

Project: Ghana Emergency Medicine Collaborative

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Administration and Management of Pain Medications

Ghana Emergency Nurses Collaborative

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February 18, 2013

Critical Outcome

- Emergency nurse assesses, identifies, and manages acute and chronic pain within the emergency setting

Specific Outcomes

- Define the types of pain and complications of pain management
- Delineate pain physiology and mechanisms of addressing pain with medications
- Define the general assessment of the patient in pain
- Delineate the nursing process and role in the management of the patient with acute and chronic pain
- Apply the nursing process when analyzing a case scenario/patient simulation
- Predict differential diagnosis when presented with specific information regarding the history of a patient
- List and know the common drugs used in the emergency department to manage the painful conditions and conduct procedural sedation
- Consider age-specific factors
- Discuss medico-legal aspects of care of patients with pain related to emergencies

Review of Classification

- Physiological
 - Nociceptive
 - Neuropathic
 - Psychological
- Clinical
 - Acute
 - Chronic
 - Malignant

Review of Pathophysiology

- Pain
 - Involves four physiological processes:
 - Transduction
 - Transmission
 - Modulation
 - Perception

Review Question

- What is pain????
 - *Pain is whatever the experiencing person says it is, existing whenever he or she says it does!*

Focus on Acute and Chronic Pain

- ACUTE PAIN

- Precipitating event with well-defined pattern of onset
- Warning signal that tissue damage has occurred
- Evidence of tissue damage
- Short-term (6 months or less), then pain resolves and normal function returns

- CHRONIC PAIN

- Occurrence may not be associated with an identified injury or event
- No useful purpose after diagnosis is made
- May not have identifiable cause
- Long-term (longer than 6 months and possibly permanent)

Acute Pain

- Signs and symptoms reflect hyperactivity of the autonomic nervous system (increased heart rate, blood pressure, respiratory rate, diaphoresis)
- Behavioral manifestations (groaning, grimacing, guarding, wincing, anxiety)
- Client reports pain
- Pain usually responds to commonly prescribed medical and nursing interventions

Chronic Pain

- Signs and symptoms of acute pain no longer present, indicating adaptation of the autonomic nervous system
- Behavioral manifestations include a blank or normal facial expression
- Client may not mention pain unless asked
- May be difficult to treat, unresponsive to conventional modalities, and ultimately disabling

Planning & Implementation

1. Determine priorities of care

- a) Maintain ABC
- b) Provide supplemental oxygen
- c) IV access
- d) Obtain and set up equipment
- e) Prepare/assist with medical interventions
 - Treat underlying conditions
 - Cardiac & pulse oximetry monitoring as needed
- f) Provide measures for pain relief
 - Consider non-pharmacological interventions like positioning (splints, support with pillows, sling) & cutaneous stimulation (ice, heat, massage)
- g) Administer pharmacological therapy as ordered

Planning & Implementation

2. Relieve anxiety and apprehension
3. Allow significant others to remain with patient if supportive
4. Educate patient and significant others
 - About the efficacy and safety of opioid analgesics

Intervention: Administer Pharmacological Therapy as Ordered

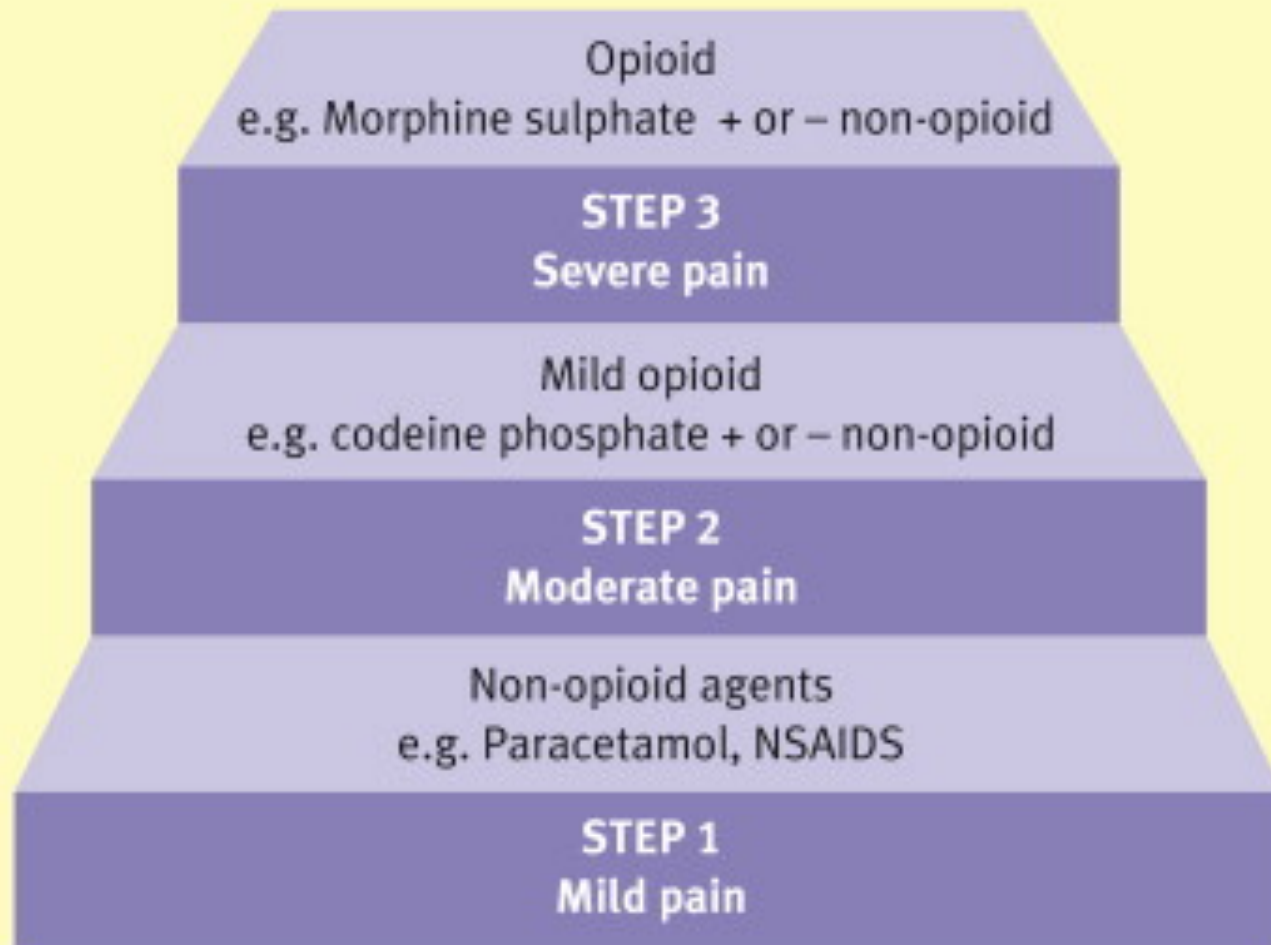
The World Health Organization (WHO) recommends the use of the analgesic ladder as a systematic plan for the use of analgesic medications.

Step 1: Use nonopioid analgesics for mild pain

Step 2: Adds a mild opioid for moderate pain

Step 3: Use of stronger opioids when pain is moderate to severe

WHO Analgesic Ladder



Expected Outcomes for the Client With Acute Pain

- Provide relief using pharmacological and nonpharmacological interventions to achieve:
 - Decreased anxiety
 - Client verbalization of planned analgesic interventions
 - Decreased verbal complaints and behaviors that indicate unrelieved pain
 - Decreased need for analgesic interventions
 - Tissue heals

Expected Outcomes for the Client with Chronic Pain

- Set realistic goals with client and family
- Reduce pain to a level that the client can tolerate
- Actively involve the client in the treatment regimen
- Maximize the client's quality of life

Interventions to Manage Acute Pain

- Selecting analgesics
- Titrating the dosage
- Choosing a schedule
- Identifying the appropriate route
- Treating procedural pain
- Planning across the continuum of care

****Acute pain from surgery, diagnostic procedures, and trauma is underestimated and undertreated!**

Interventions to Manage Chronic Pain

- Developing a therapeutic relationship
- Partnering with the client and family
- Involving a multidisciplinary team
- Using multiple modes of therapy

Evaluation and Ongoing Monitoring

1. *Continuously monitor and treat as indicated*
 - Level of consciousness
 - Hemodynamic status
 - Breath sounds and pulse oximetry
 - Cardiac rate and rhythm
 - Pain relief
2. *Monitor patient response, outcomes, and modify nursing care plan as appropriate*
3. *If positive patient outcomes are not demonstrated, reevaluate assessment and/or plan of care*

Documentation

- **Before and after** intervention document:
 - Vital signs
 - Temperature
 - Heart Rate
 - Pulse
 - *Respiration Rate*
 - Pain Score
 - Patient response

Age Related Concerns

1. Pediatrics: Growth or Development Related

- Children's pain tolerance increases with age
- Children's developmental level influences pain behavior
- Localization of pain begins during infancy
- Preschoolers can anticipate pain
- School age children can verbalize pain and describe location and intensity

Pediatrics “Pearls”

- Children may not admit to pain to avoid an “injection”
- Distraction techniques can aid in keeping the child’s mind occupied and away from pain
- Opioids are no more dangerous for children than for adults

Age Related Concerns

2. Geriatrics: Age related

- Pain is not a normal aging consequence
- Chronic pain alters the person's quality of life
- Chronic pain may be caused by a myriad of conditions

Interventions to Manage Pain in the Older Adult

- The use of analgesics in general is not impaired by normal aging, but the older adult is at greater risk for analgesic toxicity
 - Physiological variables cause slower metabolism of analgesics
 - Nonopioid analgesics, acetaminophen, and NSAIDs are used to provide relief for mild-to-moderate pain at a decreased dosage
 - Opioids can be used for moderate-to-severe pain but are more likely to cause side effects

Geriatric “Pearls”

- Adequate treatment may require deviation from clinical pathways
- *Administer pain relieving medications at lower dose and increase slowly*

Barriers to Effective Pain Management

1. Attitudes of emergency health care providers
2. Hidden biases and misconceptions about pain
3. Inadequate pain assessment
4. Failure to accept patients' reports of pain
5. Withholding pain-relieving medication
6. Exaggerated fears of addiction
7. Poor communication

Improving Pain Management

- Changing attitudes
- Continuing education related to the realities and myths of pain management
- Evidence-based practice
- Cultural sensitivity

Focus on Procedural Sedation

- The Joint Commission (TJC) has standard definitions for four levels of sedation and anesthesia:
 1. Minimal sedation
 2. Moderate sedation/analgesia
 3. Deep sedation/analgesia (patient not easily aroused)
 4. Anesthesia (requires assisted ventilation)

Preparing for Procedural Sedation

- *Indications*
 - Suturing
 - Fracture reduction
 - Abscess incision and drainage
 - Joint relocation

Preprocedural Evaluation

- Assessment
 - Medical history
 - Major organ systems
 - Anesthesia and sedation
 - Medications
 - Allergies
 - Most recent oral intake
- Focused Physical Exam
 - Heart
 - Lungs
 - Airway
 - Laboratory testing as indicated based on underlying condition

Patient Counseling

- Patient should be counseled on the risks, benefits, limitations, and alternatives of the procedural sedation and analgesia.

Preprocedural Fasting

- For elective procedures, should be sufficient time allowed for gastric emptying (1-2 hours)
- For urgent or emergent situations, the potential for pulmonary aspiration should be considered when determining target level of sedation, delay of procedure, or protection of the trachea by intubation

Monitoring

- The following should be recorded before, during, and after the procedure
 - Pulse oximetry
 - Response to verbal commands
 - Pulmonary ventilation (observation, auscultation)
 - Blood pressure and heart rate at 5-15 minute intervals unless contraindicated
 - ECG for patients with significant cardiovascular disease

Emergency Equipment that should be available during procedural sedation

- Suction
- Airway equipment
- Intravenous equipment
- Pharmacologic antagonists
- Basic resuscitative medications

Potential Dangers During Procedural Sedation

- Aspiration
- Respiratory Depression
- Cardiovascular Complications
- Inadequate Sedation
- Nausea & Vomiting
- Patient dissatisfaction

Procedural Sedation

- *Review of Procedure:*
 - Baseline vital signs and level of consciousness
 - Explain procedure to patient and family
 - Obtain venous access
 - Equipment: cardiac monitor if indicated, blood pressure monitor, pulse oximeter, suction, oxygen equipment, endotracheal intubation equipment, IV supplies, reversal agents
 - Assist with medications
 - Maintain continuous monitoring during procedure
 - Document vital signs, level of consciousness, and cardiopulmonary status every 5-15 minutes (depending on level of sedation and institutional policies)
 - Post-procedure discharge criteria

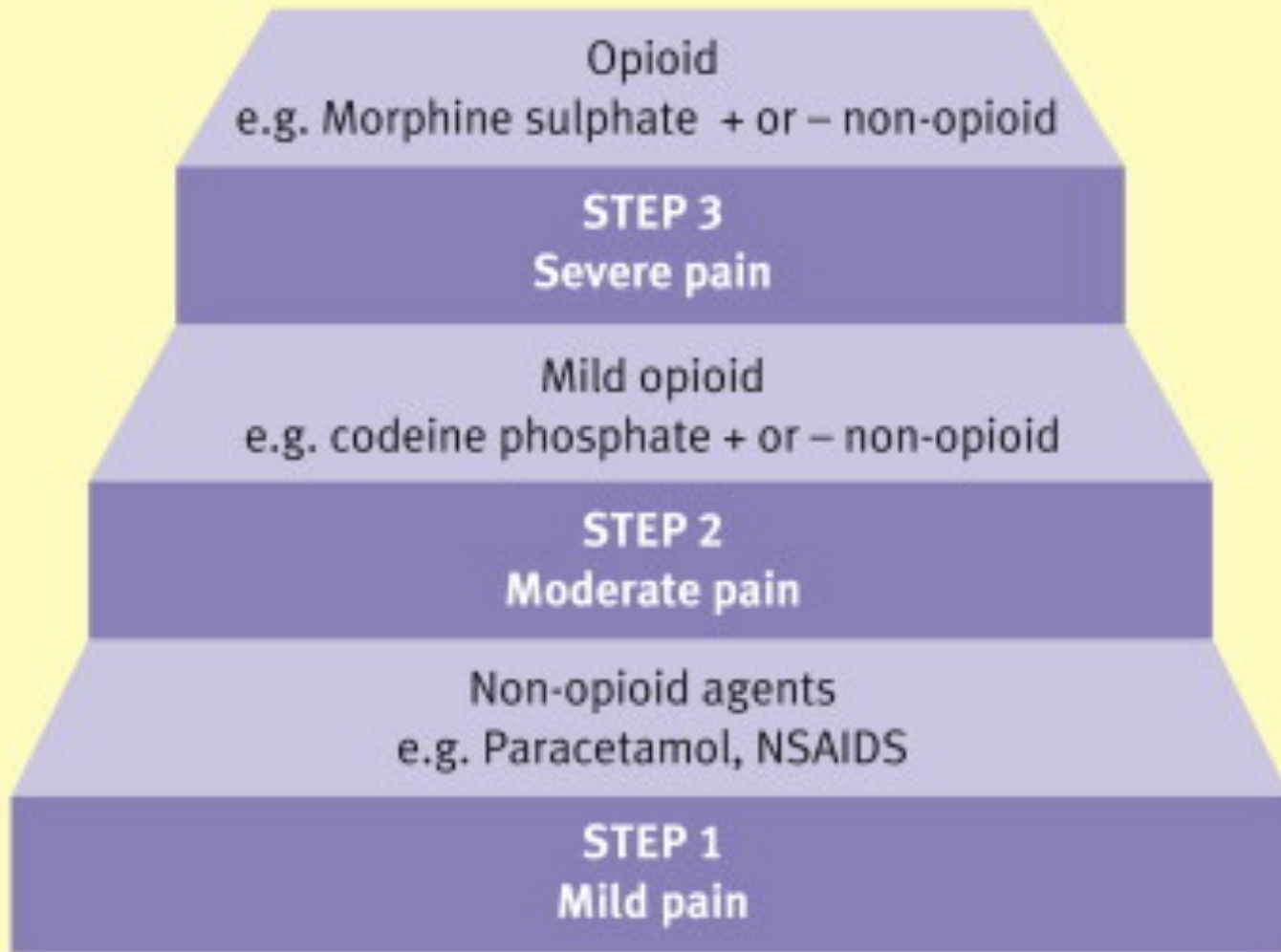
Discharge Criteria

- Usually discharged after 2 hours (if planned outpatient procedure); otherwise would depend on patient's condition and institutional policies
- For out-patient discharge, want patient to meet the following criteria:
 - Alert and oriented
 - Vital signs stable
 - Baseline ambulation status achieved
 - Pain and nausea well controlled

Review Question

- Describe the three steps of the WHO Analgesic Ladder.

Answer



Review Question

- What must be considered when treating the older adult with pain?

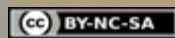
Answer

- Physiological variables cause slow metabolism of analgesics
- Nonopioid analgesics, acetaminophen, and NSAIDs are used to provide relief for mild-to-moderate pain at a decreased dosage
- Opioids can be used for moderate-to-severe pain but are more likely to cause side effects
- *Administer pain relieving medications at lower dose and increase slowly*

Case Review

- Discuss a nursing care plan and appropriate pain management for the following scenario:
 - A 40 year old woman appears at the A & E with complaints of pain in her ankle. She suffered a trauma to her ankle in which she fell down in a hole. Her examination reveals a fracture and she will need casting but in the meantime she is need of pain management. Her temp is 37.5°C, Pulse is 105, Respirations are 22, B/P is 116/70.
 - **Assessment:** General assessment for pain would include what indicators?
 - **Nursing diagnosis:** What do you think is going on?
 - **Plan/Intervention:** What type of nursing plan would you implement? What type of pain medications should be initiated?
 - **Evaluation:** How often would you follow-up with patient? What risks/ complications would you be looking for?

Questions



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