



# E L N E C

*End-of-Life Nursing Education Consortium*

Core Curriculum

## Module 2 Pain Management

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### Pain Is...

- **“An unpleasant sensory and emotional experience associated with actual or potential tissue damage”**  
[www.iasp-pain.org/terms](http://www.iasp-pain.org/terms)
- **“What the person says it is...”**  
Pasero & McCaffery, 2011

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2

## Current Status of Pain

- **Cancer patients at EOL – 54% have pain**
- **AIDS with prognosis <6 months – intense pain**

Paice, 2010; Selwyn, 2007

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3

## Current Status of Pain (cont.)

- **Less research conducted in other chronic illness**
- **Inadequate pain relief hastens death**
- **Pain relief is essential at end of life**

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4

## Barriers to Pain Relief

- Importance of discussing barriers
- Specific barriers
  - Professionals
  - Health care systems
  - Patients/families

Miaskowski et al, 2005; Paice, 2010;  
Pasero & McCaffery, 2011

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5

## Pain Assessment

- Pain history
- Pain terms
- Acute vs. chronic

Fink & Gates, 2010

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6

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## Pain History

- **Location**
- **Intensity**
- **Quality**
- **Temporal pattern**



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7

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## Pain History

- **Aggravating/alleviating factors**
- **Medication history (recent and distant)**
- **Meaning of pain**
- **Cultural factors**

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8

## Physical Examination

- Observation
- Palpation
- Auscultation
- Percussion



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9

## Neurological Examination

- Vibration
- Proprioception
- Pain
- Temperature
- Reflexes

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10

## Laboratory/Diagnostic Evaluation

- Rule out potentially treatable causes
- Need for additional laboratory or radiographic evaluation is directed by the goals of care

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11

## Reassess

- Changes in pain
- Assess pain relief
- Make pain visible



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12

## Common Syndromes at the End of Life

- **Nociceptive**
  - Somatic
  - Visceral
- **Neuropathic**
  - Post herpetic neuropathy
  - Diabetic neuropathy
  - HIV associated neuropathy
  - Chemotherapy related neuropathy

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13

## Pain vs. Suffering at the End of Life

- **Existential distress**
- **Dimensions of QOL**
- **Requires interdisciplinary approach**

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14

## Patients at Risk for Undertreatment

- Children and older adults
- Non-verbal or cognitively impaired
- Patients who deny pain
- Non-English speaking
- Different cultures
- History of addictive disease

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15

## Communicating Assessment Findings

- Communication improves pain management
- Describe intensity, limitations, and response to treatments
- Documentation

Gordon et al., 2005; Pasero & McCaffery, 2011

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16

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## Definitions

- **Tolerance**
- **Physiologic dependence**
- **Psychological dependence**
- **Double effect**

AAPM, APS & ASAM, 2001

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17

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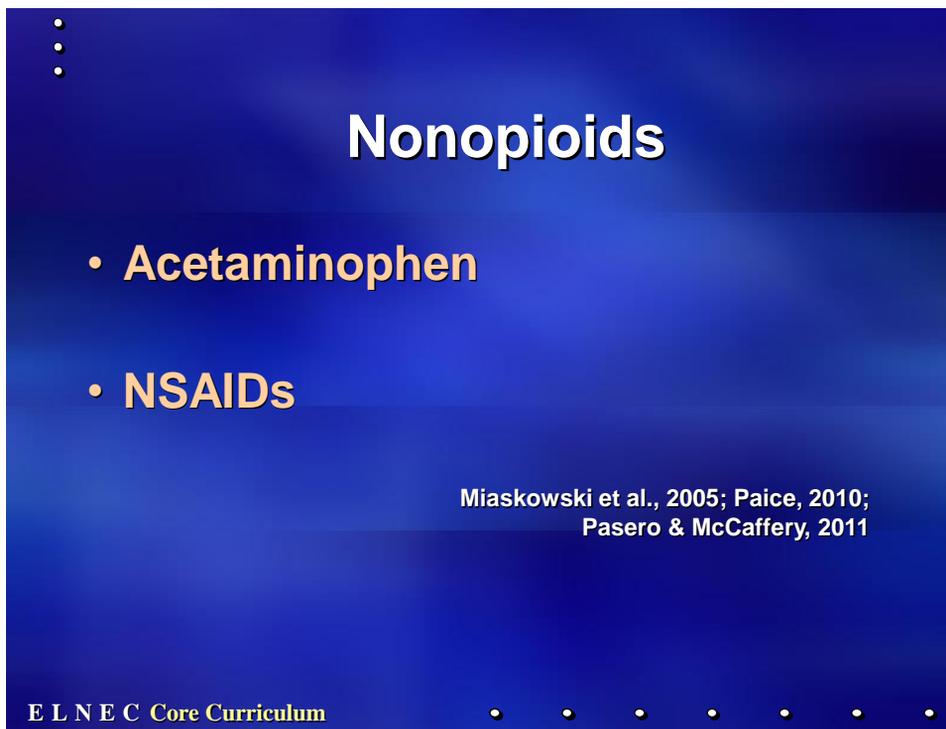
## Pharmacological Therapies

- **Nonopioids**
- **Opioids**
- **Adjuvants**

APS, 2008;  
Pasero & McCaffery, 2011

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18



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# Nonopioids

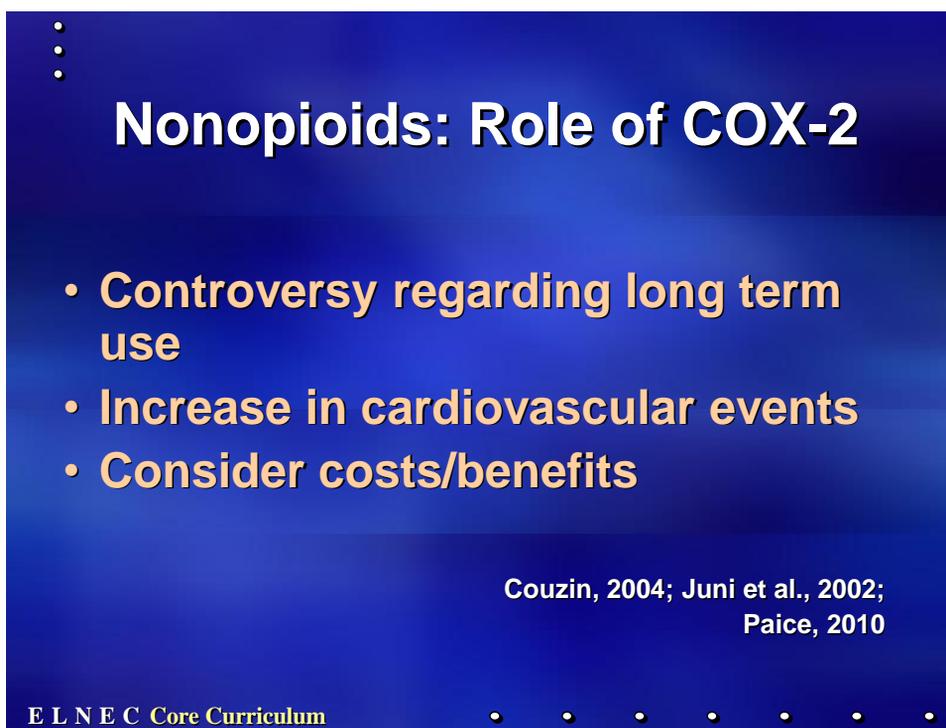
- Acetaminophen
- NSAIDs

Miaskowski et al., 2005; Paice, 2010;  
Pasero & McCaffery, 2011

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19



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# Nonopioids: Role of COX-2

- Controversy regarding long term use
- Increase in cardiovascular events
- Consider costs/benefits

Couzin, 2004; Juni et al., 2002;  
Paice, 2010

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20

# Nonopioids: NSAIDs Adverse Effects



The slide features three illustrations on a dark blue background. On the left is a brown stomach. In the center is a red blood vessel with a white clot and a blue medical device. On the right is a cross-section of a kidney with red and blue internal structures.

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21

# Opioids

- Mechanisms of action
- Adverse effects

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22

## Opioids: Adverse Effects

- **Respiratory depression**
- **Constipation**
- **Sedation**
- **Urinary retention**
- **Nausea/vomiting**
- **Pruritus**

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23

## Adjuvant Analgesics

- **Antidepressants**
- **Anticonvulsants**
- **Local anesthetics**
- **Corticosteroids**

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24

## Antidepressants

- Sedation
- Administer at bedtime
- Side effects
- Newer agents

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25

## Anticonvulsants

- Older agents have significant adverse effects
- Gabapentin (Neurontin<sup>®</sup>)
  - Dose: 100 mg po TID and titrate gradually
- Pregabalin (Lyrica<sup>®</sup>)
  - Dose: 50 mg TID x 1 wk then 100 mg TID
- Lamotrigine, levetiracetam, oxcarbazepine and others

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26

## Local Anesthetics

- **Topical: Lidocaine gel, EMLA® and Lidoderm®**
- **Intravenous**
- **Spinal**

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27

## Corticosteroids

- **Dexamethasone has least mineralocorticoid effect**
- **Psychosis**
- **Proximal muscle wasting**
- **Administer - q am**

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28

## Routes of Administration

- Oral
- Mucosal
- Rectal
- Transdermal
- Topical



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29

## Routes of Administration (cont.)

- Parenteral
  - Intravenous
  - Subcutaneous
  - Intramuscular
- Nasal



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30

## Routes of Administration (cont.)

- **Spinal**
  - Epidural
  - Intrathecal



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31

## Nebulized and Sublingual Opioids

- **Nebulized opioids provide no advantage over other routes of administration for dyspnea or pain**
- **Sublingual morphine – only 18% absorbed through sublingual mucosa**
- **Sublingual absorption of other agents:**
  - Fentanyl            51%
  - Buprenorphine    55%
  - Methadone        34%
  - Oxycodone        16%

Coyne, 2003; Dudgeon, 2010;  
Gordon & Weissman, 2005;  
Jennings et al., 2001

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32

## WHO 3 Step Analgesic Ladder Pain Management

- Step 1: Mild pain
- Step 2: Moderate pain
- Step 3: Severe pain



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## Principles: Prevent and Treat Side Effects

- Anticipate
- Prevent
- Treat

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34

## Principles: Long Acting Medications

- Sustained release medications
- Immediate release for breakthrough pain
- Distinguish types of breakthrough pain

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35

## Principles of Equianalgesia

- Determine equal doses when changing drugs or routes of administration
- Reduce by 25% when changing drugs
- Use of morphine equivalents

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36



## Principles: Use of Opioid Rotation

- Use when one opioid is ineffective even with adequate titration
- Use when adverse effects are unmanageable

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37



## Other Issues

- Polypharmacy
- Cost
- Compounding

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38

## Cancer Therapies to Relieve Pain

- Radiation
- Surgery
- Chemotherapy
- Hormonal therapy
- Others

Chevlen, 2007; Janjan et al., 2003;  
Podnos et al., 2007; Rutter & Weissman, 2004

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39

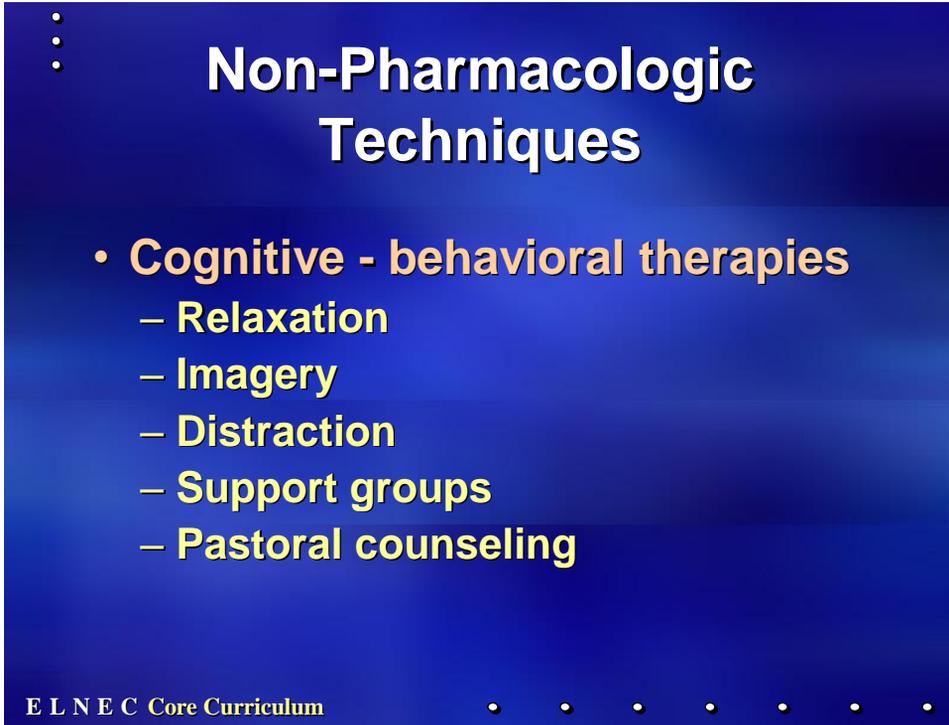
## Interventional Therapies

- Neurolytic blocks
- Neuroablative procedures
- Vertebroplasty/kyphoplasty

Furlan et al., 2001;  
Mathis et al., 2001; Swarm et al., 2010

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40



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## Non-Pharmacologic Techniques

- **Cognitive - behavioral therapies**
  - Relaxation
  - Imagery
  - Distraction
  - Support groups
  - Pastoral counseling

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41



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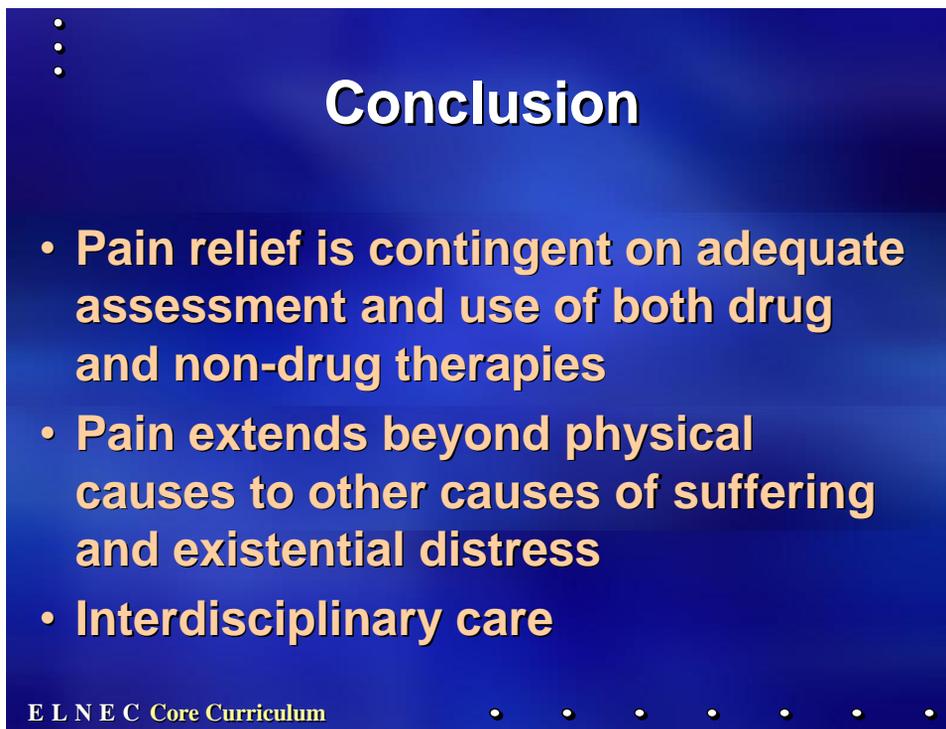
## Non-Pharmacologic Techniques (cont.)

- **Physical measures (heat, cold, massage)**
- **Complementary therapies**

Ernst, 2004; Kravitz & Berenson, 2010;  
Kravits & Berenson, 2010;  
Smith et al., 2002

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42



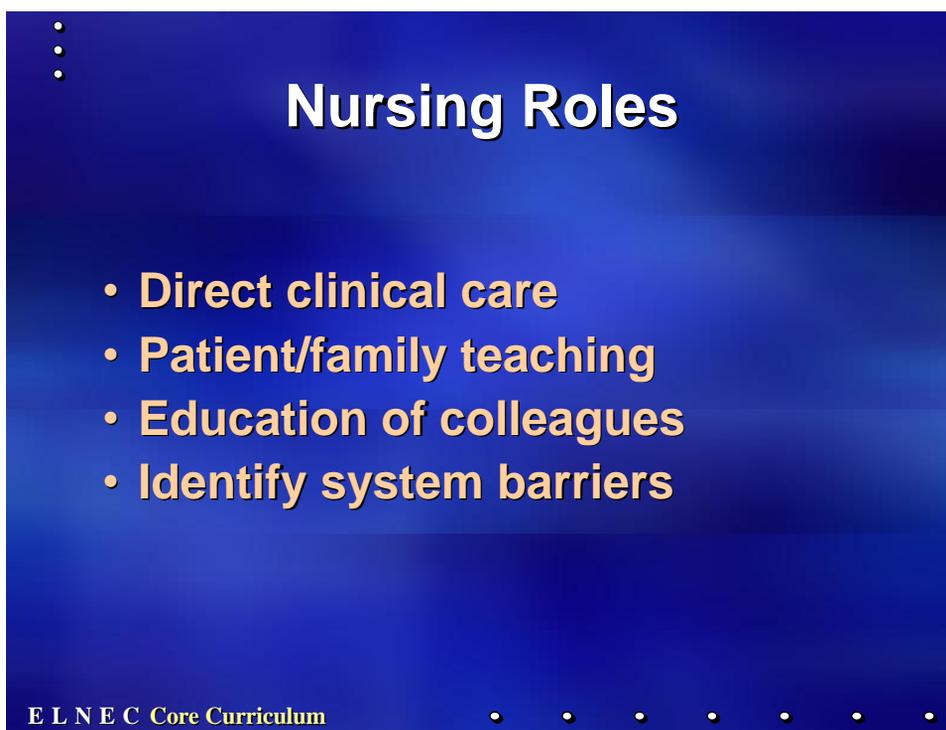
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## Conclusion

- **Pain relief is contingent on adequate assessment and use of both drug and non-drug therapies**
- **Pain extends beyond physical causes to other causes of suffering and existential distress**
- **Interdisciplinary care**

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43



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## Nursing Roles

- **Direct clinical care**
- **Patient/family teaching**
- **Education of colleagues**
- **Identify system barriers**

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44



45