapy to the abdomen, pelvis, and spine, can cause diarrhea.
 - Graft vs. host disease after stem cell transplant can affect the GI tract, causing diarrhea.
 - Dumping syndrome can also occur after surgery, causing diarrhea.
 - Infections such as clostridium difficile may occur after receiving antibiotics. This is a result of overgrowth of bacteria in the gut, often after antibiotic use, causing diarrhea.
 - Medications (i.e., herbal remedies, over-the-counter medications, and overly aggressive bowel regimen) can cause diarrhea.


Assessment of Diarrhea

- **Bowel history**
- **Medication review**
- **Physical assessment**
- **Infectious processes**

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- Persistent diarrhea has been associated with decrease in quality of life (Mooney et al., 2019).
- Bowel history:
 - Number and nature of stools in 24 hours; consistency; timing; duration of increased amount of stool; associated symptoms (pain, nausea/vomiting, fevers, dizziness).
 - The onset/suddenness of a bowel movement is also an important part of assessment. A rapid onset may indicate fecal impaction with overflow. If diarrhea occurs once or twice a day, it may be due to anal incontinence. Typically, watery stools in large amounts are consistent with colonic diarrhea, while foul smelling, fatty, pale stools are associated with malabsorption.
 - Evaluate for presence of dumping syndrome, carcinoid, and other syndromes.
 - Evaluate/monitor occurrence of incontinence.
- Medication review:
 - Indications of laxative overuse include cramping, urgency, or fecal leakage.
 - Check over-the-counter medications or herbal supplement usage (e.g., melatonin has been shown to cause diarrhea in some individuals).

- Is the patient on chemotherapy?
- Or taking antibiotics, or magnesium-containing agents?
- Before diarrhea can be treated, it is essential that an accurate physical assessment be completed. Assess for:
 - Hyperactive/hypoactive bowel
 - Distended or tender abdomen
 - Signs of dehydration
 - Presence of a fecal impaction
 - Incontinent of stool
 - Perineal skin integrity
 - Postural hypotension
 - Weight change
- Laboratory values and imaging:
 - Assess stool specimen for parasites, blood, ova, and potential pathogens such as salmonella, shigella, Escherichia coli, listeria, *c. difficile*, etc.
 - Electrolytes
 - Abdominal x-ray or CT to rule out obstruction



Interventions for Diarrhea

- **Treat underlying cause**
- **Dietary modifications**
- **Hydration**
- **Pharmacologic agents**

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- Diarrhea can cause increased morbidity and mortality and can be fatal if not treated appropriately. Early treatment for diarrhea is essential, as people can die from dehydration and/or loss of electrolytes. Treat the underlying cause, as appropriate.
- Dietary modifications:
 - Initiate a clear liquid diet. Avoid milk, proteins, and fats, alcohol, hot spices, and gas-forming foods, such as broccoli, cauliflower, cabbage, sauerkraut, corn, and beans.
- Promote hydration, suggesting fluids that may improve electrolyte status (i.e., sports drinks, juices). Consider IV fluids, if consistent with goals of care.
- Use of medications:
 - First-line treatment for chemo-induced diarrhea: loperamide (Imodium—over the counter) 4 mg orally, followed by 2 mg q2 hours (or 4 mg q4 hours) until 12 hours of not experiencing any diarrhea. Lomotil (diphenoxylate and atropine) 2 tablets 4 times daily, reducing the dose when stools become more firm (requires a prescription).
 - Second-line treatment for chemo-induced diarrhea: Octreotide 300 – 600

mcg/day, subcutaneously in 2-4 divided doses, which slows intestinal transit and decreases fluid secretion into the small intestine (Chow & Koranteng, 2016).

➤ Other meds to consider:

- Opioids
- Absorbents (psyllium, kaolin/pectin)
- Anticholinergics
- Others (cholestyramine and pancreatic enzymes for malabsorption)

Diarrhea can be overwhelming for the caregivers and cause further exhaustion from changing linens, bathing their loved one multiple times/day, and doing laundry.

Nausea and/or Vomiting

- **Common in advanced disease**
- **Assessment of etiology is important**
- **Acute, anticipatory or delayed**

Collett & Chow 2019; Lynch, 2016

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- Nausea and vomiting are two of the most dreaded side effects of a disease and/or its treatment(s) (Collett & Chow, 2019).
- The incidence of nausea is common in advanced disease, occurring in up to 20%-70% of patients with advanced cancer (Collett & Chow, 2019). Vomiting occurs in approximately 30% of patients; unfortunately, this symptom has not been well-researched in those with advanced disease. Up to 80% of cancer patients receiving chemotherapy and/or radiation experience nausea/vomiting (Lynch, 2016).
- The pathophysiology of nausea and vomiting is extremely complex, requiring careful assessment of etiology, and therefore, appropriate treatment.
 - Nausea/vomiting can be acute, anticipatory, or delayed if treatment related.
 - Nausea and vomiting can be exceptionally frustrating, painful, and exhausting for the patient and family/caregivers.
 - These symptoms clearly increase suffering and require immediate intervention in ensuring patient comfort.
 - Nausea is subjective, while vomiting is objective.

Causes of Nausea and Vomiting

- **Physiological (GI, metabolic, CNS)**
- **Psychological**
- **Disease related**
- **Treatment related**

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- There are numerous causes of nausea and vomiting in individuals with serious illness (Collett & Chow, 2019).
- **Physiological:**
 - **Gastrointestinal causes:** The following causes of nausea and vomiting include gastric irritation and stasis, constipation, intestinal obstruction, pancreatitis, ascites, liver failure, intractable cough, and radiation effects. All cause visceral disturbances by stimulating vagal and sympathetic pathways.
 - **Metabolic causes:** Fluid and electrolyte imbalances. Hypercalcemia, uremia, infection, and drugs cause stimulation of the chemoreceptor zone within the brain, causing nausea, with or without vomiting.
 - **Central nervous system causes:** Raised intracranial pressure due to infection or tumors, pain.
 - **Vestibular:** Motion sickness, Meniere's syndrome.
 - **Mid-brain:** Anxiety, emetogenic sensory stimuli.
- **Psychological:**
 - Emotional factors can lead to nausea and vomiting as a result of stimulation of emetic receptors in the brain.

- Disease related: Most commonly seen in patients with advanced gynecological and gastroenterological tumors, as well as in liver and renal failure.

- Treatment related:
 - Radiation
 - Chemotherapy
 - Opioid use
 - NSAIDs
 - Antibiotics
 - Antiretroviral therapy (ART)

Assessment of Nausea and Vomiting



- **Physical exam**
- **History**
- **Lab values**
- **Dehydration**

- Assessment should be centered on how nausea/vomiting is affecting the patient's ability to function and on their quality of life. Does this impact their ability to care for themselves? Does it isolate them? Burdensome on caregivers? (Lynch, 2016).
- Clinical assessment of nausea and vomiting should also include past history, effectiveness of treatment of nausea/vomiting, medication history, frequency and intensity of episodes of nausea and any correlation with vomiting, identification of those activities that may precipitate or alleviate nausea/vomiting (Collett & Chow, 2019).
- History:
 - Consistency, intensity, exacerbating/relieving factors, frequency and volume of emesis
 - Frequency and duration of nausea
 - Is vomiting occurring without nausea?
 - Emesis associated with position changes
 - Presence of contributing factors (i.e., vertigo, blood sugar levels, and medications)
 - Relationship to food intake

- Evaluation of the presence of constipation or impaction
- Presence of uncontrolled pain or infection
- Presence of anxiety and other emotional symptoms
- Recent chemotherapy and/or radiation treatments?
- Physical assessment should include:
 - Oral examination
 - Abdominal examination and evaluation to include bowel sounds, ascites
 - Possible assessment of the rectal vault
- Lab values:
 - Renal and liver function tests
 - Electrolytes, calcium, serum drug levels
 - Radiologic tests to include abdominal X-rays (to assess for impaction, air/fluid in bowel) and/or head CT (when brain metastasis is suspected) or MRI

NOTE: Assess for dehydration in those patients vomiting larger amounts.

Suggested Video:

Taking a Symptom History Nausea and Vomiting:

<https://vimeo.com/reliaslearning/review/325307760/36567765fe>

Pharmacologic Treatment of Nausea and Vomiting

- **Anticholinergics**
- **Antihistamines**
- **Steroids**
- **Prokinetic agents**
- **Othe**

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- Treatment of nausea is dictated by the presumed cause, so treat any underlying cause, if possible, and try interventions that have worked in the past.
- Medications include (Collett & Chow, 2019):
 - Anticholinergics, such as hyoscine hydrobromide, treat motion sickness, intractable vomiting, or small bowel obstruction.
 - Antihistamines are commonly used in intestinal obstruction, increased intracranial pressure, or peritoneal irritation, and when vestibular causes exist (e.g., cyclizine).
 - Steroids, given alone or with other agents for nausea and vomiting, are appropriate for cytotoxic-induced emesis (e.g., dexamethasone) and when the cause of nausea/vomiting is unclear.
 - Prokinetic agents, such as metoclopramide, can treat gastric stasis.
 - Benzodiazepines, such as lorazepam, are most effective in treating nausea exacerbated by anxiety.
 - 5-HT₃ receptor agonists are used for post-operative nausea and vomiting and chemotherapy-related emesis. These include ondansetron and granisetron.
 - Neurokinin –1- receptor antagonists inhibit postoperative and post-chemotherapy nausea and vomiting, but their role in chronic nausea and vomiting is not yet known.

- Bisphosphonates and hydration for hypercalcemia. Evaluate benefit vs burden vs risk.
- Opioid rotation or decrease the dose for opioid toxicity. Somatostatin analog, such as octreotide, for nausea and vomiting associated with bowel obstruction

Non-Drug Treatment of Nausea and Vomiting

- Distraction/relaxation
- Dietary modifications
- Invasive therapies

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- Several non-drug treatments are recommended to treat nausea and vomiting.
- Non-pharmacologic techniques (Meyer & Ring, 2019):
 - Anticipatory nausea can be treated with the use of distraction or relaxation techniques (guided imagery), acupuncture, music therapy, hypnosis, and ginger.
- Dietary modifications
 - Serving meals at room temperature with clear fluids, while avoiding strong smells may be beneficial.
 - Encourage the patient to eat slowly, avoiding large, high bulk meals.
 - Patients who are weak should be positioned to avoid aspiration.
- Invasive/non-invasive therapies:
 - A nasogastric tube may need to be inserted to relieve pressure for comfort.
 - Venting G-tube may be considered for long-term use.
 - IV hydration in severe nausea/vomiting needs to be carefully considered. TPN and peripheral nutrition have a very limited role in palliative care. Some may argue it has no role in end-stage disease. Be aware of patient's goal.
 - Others include:
 - Aggressive bowel regimen for constipation

- Paracentesis for ascites
- Radiation, steroids for brain metastases
- Resection, bypassing, stenting, venting gastrostomy for bowel obstruction

Module 3 Suggested Supplemental Teaching Material:

Table 2: Self-Management Strategies for Nausea and Vomiting

Xerostomia

- **Xerostomia**
- **Dry mouth**
- **Difficulty in mastication, swallowing, and speech**
- **Can be caused by medications, radiation, and systemic diseases**
- **Management: modify medications, provide moist soft foods, others**

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- Compared to managing pain and dyspnea, xerostomia may be one of the most overlooked symptoms. However, this can greatly affect quality of life, as decreased saliva can increase the patient's dry mouth and discomfort, making oral intake and even talking difficult (Klinedinst et al., 2019).
- Xerostomia can cause difficulty in mastication, swallowing, and speech and can also increase the risk of dental caries, periodontal disease, candidiasis, and changes in taste.
- Causes of xerostomia are:
 - Medications (anticholinergics, antihistamines, psychotropics, opioids, cardiovascular medications, and sympathetic agonists)
 - Radiation to head and neck
 - Systemic disease (sarcoidosis, diabetes mellitus, GVHD, anxiety, depression, dehydration)
- Management:
 - Look for underlying cause. Can xerostomia be reversed if medications are changed?

- Immaculate mouth care including frequent brushing of the teeth
- Frequent sips of water, sucking on ice
- Chewing sugarless gum
- Maintain room humidity
- Provide moist and soft foods
- Pilocarpine has been studied in patients with head and neck cancers and with medication-induced xerostomia and has positive results. Pilocarpine should be used with caution, as it can cause glaucoma and cardiac disturbances. Usual dose of Pilocarpine is 5 mg po tid.

Hiccups

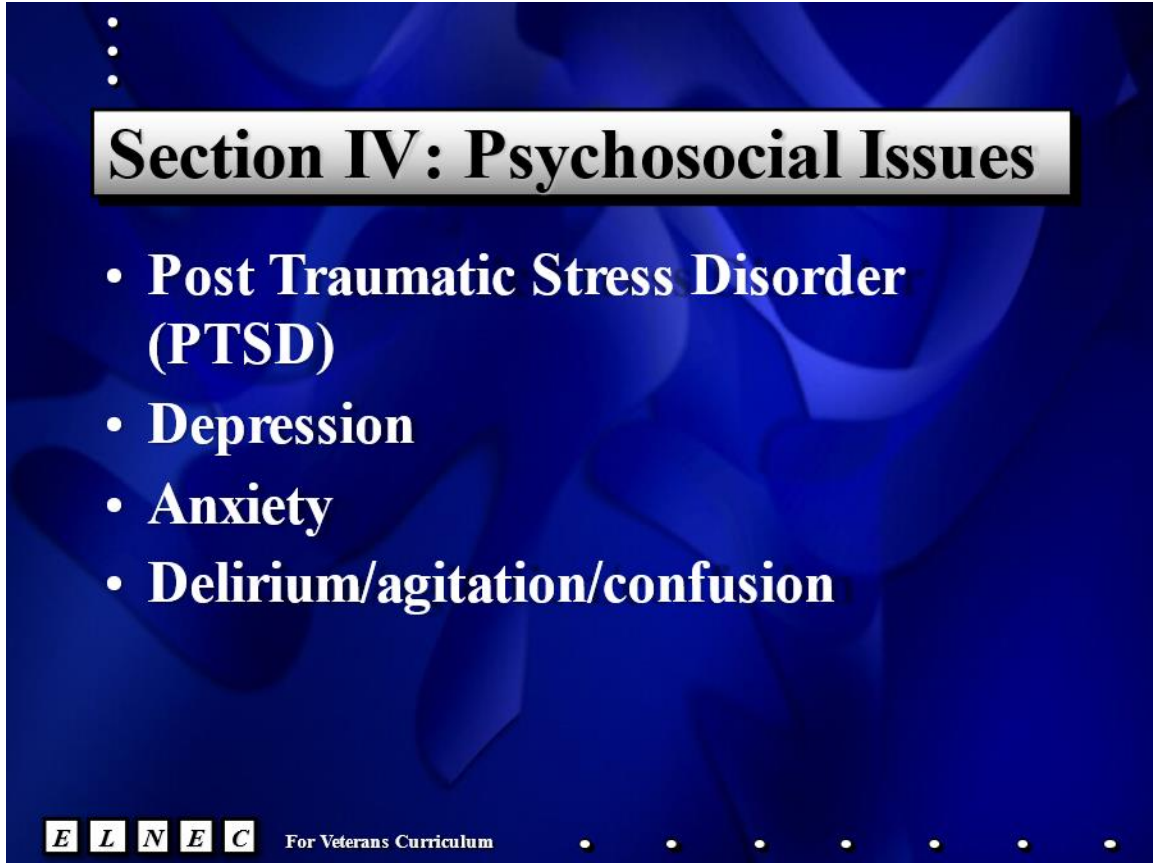
- **Sudden, involuntary contraction of diaphragm and intercostal muscles**
- **High prevalence with GERD, gastric distention**
- **Management can include Baclofen, gabapentin, acupuncture**

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- Hiccups are sudden, involuntary contractions of the diaphragm and intercostal muscles, and are terminated by an abrupt closure of the glottis. Hiccups can be experienced 4–60 times per minute, causing fatigue, loss of sleep, anxiety, frustration, and a decrease in quality of life. Little research has been done on hiccups in the palliative care patient. It is estimated that 10%–20% of cancer patients experience hiccups. It is more common in men (Klinedinst et al., 2019).
- Those with gastroesophageal reflux disease (GERD) and gastric distention appear to have the highest prevalence of hiccups. Also, those taking corticosteroids and benzodiazepines are most likely to have hiccups (Klinedinst et al., 2019).
- Assessment is key. Hiccups are categorized as:
 - Benign (lasts minutes and up to 2 days)
 - Persistent/chronic (lasts more than 48 hours, but less than 1 month)
 - Intractable (lasts longer than 1 month)

- The duration of hiccups in palliative care patients can be critical. Think about a patient whose respirations are already compromised by the disease (i.e., COPD, ALS, etc.) and then hiccups add to that distress.
- Management of hiccups should be determined by the underlying cause/disease and correct those, if possible.
 - If the cause is not known, there are some medications that may be used, if the patient's condition warrants it. For example:
 - Metoclopramide (10 mg q4h IV or SC) + a proton inhibitor if GERD is suspected.
 - If this is not effective and renal status is adequate, baclofen (5 mg TID, increased by 5 mg/dose every 3 days to a maximum of 80 mg/day) may be added. Watch for side effects—sedation, vertigo, ataxia, slurred speech, weakness)
 - Others: Gabapentin (100-300 mg tid as a starting dose), chlorpromazine (25 mg po TID) or haloperidol (3-5 mg po/sub-q TID), nifedipine (30-60 mg/day). Consider renal function with all of these medications (Klinedinst et al., 2019).
 - Non-pharmacological interventions may include acupuncture and vagal nerve stimulation. Phrenic nerve ablation should be the treatment of last resort, as it can cause risk to pulmonary function (Klinedinst et al., 2019).

***This Concludes Section III**

A blue-themed slide with a white title box at the top containing the text "Section IV: Psychosocial Issues". Below the title is a bulleted list of four items: "Post Traumatic Stress Disorder (PTSD)", "Depression", "Anxiety", and "Delirium/agitation/confusion". At the bottom left, there is a logo for "ELNEC For Veterans Curriculum" with the letters E, L, N, E, C in individual boxes. The background features a faint, stylized image of a person's face.


Section IV: Psychosocial Issues

- **Post Traumatic Stress Disorder (PTSD)**
- **Depression**
- **Anxiety**
- **Delirium/agitation/confusion**

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- Assessing and managing psychological issues in the midst of chronic illness can be challenging. Culture, the length of time they have been sick, managed care issues and increased cost of healthcare always add to the complexity of developing a plan of care. Four of the most important factors to consider when looking at psychosocial issues are:
 - Previous coping mechanisms/strategies
 - Emotional stability
 - Social support
 - Symptom distress.
- This section will reinforce the vital role of the nurse in assessing and managing palliative care patients with psychosocial issues.

Post Traumatic Stress Disorder (PTSD)



- PTSD is characterized by persistent/severe reaction to a traumatic event
 - Combat
 - Terrorist attacks
 - Sexual or physical assault
 - Accidents
 - National/natural disasters
- Symptom clusters
 - Avoidance
 - Reexperiencing the event
 - Hyperarousal
- Implications for EOL

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- Post-Traumatic Stress Disorder (PTSD) is different from other psychiatric disorders, as the cause is attributed to a life-threatening event. It was originally classified as an anxiety disorder but is now seen as a traumatic and stress related disorder (Blatt, 2016; Feldman, 2017. See: Fast Fact #398 Assessment and treatment of PTSD at the End of Life, <https://www.mypcnow.org/fast-fact/assessment-and-treatment-of-ptsd-at-the-end-of-life/> <https://www.mypcnow.org/fast-fact/assessment-and-treatment-of-ptsd-at-the-end-of-life/> Accessed August 21, 2022.
- PTSD is a disorder that is characterized by a persistent and severe reaction to a traumatic event and has specific symptom clusters (e.g., avoidance, reexperiencing, and hyperarousal). It is characterized by recurrent distressing, vivid memories and is associated with events such as:
 - Combat
 - Terrorist attacks
 - Sexual, physical/violent assault
 - Accidents
 - National/natural disasters
 - Life-threatening illness

- Nurses' keen assessments are important to report to the entire healthcare/palliative care team (Glick et al., 2018):
 - These symptoms should be assessed along with depression, anxiety, and other psychological distresses.
 - PTSD related symptoms may be difficult to predict, especially when a formal diagnosis of PTSD has never been made.
 - Near the end of life, PTSD related symptoms are not as common as pain and dyspnea. However, **families report that PTSD causes more distress than dyspnea.**
 - During the last month of life, families whose loved one had PTSD-related symptoms reported negative perceptions of care.


Important: Those who received palliative care consults were associated with less PTSD related discomfort. This suggests that PTSD related symptoms and their management near death relates to the way families evaluate the quality of care that their family member received. Palliative care teams may be used to reduce some of the burden that these symptoms cause.

NOTE: Some practical things to remember:

- Avoid using bed alarms.
- Avoid touching them unless you call their name out first and and/or they see you coming.
- Avoid keeping curtains closed around their bed, where they cannot see what is going on in the room.
- Tucking linens around their feet may give them a sense of being “closed in” without a way “to escape.”

Module 3 Suggested Supplemental Material:

- Table 4: PTSD-Post Traumatic Stress Disorder



PTSD in Veterans

- **Statistics**
 - **Operation Iraqi Freedom (OIF) & Enduring Freedom (OEF) 11-20%**
 - **Gulf War 12%**
 - **Vietnam War 15-30%**
- **Military Sexual Trauma (MST)**

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- The number of Veterans with PTSD varies by service era (VA, 2022a):
 - Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF): About 11-20 out of every 100 Veterans (or between 11-20%) who served in OIF or OEF have PTSD in a given year.
 - Gulf War (Desert Storm): About 12 out of every 100 Gulf War Veterans (or 12%) have PTSD in a given year.
 - Vietnam War: About 15 out of every 100 Vietnam Veterans (or 15%) were currently diagnosed with PTSD at the time of the most recent study in the late 1980s, the National Vietnam Veterans Readjustment Study (NVVRS). It is estimated that about 30 out of every 100 (or 30%) of Vietnam Veterans have had PTSD in their lifetime.
- Other factors in a combat situation can add more stress to an already stressful situation. This may contribute to PTSD and other mental health problems. These factors include what the Veteran did in the war, the politics around the war, where the war is fought, and the type of enemy faced.
- Military sexual trauma (MST) is any sexual harassment or sexual assault that occurs while the Veteran was in the military. MST can happen to both men and women and can occur during peacetime, training, or war.

- Among Veterans who use VA health care, about:
 - 23 out of 100 women (or 23%) reported sexual assault when in the military.
 - 55 out of 100 women (or 55%) and 38 out of 100 men (or 38%) have experienced sexual harassment when in the military.
- There are many more male Veterans than there are female Veterans. So, even though military sexual trauma is more common in women Veterans, over half of all Veterans with military sexual trauma are men. (VA, 2022a)

Additional sources of information on PTSD in Veterans

- Veterans Affairs PTSD <https://www.ptsd.va.gov/index.asp>
- We Honor Veterans resources

<https://www.wehonorveterans.org/working-for-veterans/specific-needs/post-traumatic-stress-disorder-ptsd/>

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PTSD and Palliative Care

- **Trust is an important factor**
- **Authenticity**
- **Open and direct conversation**
- **Fear of dependency**
- **Fear of loss of control**




Grassman, 2017

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- Trust plays an important role in helping veterans with PTSD as they may not trust easily. Health care professionals should ensure they “keep their word” or could become the enemy.
- Authenticity is especially important as the interprofessional team engages with the Veteran.
- Veterans with PTSD will often “test” clinicians to see if they are trustworthy. Dialogues about death should be done openly and directly. Veterans may have faced death before when they were in combat.
- Increasing dependency often accompanies the dying process. This can become especially problematic for veterans because they have been trained to be strong, in control, and independent. Although interventions to maintain a sense of control should be provided, it is also important to initiate dialogue about losing control so the Veteran can make peace with the losses.
- Loss of control can be especially difficult for veterans with PTSD. Helplessness and loss of control experienced in the original trauma play a crucial role in how veterans with PTSD sometimes face death. Their helplessness during the original trauma can subsequently incite overly-controlling behaviors throughout their lifetime in order to ward off experiencing helpless again. (Grassman, 2017)



Trauma Informed Care

- **Trauma -informed care is the adoption of principles and practices that promote a culture of safety, empowerment, and healing.**
- **It is a focus on *how* care is delivered.**
- **To be trauma -informed is to understand how trauma impacts someone and how they might present to a healthcare environment**

(SAMHSA, 2014)

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- Definition of Trauma “*Individual trauma results from an event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual’s functioning and mental, physical, social, emotional, or spiritual well-being.*” (SAMHSA, 2014)
- Trauma-informed care is the adoption of principles and practices that promote a culture of safety, empowerment, and healing. (SAMHSA, 2014) It is a focus on *how* care is delivered. To be trauma-informed is to understand how trauma impacts someone and how they might present to a healthcare environment
- Since individuals might not initially disclose a history of trauma, basic screening for such can be beneficial to prepare for the potential impact of trauma on the end-of-life experience.
- Six key principles of trauma informed care
 - Safety
 - Trustworthiness and Transparency
 - Peer support

- Collaboration and Mutuality
- Empowerment, Voice and Choice
- Cultural, Historical, and Gender Issues

- The Stepwise Psychosocial Staged Model for Treating PTSD at the End of Life can be used in hospice care. There are three stages to this model and treatment only moves on to the next stage if symptoms are not resolved and the Veteran would like additional treatment (WHV, n.d.)
 - Stage I: Palliate immediate discomfort and provide social supports
 - Stage II: Enhance coping skills
 - Stage III: Treat specific trauma issues

More detailed information and treatment approaches specific to Veterans can be found on the We Honor Veterans Website

<https://www.wehonorveterans.org/trauma-informed-care/>

See the following documents in the supplemental materials:

- Trauma Informed Care at End-of-Life Resource Sheet 2021
- 2021 Screening Guide for Veterans

Depression

- Ranges from sadness to suicidal
- Often unrecognized and undertreated
- Occurs in 25-75% of terminally ill
- Distinguish normal vs abnormal
- Should not be dismissed
- Cluster

Chovan, 2016; Salman et al, 2019

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- Depression can be described as a broad spectrum of responses that range from expected, transient, and nonclinical sadness to extremes of major clinical depressive disorders and suicidality (Salman et al., 2019). Depression rates vary according to the disease (Chovan, 2016). For example, patients with:
 - Myocardial infarction = 40%–65%
 - Parkinson’s disease = 40%
 - Chronic pain syndromes = 30% – 54%
 - Cancer = 25%
- Persistent feelings of helplessness, hopelessness, inadequacy, depression and suicidal ideation *are not normal* at the end of life. These symptoms should be aggressively evaluated and treated.
- Depression and anxiety are frequent co-morbid factors in chronic medical illness. Unfortunately the symptoms are frequently unrecognized and undertreated (See National Cancer Institute PDQ® Cancer Information Summaries: Supportive Care “Depression” at: <https://www.cancer.gov/about-cancer/coping/feelings/depression-hp-pdq> [Accessed May 19, 2022])

- However, symptoms usually respond to treatment, and recognition of their existence is extremely important.
- Early diagnosis can improve outcomes and allow individuals to feel better while having more energy to achieve their goals. Does the Veteran have a history of depression before the life-threatening illness occurred?

Causes of Depression

- **Disease related**
- **Psychological**
- **Medication related**
- **Treatment related**
- **Social issues**

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The slide features a dark blue background with a faint American flag pattern. At the bottom, there are three large question marks filled with the stars and stripes of the US flag. The text 'Causes of Depression' is in a white box with a black border. The 'ELNEC' logo is in white boxes, and 'For Veterans Curriculum' is in white text.

- There can be many causes for depression in terminal illness.
- Disease related:
 - Uncontrolled pain and other associated symptoms (e.g., constipation, anorexia, sleep disturbances) are factors that may exacerbate depression.
 - Physical causes of depression include: brain tumors, cardiac surgery, hypothyroidism, hypoxia, obstructive sleep apnea, seizures, strokes, and traumatic brain injury (Chovan, 2016).
 - Altered physiologic states that can cause anxiety and contribute to depression in the cancer patient include sepsis, abnormal metabolic states, delirium, organic mental disorders, drug reactions, and drug withdrawal syndromes.
- Psychological:
 - Psychological or existential factors related to impending death such as fear, loss of independence or control, changes in body image also affect Veteran's emotional responses.
 - Family and personal history of pre-existing psychological conditions, such as major depressive and anxiety disorders, can place the Veteran at greater risk of experiencing these disorders when facing cancer or other life-threatening

illnesses. Other factors, including financial, social, safety issues, may contribute to distress and exacerbate depressive symptoms.

- Medications (Salman et al., 2019):
 - Numerous medications and substances associated with depression include the antihypertensives, analgesics, antiparkinsonian agents, steroids, hypoglycemics, chemotherapeutic agents (e.g., interleukin, intrathecal methotrexate, vincristine), hormones, antimicrobials, L-Dopa, benzodiazepines, alcohol, phenothiazines, amphetamines, cimetidine, and others.
- Treatment related:
 - Additional causes are brain radiation and metabolic and endocrine abnormalities
- Social issues:
 - Illness, loss of job, loss of finances, relationships, and body image are issues that may cause Veteran to withdraw and isolate themselves.

Assessment of Depression

- **Situational factors/symptoms**
- **Previous psychiatric history**
- **Other factors(e.g., lack of support system, pain)**

Chovan, 2017

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- Evaluation of depression requires a careful interprofessional team assessment, including social work and psychiatry as appropriate.
- Situational factors:
 - Somatic complaints such as lack of appetite, insomnia, decreased sexual interest, pervasive helplessness and hopelessness, psychomotor agitation, and diminished energy may be a result of disease and treatment effects and cannot be considered hallmark signs of depression in the medically ill. Instead, more reliable symptoms such as depressed appearance, fearfulness, withdrawal, self-pity and a sense of punishment, and mood that cannot be improved with good news, should be evaluated in the terminally ill population.
- Previous psychiatric history/treatment (Chovan, 2017):
 - Prior episode of depression
 - Family history of depression
 - Other mental health issues (bipolar, personality disorders, schizophrenia)
 - Prior attempts at suicide
 - Under 40 years of age
 - Post-partum

- Lack of social support
 - Sexual abuse
 - Substance misuse/substance use disorder
 - Medication review (previous and present)
- Chronic deteriorating medical illness with perceived poor health, recent diagnosis of a life-threatening illness, and a recent conflict or a loss of significant relationship are also predictors.

Suicide Assessment

- **Risk factors for suicide**
- **History of declining functionality**
- **Psychiatric evaluation**

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- Suicide [intentional self-harm] is the tenth leading cause of death in the U.S. (Xu et al., 2020).
- A diagnosis of cancer increases a person's risk of dying by suicide by 55% compared to those without cancer (those at highest risk: head and neck cancers, pancreatic cancer). (Massa et al., 2017)
- Veterans with immediate, lethal, and precise suicide plans and resources to carry out the plan should be immediately evaluated by psychiatric professionals, hospitalized, or placed under appropriate close and continuous supervision. Veterans at highest risk for depression and suicide are those with (Chovan, 2016 & 2017):
 - Depressed mood
 - Substance use disorder (SUD)
 - Stressful life events (loss, stressful life events, military service, financial/legal issues)
 - Genetic link/environmental exposure to mental illness
 - Psychiatric disorders (i.e. anxiety, PTSD, personality disorder, psychosis, paranoia)
 - Chronic/life-threatening illness, pain

- Means to carry out suicide (i.e., firearms)
 - History of attempted suicide
 - Family history of suicide
 - Family violence (physical or sexual abuse)
- Suicide lethality should be assessed by evaluating:
 - The presence of a suicidal plan, method to carry out the plan, availability of resources to carry out the plan.
 - Ability to communicate intent and intended outcome (gesture versus serious attempt to die).
 - The nurse should screen for suicide by asking these questions (Chovan, 2017).
 - Has anyone close to you attempted or completed suicide?
 - Have you ever tried to harm or hurt yourself?
 - Are you currently thinking about hurting yourself?
 - If so, do you have a plan and how are you planning on doing it?
 - Do you have the means to implement such a plan?
 - Question for suicide assessment (Chovan, 2016):
 - It is important to destigmatize these questions. Think about phrasing the assessment questions: “It would not be unusual for someone in your situation to have thoughts of harming themselves. Have you had thoughts like that?”
 - Remember that Veterans who have a serious and life-threatening illness will normally experience sadness, grief, and loss. True clinical depression manifests itself in a more generalized and unremitting way and associated with feelings or hopelessness, helplessness, worthlessness, and guilt. They may also experience dysphoria, tearfulness, anger, social withdrawal.
 - **NOTE: Psychiatric Evaluation Care Is a Must!!!** These Veterans must be identified and immediately be placed in a safe environment with close supervision. Depressed, terminally ill Veterans are at highest risk of suicide and suicide ideation affected by depression, anxiety or delirium. They also may request a hastened death (Prince-Paul & Daly, 2019).

Exercise - Stop and Consider:

It is common for Veterans to go back and forth between a desire to live and a wish to be relieved from the suffering and pain of the terminal illness. Suicidal thoughts in Veterans with advanced disease may have more to do with the lack of control or autonomy, uncontrollable disease-related symptoms, distressing emotions, past life experiences, etc.

- Have you seen a Veteran in the last month who has experienced these feelings?
- How do you talk with the Veteran? What questions do you ask?
- How do you make sure that the interdisciplinary team obtains this information?

- Does your facility have a policy in place for Veterans who experience suicidal ideation? If so, how would you proceed if a Veteran said he was considering killing himself?
- If your facility does not have a policy in place for Veterans who experience suicidal ideation, how would you proceed?
- Hospice patients may say, “I want this to be over with.” But that statement does not mean that they would actively consider taking their own life.
- Listen and be present

Veterans and Suicide

- In 2020, suicide was the 13th leading cause of death among Veterans overall
- Second leading cause of death among Veterans under age 45
- Palliative care can reduce suicide risk

Kutney-Lee et al., 2022

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- In each year from 2001 through 2020, age- and sex-adjusted suicide rates of Veterans exceeded those of nonVeteran U.S. adults.
- In 2020, suicide was the 13th leading cause of death among Veterans overall, and it was the second leading cause of death among Veterans under age 45.
- In 2020, there were 6,146 Veteran suicide deaths, which was 343 fewer than in 2019. The unadjusted rate of suicide in 2020 among U.S. Veterans was 31.7 per 100,000. 2020 had the lowest number of Veteran suicides since 2006.
- From 2001 through 2018, the number of Veteran suicides increased on average by 47 deaths per year. From 2019 to 2020, there were consecutive reductions, of 307 and 343 suicides, respectively, an unprecedented decrease since 2001.(VA, 2022b)

Palliative care can reduce suicide risk. Palliative care consultation of Veterans was associated with a 71-78% decrease in the odds of death by suicide compared to other causes in a cohort of Veterans at high risk of one-year mortality, with the largest reduction among those who received two or more Palliative Care consultations. (Kutney-Lee et al., 2022)

Resources for Veterans:

VA mental health services Suicide prevention:

https://www.mentalhealth.va.gov/suicide_prevention/index.asp

Veterans crisis line: <https://www.veteranscrisisline.net/>

Pharmacologic Interventions for Depression

- **Goal: Focus on symptom control**
- **Antidepressants (e.g., amitriptyline - may take 4-6 weeks to be effective)**
- **Steroids (e.g., dexamethasone)**
- **Psychostimulants (e.g., methylphenidate)**

Salman et al., 2019

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- When treating psychological issues in Veterans with chronic illness, always focus on symptom control. Remember that the use of the interprofessional team is vital (i.e., psychiatrist, psychoanalyst, psychiatric APRN, chaplain, social worker, etc.).
- There are many medications used to treat depression (Salman et al., 2019). These drugs may be used alone or in combination with other psychotropics.
 - Antidepressants (Generally may take 4-6 weeks to be effective)
 - Serotonin selective reuptake inhibitors (SSRIs) (e.g., fluoxetine, paroxetine, sertraline, citalopram). These are generally used as first-line for the treatment of depression (Chovan, 2016).
 - Serotonin and norepinephrine reuptake inhibitors (SRNI) (venlafaxine, duloxetine). May be of benefit if Veteran is also experiencing pain
 - Norepinephrine-dopamine uptake inhibitors (bupropion)
 - Atypical antidepressants (mirtazapine, trazodone)
 - Tricyclic antidepressants (amitriptyline, nortriptyline).
 - Steroids
 - Dexamethasone for those with limited prognosis
 - Psychostimulants
 - Usually used as an adjuvant to other antidepressant therapies; useful for fatigue symptoms (methylphenidate)

- Other agents:
- Ketamine is a dissociative anesthetic that is being used for antidepressant effects and anxiolysis (Goldman, et al, 2019)

Non-Pharmacologic Interventions for Depression

- **Promote autonomy**
- **Grief counseling**
- **Draw on strengths**
- **Use cognitive strategies**

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- There are many non-pharmacologic interventions used for depression. Suggested non-pharmacologic techniques include:
 - Promote and facilitate as much autonomy and control as possible
 - Encourage Veteran and family participation in care, thus promoting a sense of control and reducing feelings of helplessness
 - Physical activity if feasible (i.e., walking, hiking, swimming, etc)
 - Reminiscence and life review can assist terminally ill Veterans to focus on life accomplishments and to promote closure and resolution of life events for the Veteran and family
 - Grief counseling can assist Veterans and families deal with past, present, and future losses
 - Maximize symptom management to decrease physical stressors that can exacerbate depression and anxiety symptoms
 - Psychiatric counseling may be needed for those experiencing significant inability to cope with the experience of their medical illness
 - Assist the patient to draw on previous sources of strength, such as faith and other belief systems
 - Using cognitive behavioral techniques, assist the patient reframe negative beliefs into positive thoughts.

- Relaxation techniques
 - Ongoing emotional support and being “present,” reducing isolation
 - Other: meditation, mindfulness, prayer, yoga, music therapy, guided imagery, aromatherapy, acupuncture
- **STOP & CONSIDER:** Is it possible that the Veteran’s caregiver(s) could experience depression during difficult times of uncertainty, financial loss, grief, etc.? If so, who could you refer this caregiver to in your institution or out in your community?

Anxiety

- **Subjective feeling of apprehension**
- **Often without specific cause**
- **Categories of mild, moderate, severe**

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- Anxiety is a subjective feeling of apprehension, tension, insecurity, and uneasiness, usually without a known specific cause.
- May be anticipatory.
- Mild to moderate anxiety can be activating; severe can be incapacitating.
- Signs and symptoms that accompany anxiety occur along a continuum that can be assessed as mild, moderate, or severe. The greater the threat perceived by the Veteran, the greater the anxiety response.
 - See National Cancer Institute PDQ[®] Cancer Information Summaries: Supportive Care: “Adjustment to Cancer: Anxiety and Distress” at: <https://www.cancer.gov/about-cancer/coping/feelings/anxiety-distress-hp-pdq> [Accessed May 19 2022].
 - Cochrane Review “Drugs to Help Reduce Anxiety in People Nearing the End of Life Due to Illness” at: https://www.cochrane.org/CD004596/SYMPT_drugs-help-reduce-anxiety-people-nearing-end-life-due-illness [Accessed May 19,2022].

Causes of Anxiety

- **Physiological changes**
- **Medications and substances**
- **Pre-existing anxiety pre -diagnosis**
- **Uncertainty**
- **Risk factors**

Gatto et al., 2016; Salman et al., 2019

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- There is a correlation between the prevalence of anxiety and incidence of mental and chronic illness(es) (Gatto et al., 2016).
- Facts about anxiety:
 - Related to physiological changes: Poor pain control, dyspnea, hypoxia, metabolic imbalances, sepsis, pulmonary edema.
 - Related to treatment(s): Stimulants, thyroid replacement hormones, neuroleptics, corticosteroids, digitalis, antihypertensives, antihistamines, antiparkinsonian medications, anticholinergics, analgesics, and various drug withdrawal states and paradoxical reactions (Salman et al., 2019).
 - Pre-existing anxiety, predating diagnosis.
 - Anxiety related to uncertainty: It is understandable that along the illness trajectory, people with life-limiting illness will experience various degrees of anxiety. There is much to be anxious about: prognosis, mortality, existential issues, financial and legal concerns, uncontrolled pain and other symptoms, loss of control, etc.
 - Consider spiritual distress as a contributor to anxiety; include chaplains in the team
- Major risk factors include (Gatto et al., 2016): Angina, CHF, myocardial

infarction, carcinoid syndrome, Cushing's disease, hyper/hypothyroidism, AIDS, anemia, asthma, COPD, pulmonary edema, akathisia, brain lesion, seizure disorder, CVA, dementia, islet cell adenomas, hormone-producing tumors.

Assessment of Anxiety

- **Physical symptoms**
- **Cognitive symptoms**
- **Questions for assessment**

APA, 2013

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- Fear and anxiety are expected reactions to a terminal diagnosis and require frequent assessment.
- Anxiety symptoms include one or more of the following: chronic apprehension, worry/stress, inability to relax, difficulty concentrating, difficulty falling and staying asleep.
- Physical symptoms can include:
 - Sweating, tachycardia, restlessness, agitation, trembling, chest pain, hyperventilation, tension.
 - Abnormal involuntary movement (AIM) testing – detects extrapyramidal side effects of neuroleptics and dopamine antagonist antiemetics. Restlessness and feelings of anxiety are often the initial clues.
- Cognitive symptoms include:
 - Recurrent and persistent thoughts, ideas, or impulses, the fear of “going crazy,” and the fear of dying. If symptoms do not subside or they worsen, intervention should take place. Treatment depends on the etiology and severity of symptoms.
- Question for anxiety assessment:
 - What is your biggest fear?

➤ What are you worried about now?

Pharmacologic Interventions for Anxiety

- **Benzodiazepines**
- **Antidepressants**

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- Pharmacologic interventions for anxiety can be multi-faceted. It is important to first determine the etiology of the anxiety. Benzodiazepines are the most frequently used medication for acute anxiety.
- Antidepressants have also been used for anxiety [see previous discussion under *Depression*].
- Be careful with benzodiazepine and antidepressant medications used with older, frail adults, as they can cause sedation, delirium, falls, and disturbances of sleep.
- Listening and being present with Veterans and their families is critical. Take time to hear their stories, as Veterans may not always feel they have been heard. Too often, healthcare providers are quick to prescribe an anti-anxiety medication without listening to the Veteran and hearing their concerns.

Nonpharmacologic Interventions for Anxiety

- **Empathetic listening**
- **Assurance and support**
- **Concrete information/warning**
- **Relaxation/imagery**

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- There are many nonpharmacologic interventions available for the treatment of anxiety. Non-pharmacologic techniques include:
 - Acknowledging Veteran fears, using open-ended questions, reflecting, clarifying, and use of empathetic listening and remarks, helps the patient to identify effective coping strategies they have used in the past and to learn new coping skills.
 - Articulating anger and providing appropriate reassurance and support.
 - Providing concrete information to eliminate fear of the unknown, and in appropriate situations, provide stressful event warning.
 - Encouraging use of a stress diary, which helps the Veteran to understand relationships between situations, thoughts, and feelings.
 - Exploring Veteran's experiences with "near-miss" events. These events can be traumatic stressors that the Veteran or a family member has experienced in the past, or during illness or treatment, which impacts potential coping ability. These experiences may include the death of a loved one, trauma, national disaster, or other near-death experiences.
 - Maximizing symptom management to decrease physical stressors that can exacerbate depression and anxiety symptoms.
 - Promoting the use of relaxation and guided imagery techniques through the use of

- apps/audiotapes, breathing exercises, massage, yoga, tai chi, and progressive muscle relaxation.
- Aromatherapy, music therapy, and kinesthetics
 - Psychological and/or psychiatric counseling may be needed for those experiencing significant inability to cope with the experience of their medical illness.
 - Meditation/mindfulness.
 - Consult with chaplains.
 - Be aware of any community resources.

Module 3 Suggested Supplemental Teaching Material:

Figure 1: Imagery Exercise

Figure 4: Nursing Management of Anxiety – Infographic

Figure 5: Nonpharmacologic Management of Stress: Meditation/Mindfulness Apps - Infographic

Delirium/Agitation/Confusion

- **Delirium**- Acute change in cognition/awareness
- **Agitation or withdrawal**-accompanies delirium
- **Confusion**- Disorientation, inappropriate behavior, hallucinations

Goldberg et al., 2019

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- Delirium is the most common cognitive disorder in hospitals and palliative care settings (Goldberg et al., 2019).
- Delirium is an acute change in cognition arousal and should be considered an emergency situation. The *Diagnostic and Statistical Manual of Mental Disorders*, 5th defines five criteria related to delirium (Goldberg, 2019):
 - Deficits in attention/awareness
 - Symptom onset over a brief period of time with symptom fluctuation
 - Additional deficits in cognition (e.g. orientation, memory, perception)
 - Not better explained by another mental disorder such as dementia
 - Caused by another medical condition

Cancer patients receiving palliative care experience delirium at a rate of 47% (Burhenn, 2016 and 2017). Early detection and assessment may lead to resolution of delirium, if cause is reversible, but in all cases, patient and family support is essential. See National Cancer Institute PDQ[®] Cancer Information Summaries: Supportive Care “Delirium” at: <https://www.cancer.gov/about-cancer/treatment/side-effects/memory/delirium-hp-pdq> and Cochrane Review “Drug Therapy for Delirium in Terminally Ill Adult Patients” at: https://www.cochrane.org/CD004770/SYMPT_drug-therapy-for-delirium-in-terminally-ill-adult-patients [Both accessed May 19, 2022].

- Delirium causes morbidity and implies increased likelihood of impending death. Primary complications associated with delirium include falls, pressure injuries, nosocomial infections, incontinence, functional decline, over sedation and malnutrition (Burhenn, 2016).
- Confusion refers to disorientation, inappropriate behavior or communication, and/or hallucinations.
- Agitation is a common symptom accompanying delirium (hyperactive delirium), although withdrawn behaviors (hypoactive delirium) can also occur. Hypoactive delirium is more common and more likely to be missed, leading to worse outcomes. Individuals may also experience a mixed delirium (hyperactive *and* hypoactive), making the diagnostic process even more challenging.
- Agitation of PTSD needs to be distinguished from delirium, confusion, or agitation. Agitation is sometimes a sign of PTSD, which can become exacerbated at end of life as cognition wanes and unwanted memories surface (Grassman, 2009).

Delirium/Agitation/Confusion: Risk Factors

- **Medications**
- **Infection**
- **Hypoxemia**
- **Bladder distention**
- **Unrelieved pain**
- **Other**

- There are many different risk factors for delirium, agitation, and confusion:
 - Medications (opioids, anticholinergics, corticosteroids, antidepressants, benzodiazepines)
 - Older age (≥ 75 years of age)
 - Dementia
 - Immobility
 - Hearing impairment
 - Infection (pneumonia, urinary tract infection)
 - Metabolic abnormalities (hypoglycemia, hypothyroidism)
 - Hypoxemia
 - Renal, cardiac and/or hepatic failure
 - Electrolyte imbalance (hypercalcemia, hyponatremia, hypernatremia, hypomagnesemia)
 - Dehydration
 - Intracranial disease (primary or metastatic brain tumor, leptomenigeal disease, stroke)
 - Nutritional deficiencies
 - Vitamin deficiencies
 - Unrelieved pain

- Constipation or bladder distension - especially with older adults
- Urinary tract infection
- Rapid withdrawal of medications (opioids, benzodiazepines) and/or alcohol, nicotine
- Environmental stimulation
- Use of restraint
- Use of urinary catheters

Delirium/Agitation/Confusion: Assessment

- **History**
- **Spiritual distress**
- **Physical exam**
- **Other symptoms**

Burhenn, 2017; Goldberg et al, 2019

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- Screening for delirium: Confusion Assessment Method (CAM), Montreal Cognitive Assessment, Delirium Rating scale, etc.
- History:
 - Veteran’s history is taken to determine onset and distinguish delirium from related symptoms such as anxiety or depression. Is there a history of alcohol or substance abuse? Do a thorough medication review of what the Veteran is currently taking. Consider substance withdrawal.
- Obtaining a surrogate history from the caregiver may be necessary in order to establish a mental status baseline. Caregivers can assist in identifying key factors that may be present preceding delirium (i.e., physical, cognitive/psychological decline, alteration in sleep/wake, hallucinations, withdrawal, awareness of dying, deteriorating sleep patterns, and suffering) (Burhenn, 2017).
- Assess for spiritual distress. Many search for the meaning of suffering, for forgiveness and/or for acceptance. This can cause anxiety and depression that can further lead to delirium, confusion and agitation. Forgiveness issues, including acts they might have committed during combat.

- Physical assessment:
 - Common signs include disturbed sleep/wake cycle, agitation, restlessness, moaning, hallucinations, delusional thoughts.
 - Assess for sepsis, dehydration, opioid toxicity, urinary retention or infection, constipation, etc) (Goldberg et al., 2019).
- Laboratory and radiological tests may be considered, depending on the patient's goals of care (e.g., CBC, electrolytes, calcium, renal/liver function, UA, CXR, O₂ saturation, imagery of the brain via CT or MRI).

Delirium/Agitation/Confusion: Treatment

- **Maintain safety**
- **Pharmacologic**
 - **Haloperidol**
 - **Atypical antipsychotics**
 - **Benzodiazepines**
- **Monitor for side effects, withdrawal**
- **Eliminate non -essential/contributing medications**
- **Reorientation**
- **Relaxation/distraction**
- **Hydration**

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- Use of pharmacologic treatments and non-pharmacologic therapies have been shown to provide benefit with delirium/agitation/confusion. The care plan should be developed with the patient's goals of care fully understood. Interprofessional care is essential.
- Pharmacologic treatments:
 - Haloperidol
 - Atypical antipsychotics (olanzapine, risperidone)
 - Benzodiazepines for acute agitation (lorazepam or midazolam). Use cautiously, as they can cause delirium to worsen.
- Monitor closely for potential side effects of these agents. Treat neuromuscular symptoms (tremors, twitching) with midazolam.
- Evaluate current medications to eliminate any nonessential drugs.
- Presence of family or staff to reorient as needed.

- Institute non-pharmacologic treatments such as relaxation/distraction therapy, massage (Meyer & Ring, 2019).
- Hydration may be indicated based on assessment of potential benefits or burdens.
- One final thought about delirium: It is common at the end-of-life and can be an indicator of impending death. Provide interprofessional support to both patient and family during this critical time.

***This Concludes Section IV**

Section V: General/Other Symptoms

- **Fatigue**
- **Wound**
- **Seizures**
- **Sleep disturbances**
- **Lymphedema**
- **Urgent syndromes**



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Fatigue

- **Subjective, multidimensional experience of exhaustion**
- **Cause include disease, treatment and psychological factors**
- **Assessment**
- **Treatment**



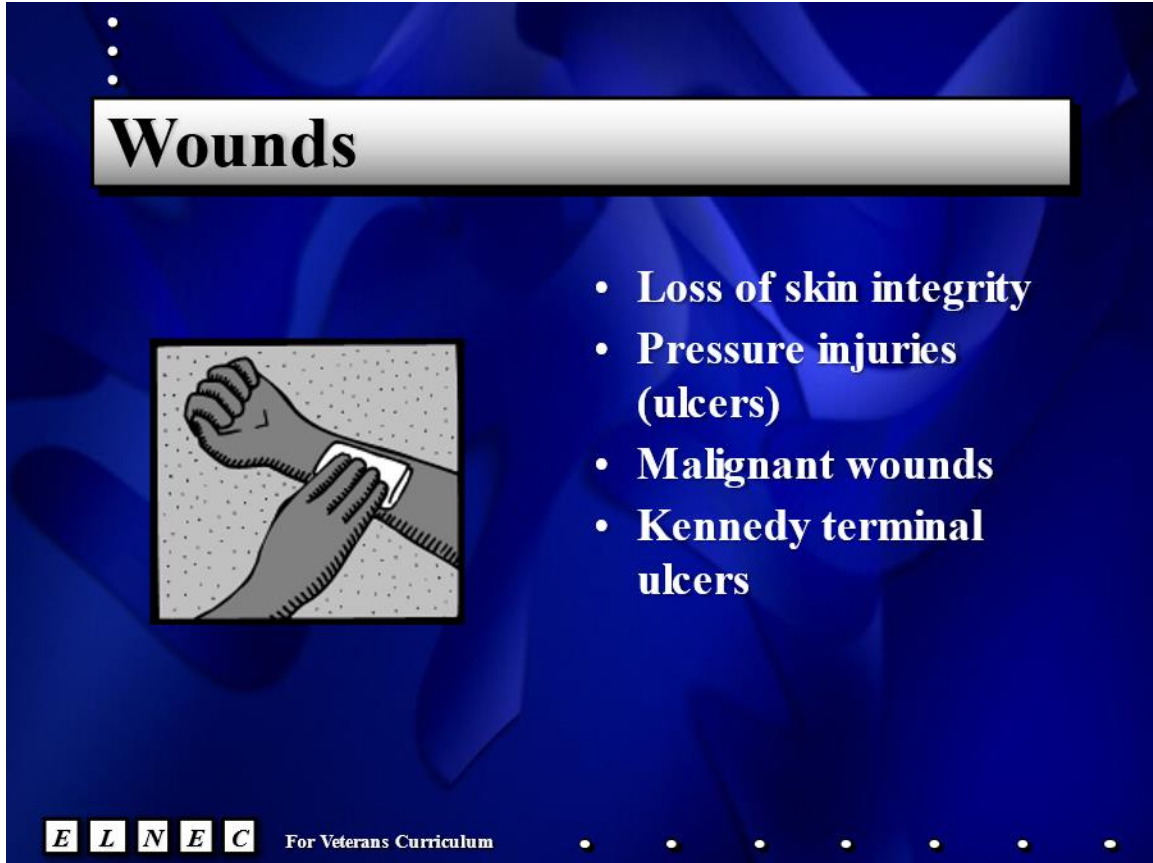
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- Cancer-related fatigue is reported in as many as 60% to 90% of patients (O’Neil-Page et al., 2019). However, fatigue is commonly associated with numerous other diseases including: Coronary artery disease, HIV/AIDS, rheumatoid arthritis, advanced renal disease, and others.
- Causes of fatigue
 - Disease related: (e.g., anemia, electrolyte imbalances, malnutrition, infection, hyperglycemia, fever, pain, organ failure (heart/lungs/kidneys/liver), adverse environment (heat or cold extremes), CNS injury disrupts the electrical pathway within the nervous system, hypoxia.
 - Psychological:
 - ◆ Somatic symptoms that may be associated with depression and inactivity/immobility (e.g., sense of loss, loss of role).
 - Treatment related:
 - ◆ Inadequate rest, unrelieved symptoms, medications, radiation, chemotherapy, surgery, psychological and spiritual distress, etc., and, unrelieved symptoms, (such as diarrhea, constipation, and vomiting).
- See National Cancer Institute PDQ® Cancer Information Summaries: Supportive

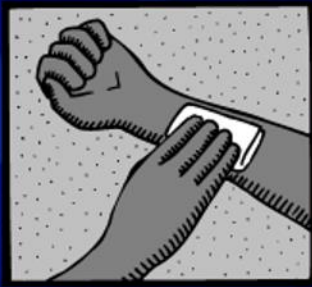
Care “Fatigue” at: <https://www.cancer.gov/about-cancer/treatment/side-effects/fatigue/fatigue-hp-pdq?redirect=true> [Accessed August 21, 2022].

- Assessment requires both subjective and objective data and a thorough review of laboratory data.
 - Some examples of questions to elicit subjective data (based on a scale of 1-10 with 0=no fatigue to 10=worst fatigue imaginable):
 - Are you feeling weak, tired or wiped out?
 - How long does the fatigue last? Is there a pattern? Hours, days, weeks?
 - Are you able to complete activities of daily living?
 - What makes this better or worse?
 - Do any of your medications improve or worsen this problem?
 - Are you anxious or depressed?
 - Are you experiencing difficulty in concentrating?
 - How does fatigue affect the way you live your life?
 - What is your sleep history/disturbances?
 - Some examples of questions to elicit objective data:
 - Monitor vital signs to determine if fever, rapid or weak pulse is present.
 - Observe patient's ability to move about without experiencing dyspnea or nausea.
 - Evaluate hydration status.
 - Test muscle strength, symmetry and endurance of upper and lower extremities to determine if neurological changes are present.
 - Evaluate medications, especially sedations.
- Laboratory data:
 - Oxygenation status
 - Hgb, CBC and differential
 - Thyroid function
- Pharmacologic interventions:
 - Psychostimulants: methylphenidate, modafinil, armodafinil
 - Bupropion
 - Corticosteroids
 - Transfusions if anemic and consistent with goals of care
- Non-pharmacologic interventions (O’Neil-Page et al., 2019):
 - Take frequent rest periods and use energy conservation techniques.
 - Provide assistance that helps the person to maintain independence and functional abilities for as long as possible.
 - Initiate physical and occupational therapy for evaluation of potential interventions.
 - Incorporate cognitive-behavioral therapy.
 - Consider integrative practices such as yoga, qigong, tai chi, mindfulness, meditation.



Wounds

- Loss of skin integrity
- Pressure injuries (ulcers)
- Malignant wounds
- Kennedy terminal ulcers



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- The largest organ in the body is the skin.
 - Wounds can be described as skin damage of varying degrees causing inflammation and pain, and a potential site of infection.
 - Patients at higher risk include: breast, lung, kidney, stomach, gynecologic, bladder, head and neck cancers, frailty, and dementia.
 - **Pressure injuries (ulcers):** account for 66% of all wounds (Tilley et al., 2019).
- Causes
 - Risk factors include:
 - Intrinsic – sensory impairment, tumor growth or vascular stasis, arterial insufficiency, infection.
 - Extrinsic – pressure, friction/shearing, chemotherapy extravasation, radiation, surgical dehiscence, urinary and fecal incontinence.
 - Risk factors are increased due to poor functional status, decreased activity, poor nutrition, and/or advanced age. Predictors for those near end-of-life include: Post-fractures, infections, multiple co-morbidities, and those with

unresolved pain issues. Those receiving IV fluids or enteral feedings have a lower likelihood of developing pressure ulcers (Carlsson & Gunningberg, 2017).

- Most common sites of pressure injuries occur at the sacrum, trochanter, ischial tuberosity, posterior heel, elbow, scapula, and occipital areas. Assess these areas routinely in the severely ill patient.
- Prevention is key and requires:
 - Early intervention
 - Maintaining mobility as possible
 - Decrease moisture
 - Maintaining nutritional status, as appropriate
- **Malignant wounds** (also known as fungating tumors, tumor necrosis, and ulcerative malignant wounds) are seen in a variety of patients with cancer—most prevalent in breast cancer (63%), head and neck cancers (24%), groin, genitals and back cancers (3%) (Tilley et al., 2019).
- These wounds add to the physical and emotional burden of the Veteran and the caregiver. Much time is taken by the caregiver in assessing and dressing these wounds. Extra trips to clinics for wound care add to the list of activities for the caregiver and further diminish energy from the Veteran, who is already compromised. Because of the odor, pain, bleeding, and unsightly appearance of these wounds, this can further promote lack of autonomy and low self-esteem. All of these issues may discourage the Veteran from having visitors, thus causing isolation.
- Goals of care/treatment for malignant wounds:
 - Low exudate wounds: Maintain moist dressings and prevent the dressing from adhering and the wound from bleeding.
 - High exudate wounds: Absorb and contain the exudate. Prevent the dressing from adhering to the wound.
 - Malodorous wounds: Keep wound clean and reduce/eliminate odor with charcoal dressings, metronidazole, etc.
- The ***Kennedy Terminal Ulcer*** is a pressure injury that some patients develop shortly before death, resulting from multi-symptom organ failure (Tilly et al., 2019).
 - This ulcer may be identified at the end of a shift by a nurse who says, “That ulcer was not present when I assessed the patient this morning.”
 - It usually starts on the sacrum, shaped as a pear, butterfly, or horseshoe, and red, yellow, black, or purple in color, sudden onset, and irregular border.
 - Progresses quickly.
 - The ***Kennedy Terminal Ulcer*** is generally seen in older adults and is extremely rare in children.

Assessment of Wounds

- **Characteristics**
- **Pain**
- **Psychosocial**
- **caregivers**

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- Work closely with wound specialist/ostomy nurse. Evaluate the characteristics of the injury:
 - Odor
 - Location: anatomic
 - Size: length, width, depth
 - Color: pink, black, or yellow
 - Drainage: amount, consistency, source
 - Periwound status of skin: intact, inflamed, or macerated
 - Grading of pressure injuries (ulcers):
 - Stage 1: nonblanchable erythema of intact skin
 - Stage 2: partial skin thickness loss, involving the epidermis and/or dermis (a shallow crater or blister)
 - Stage 3: full skin thickness loss involving damage or necrosis of subcutaneous tissue that may extend to fascia. Usually a deep crater with or without undermining of adjacent structures.
 - Stage 4: full skin thickness loss with extensive destruction, necrosis, or damage to muscle, bone, and supporting structures.
- Pain

- Psychosocial issues
- Impact on caregivers related to management of the injury and impact on relationships.
- Diagnostic evaluation as appropriate:
 - Transferrin and albumin
 - Creatinine
 - Hemoglobin
 - Complete blood count
 - Blood and wound cultures

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Treatment of Injuries

- **Frequent position changes**
- **Injury cleaning**
- **Dressings**
- **Provide analgesia**
- **Seek consultation**
- **Prevention is key**

Tilley et al., 2019



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- Unrelieved pressure is the cause of a pressure injury. Every effort must be made to relieve that pressure. Frequent repositioning, use of special pressure-reducing mattresses and wheelchair cushions are helpful.
- Wound cleaning to decrease exudate needs to be gentle to prevent trauma, bleeding, and pain. Debridement as appropriate; consult with enterostomal nurses or wound care teams as appropriate.
- Appropriate dressings to absorb exudates and promote comfort may prove useful. Use appropriate cleansing and dressing, such as moist dressings or collagens to decrease risk of bleeding. The injury should not be left dry.
- Ensure appropriate analgesic treatment for all injury care (before turning or dressing changes).
- Topical metronidazole may decrease infection, while improving odor. Lidocaine gel and compounded morphine gel can be used topically to assist with local pain and may affect wound healing. Protect the injury and normal skin from incontinence. Clean the wound with normal saline, Ringer's lactate, or sterile water.

- Consultation with wound care specialist, physical therapy and/or occupational therapy, can assist caregiver in considering various positioning techniques.
- Continue to evaluate impact of injury on patient's self esteem.
- Patients who are able to take in nutrition, should consult with a dietician, as needed.

When orchestrating care for a patient with life-limiting illness who has an injury/malignant wound, it is important to:

- Assess the underlying cause. Is this a wound from a previous injury, amputation, diabetes complication, arterial insufficiency, etc.? Is the wound caused because of lack of attention in turning a patient and/or the inability of the caregiver to provide this service?
- What are the goals of care? Is this a patient who will likely die in the next few hours/days? If so, is taking the patient to the surgical suite to do a skin graft a good option?
- Providers should ask, "Would this patient's life be significantly better, from a quality of life standpoint, if the wound was healed?"
- Is it realistic that the injury will heal?
- Prevent further pressure injuries/wounds (special mattresses, wheelchair cushions, etc.).
- Manage pain and odor.
- It is not uncommon to see pressure injuries (ulcers) occur 2–3 weeks before death. This has been seen as an indicator of failure of the skin, the body's largest organ. Some suggest that these injuries may be unavoidable in this population.

Seizures

- **Definition**
- **Causes**
 - **Infections**
 - **Trauma**
 - **HIV**
 - **Tumors**
 - **Medications**
 - **Metabolic imbalances**

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- Definition: Sudden, abnormal, excessive electrical impulses in the brain that alter neurologic functions such as motor, autonomic, behavioral, and cognitive function. Exact mechanism is unknown.
- Can be caused by infections such as trauma, brain injury from stroke and hemorrhage, HIV, primary and metastatic brain tumors, paraneoplastic disorders, side effect of medications, metabolic imbalances, drug toxicities, and withdrawal from medications (Schwartz, 2019).

Assessment of Seizures

- **Manifestations**
 - **Aura**
 - **Mental status changes**
 - **Sensory changes**
- **Physical exam**
- **labs**

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Manifestations include aura, acute or gradual onset, mental status changes, motor movement changes, sensory changes.

- Seizures should always be considered a medical emergency.
- Almost 50% of seizures occur in people without a history of epilepsy (Buckley & Syrett, 2016).
- Exam includes orientation, speech fluency, registration, cranial nerve evaluation, motor function, sensory exam, oral exam for trauma to mouth and tongue.
- Classifications:
 - Simple partial: specific cortical region affected. Normal levels of consciousness may be like an aura.
 - Complex : impaired consciousness
 - Absence: typical of infancy, occurs frequently with blinking
 - Partial complex: most common in adults and in palliative care. Patient seems awake but no response. May have aura and then seizures of 3 minutes and a postictal period.
 - Generalized: bilateral hemisphere involvement. Tonic-clonic with sudden loss of

consciousness with characteristics of diffuse muscle rigidity, myoclonus, and fasciculations.

- Depending on goals of care, consider the following tests: complete blood count; chemistry profile; coagulation studies; TSH; blood cultures; blood gases; drug and alcohol screen; drug levels; and urinalysis.

Treatment for Seizures

- **Limit trauma**
- **Anticonvulsant treatments**
 - **Phenytoin**
 - **Phenobarbital**
 - **Lorazepam, diazepam**
 - **Levetiracetam**

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Treatment is focused on prevention and limiting trauma for both patients experiencing the seizure and the family witnessing it. Remember the ABCs: open airway, effective breathing, and adequate circulation. Support is imperative for the family as seizures are difficult to witness.

- Anticonvulsant therapy with respect to intravenous therapy:
 - Phenytoin is the most common therapy for simple and complex and tonic-clonic seizures. Side effects include ataxia, gastrointestinal disturbances, gingival disease, and anemia.
 - Phenobarbital is used for partial, generalized, and tonic-clonic seizures.
 - Most seizures can be managed by benzodiazepines such as lorazepam, diazepam, or midazolam intravenous in palliative care settings.

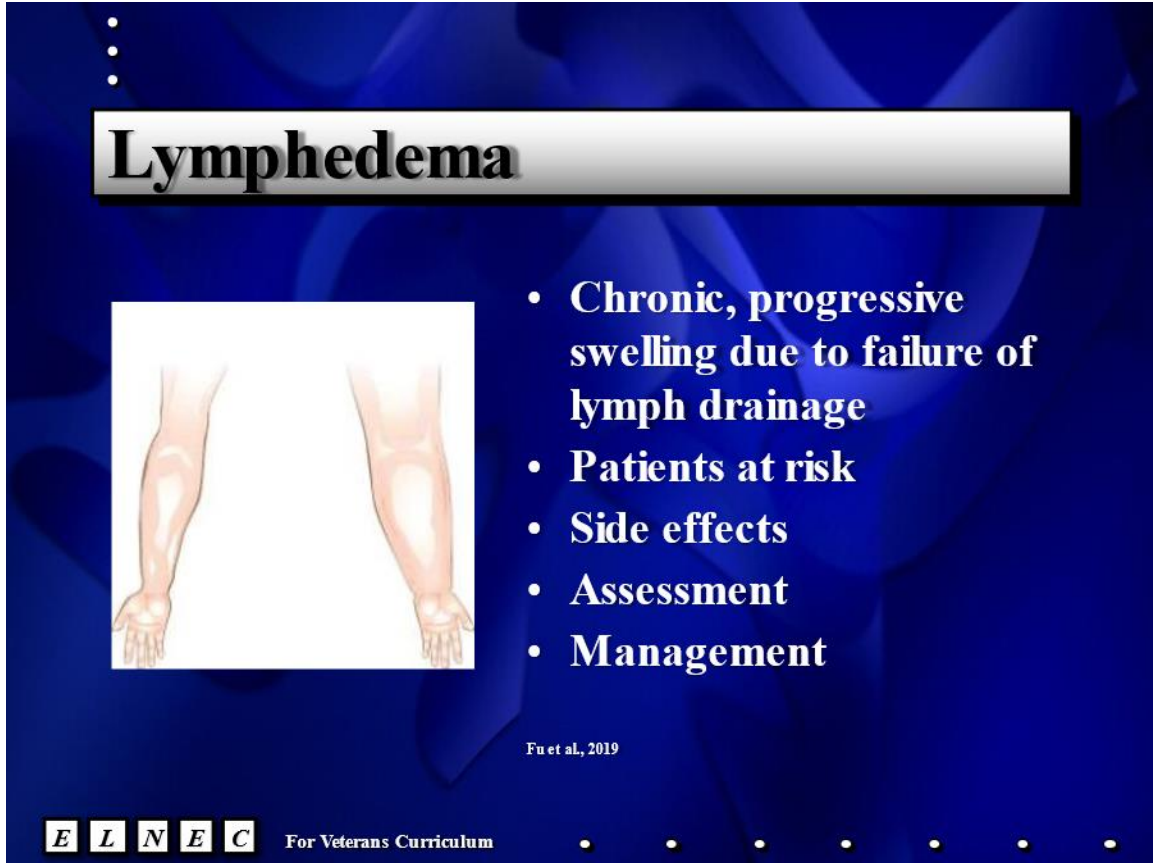
Sleep Disturbances

- **Affects quality of life for both the patient and caregiver**
- **Assessment**
- **Management**
 - **Sleep hygiene**
 - **Cognitive behavioral therapies**
 - **medications**

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- Sleep disturbances affect quality of life for both patients and their families and can promote much suffering. Poor pain and symptom management can lead to major disturbances in sleep. Sleep disturbance is a frequent occurrence in critical care settings, where frequent assessments take place, bright lights are on, and numerous health professionals see the patient around the clock. The prevalence of sleep disturbances for patients with cancer ranges from 23%–61% (Bobb & Fletcher, 2016).
- Assessment should begin with a thorough history and physical of the patient. If pain, anxiety, depression, nausea/vomiting are issues, assess, and manage (Schroeder, 2019).
 - What medication is the patient taking that could disrupt sleep (i.e., corticosteroids, psychostimulants, benzodiazepines, etc.)?
 - How much caffeine is the patient consuming?
 - Could the patient be withdrawing from alcohol, opioids, illicit drugs?
 - Is the patient experiencing nocturia, polyuria?
 - Are circadian rhythms off?
 - Does the patient have brain metastasis, sleep apnea, restless leg syndrome, heart failure, COPD, etc.?

- Sleep hygiene includes avoiding stimulants close to bedtime (caffeine, nicotine); limiting daytime naps to earlier in the day and shorter time periods; keeping electronic devices (television, mobile phones and tablets) out of bedrooms; keeping bedroom cool and dark; and limiting alcohol or large meals before bedtime.
- Cognitive behavioral therapies (CBT) should be the first line of management for sleep disturbances/insomnia (Schroeder, 2019).
 - Massage
 - Aromatherapy
 - Reiki
 - Reflexology
 - Mindfulness-based stress reduction
 - Guided imagery
 - Acupuncture
- For those in which CBT does not work or in conjunction with, benzodiazepines are the most frequently used medications for insomnia. Other pharmacological options include antidepressants, melatonin-receptor agonist, atypical antipsychotics, and antihistamines (Bobb & Fletcher, 2016; Schroeder, 2019).
- ***Don't forget to ask about sleep disturbances in the caregiver, too.***

A presentation slide with a dark blue background. At the top left, there are three white dots. A white rectangular box with a black border contains the word "Lymphedema" in a bold, black, serif font. Below the title, on the left, is a medical illustration of two human arms from the elbow down to the hand. The arm on the left is normal, while the arm on the right is significantly swollen, particularly around the elbow and forearm. To the right of the illustration is a bulleted list of five items: "Chronic, progressive swelling due to failure of lymph drainage", "Patients at risk", "Side effects", "Assessment", and "Management". Below the list, the text "Fu et al., 2019" is written in a small font. At the bottom left, the letters "E L N E C" are displayed in white boxes, followed by the text "For Veterans Curriculum". At the bottom right, there are several small white dots.

Lymphedema

- **Chronic, progressive swelling due to failure of lymph drainage**
- **Patients at risk**
- **Side effects**
- **Assessment**
- **Management**

Fu et al., 2019

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- Definition/overview
 - Lymphedema is chronic and presents as progressive swelling due to the failure of drainage within the lymphatic system. This can occur secondary to the disease or as a result after surgery or radiation of the lymph system (Fu et al., 2019).
- Patients at risk include those who have had surgery that involved removal of lymph nodes (i.e., breast surgery); tumor burden around lymphatic chains; infection involving the lymph system; or radiation.
- The affected limb can develop cellulitis due to the accumulation of the fluid. Lymphedema that is chronic, results in inflammation that manifest as fibrosis and sclerosis.
- Symptoms include heaviness of the limb, discomfort, low range of motion and stasis ulcers. Body image and quality of life issues are very common.
- Assessment:
 - Evaluate for history of diseases and treatments, which might be etiology for lymphedema, along with duration, symptoms and complications of this disorder.

- Determine changes in activity related to lymphedema.
- Evaluate for depression and decreased self-esteem.
- Physical exam should include:
 - Inspection of size, skin integrity and presence of any infection.
 - Palpate for pulse.
 - Determine motor and sensory functions.
 - Measure extremities.

- Treatment (Fu et al., 2019; Mahler & Verney, 2016):
 - Consultation with a lymphedema therapist (physiotherapist [OT/PT], nurse, kinesiologist) is vital, as they are familiar with skin care, massage/manual lymph drainage, compression dressings, pneumatic compression.
 - Elevate affected limb.
 - Education of patient and family to monitor skin integrity, avoid heavy lifting, no hot tubs.
 - Blood should not be withdrawn from the affected extremity. Exercise should be increased as tolerated.
 - Emphasize meticulous skin care to prevent cellulitis (use of emollients and water-based moisturizers are recommended).

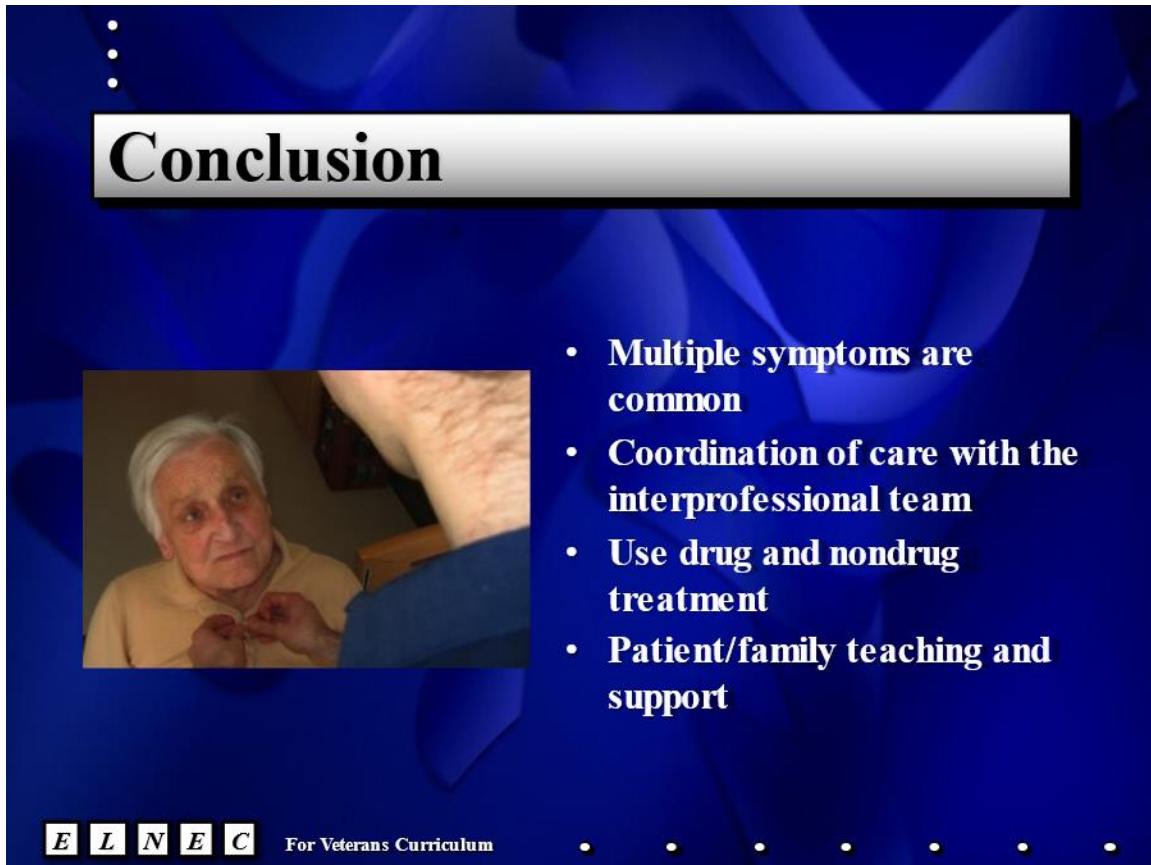
One Final Reminder: Be Aware of Symptoms of Urgent Syndromes

- Superior vena cava obstructions
- Pleural effusion
- Pericardial effusion
- Hemoptysis
- Spinal cord compression
- Hypercalcemia

Robertson & Gershon, 2019

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- Be more familiar with the syndromes, as they occur frequently at the end of life. Keen assessment and management are crucial.
- For more information on these syndromes, refer to Robertson, Q., & Gershon, K. (2019). Urgent syndromes at the end-of-life. In: B.R. Ferrell and J. Paice (Eds.) *Oxford textbook of palliative nursing*. 5th edition (Chapter 26). New York, NY: Oxford University Press.



Conclusion

- **Multiple symptoms are common**
- **Coordination of care with the interprofessional team**
- **Use drug and nondrug treatment**
- **Patient/family teaching and support**

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- Symptom management challenges all healthcare professionals. There are many symptoms common to serious illnesses and conditions.
- Nurses must work closely with the entire team to coordinate optimum pharmacologic and non-drug treatments.
- Patients and families require extensive teaching and support for symptom management.

***This Concludes Section V**