



Pain Assessment and  
Management Initiative

# Basics of Pain Assessment and Management

Updated May 20, 2019



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- ***Suggested Citation:*** Basic of Pain Assessment and Management. University of Florida College of Medicine - Jacksonville, Department of Emergency Medicine. Pain Assessment and Management Initiative (PAMI 3.0): Multimodal Approaches to Improve Pain Outcomes and Reduce Opioid Risk, [*date retrieved*]. Retrieved from <http://pami.emergency.med.jax.ufl.edu/>.

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# Learning Objectives

1. Understand the importance of pain recognition, assessment and re-assessment.
2. Discuss the multi-factorial determinants of pain.
3. Identify the different classifications of pain and how this impacts treatment selection.
4. Discuss the key elements of performing an accurate pain history and examination.
5. Understand the different types of pain scales.
6. Describe the consequences of untreated pain.
7. Recognize patient safety issues regarding pain management, discharge planning, and transitions of care.



# Consider these case scenarios throughout the module

A 54 year-old non-English speaking male is brought to the ED by EMS after sustaining a motorcycle collision approximately 20 minutes prior to arrival; he is calm and reports mild pain. Simultaneously, a 23 year-old female that was involved in the same accident is brought to the ED. She was the restrained backseat passenger in a pick-up truck; reports “pain all over” and is crying hysterically.

A 3 year-old right-handed male presents with his caregiver who reports that the child has complained of pain in his right arm since yesterday. When questioned the child denies pain but cries and pulls away when any part of the right upper extremity is touched. He has no obvious deformity or swelling to either arm.

A 53 year-old male with chronic back pain underwent knee replacement one week ago. He presents to his primary care doctor complaining of persistent post-op pain. The patient reports his prescribed opioid is not controlling his pain. The pain is limiting his ability to perform his daily activities of living.

# Module Outline

1. Introduction to Pain Management
2. Defining and Classifying Pain
3. How to Perform a Pain Assessment
  - a. Components of the Pain History
  - b. Pain Focused Physical Exam
4. Pain Assessment Scales
  - a. Adult Pain Assessment Scales
  - b. Pediatric Pain Assessment Scales
5. Management of Pain
  - a. General Principles of Pain Management and Stepwise Approach
  - b. Re-assessment of Pain
  - c. Consequences of Unrelieved Pain
6. Discharge Planning and Transitions of Care
7. Patient Safety, Regulatory and Legal Aspects of Pain Management
8. Case Scenario Discussion
9. Summary

# 1. Introduction to Pain Management



# Why is Pain Management Important?

- Pain is a complex and common complaint that leads to frequent access of the US healthcare system.
- Chronic pain alone affects more Americans than diabetes, cancer, and heart disease combined, with an estimated annual cost of \$600 billion.
- Pain is often under recognized leading to inadequate management and numerous patient safety concerns, particularly in special populations and minority groups.
- Untreated acute pain may lead to adverse sequelae.
- With the recent opioid epidemic and advances in pain research, there is a renewed emphasis on early multimodal pain management, nonpharmacologic options and nonopioid alternatives.

# General Pain Management Challenges

## (part 1)

- Failure to recognize or differentiate pain from anxiety
- Lack of education for healthcare providers, especially regarding nonpharmacologic modalities.
- Safety concerns, fear of patient addiction or prescription legal repercussions
- Lack of pre-existing physician-patient relationships i.e. knowledge of past medical history
- Inadequate discharge pain plans resulting in return visits or admissions
- Pressure to see patients rapidly, especially those perceived to be more critical, which can hinder time for adequate pain assessments and re-assessments

# General Pain Management Challenges (part 2)

- Physiologically unstable patients are least likely to receive a standardized pain assessment and to receive pain medications
- Outpatient settings may have limited time to perform full pain assessments or to evaluate for psychosocial contributors to pain (e.g. financial stress, impaired sleep, anxiety, etc.)
- Stereotypes towards patients with chronic pain being drug-seekers
- Analgesic shortages leading to medication errors and changing protocols
- And many more!



# Opioid Safety Across the Continuum of Care

## ...continues to be a *top patient* safety concern

### ECRI Institute's Top 10 Patient Safety Concerns for 2017

- 1 Information management in EHRs
- 2 Unrecognized patient deterioration
- 3 Implementation and use of clinical decision support
- 4 Test result reporting and follow-up
- 5 Antimicrobial stewardship
- 6 Patient identification
- 7 Opioid administration and monitoring in acute care
- 8 Behavioral health issues in non-behavioral-health settings
- 9 Management of new oral anticoagulants
- 10 Inadequate organization systems or processes to improve safety and quality

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### ECRI Institute's Top 10 Patient Safety Concerns for 2018

- 1 Diagnostic errors
- 2 Opioid safety across the continuum of care
- 3 Internal care coordination
- 4 Workarounds
- 5 Incorporating health IT into patient safety programs
- 6 Management of behavioral health needs in acute care settings
- 7 All-hazards emergency preparedness
- 8 Device cleaning, disinfection, and sterilization
- 9 Patient engagement and health literacy
- 10 Leadership engagement in patient safety

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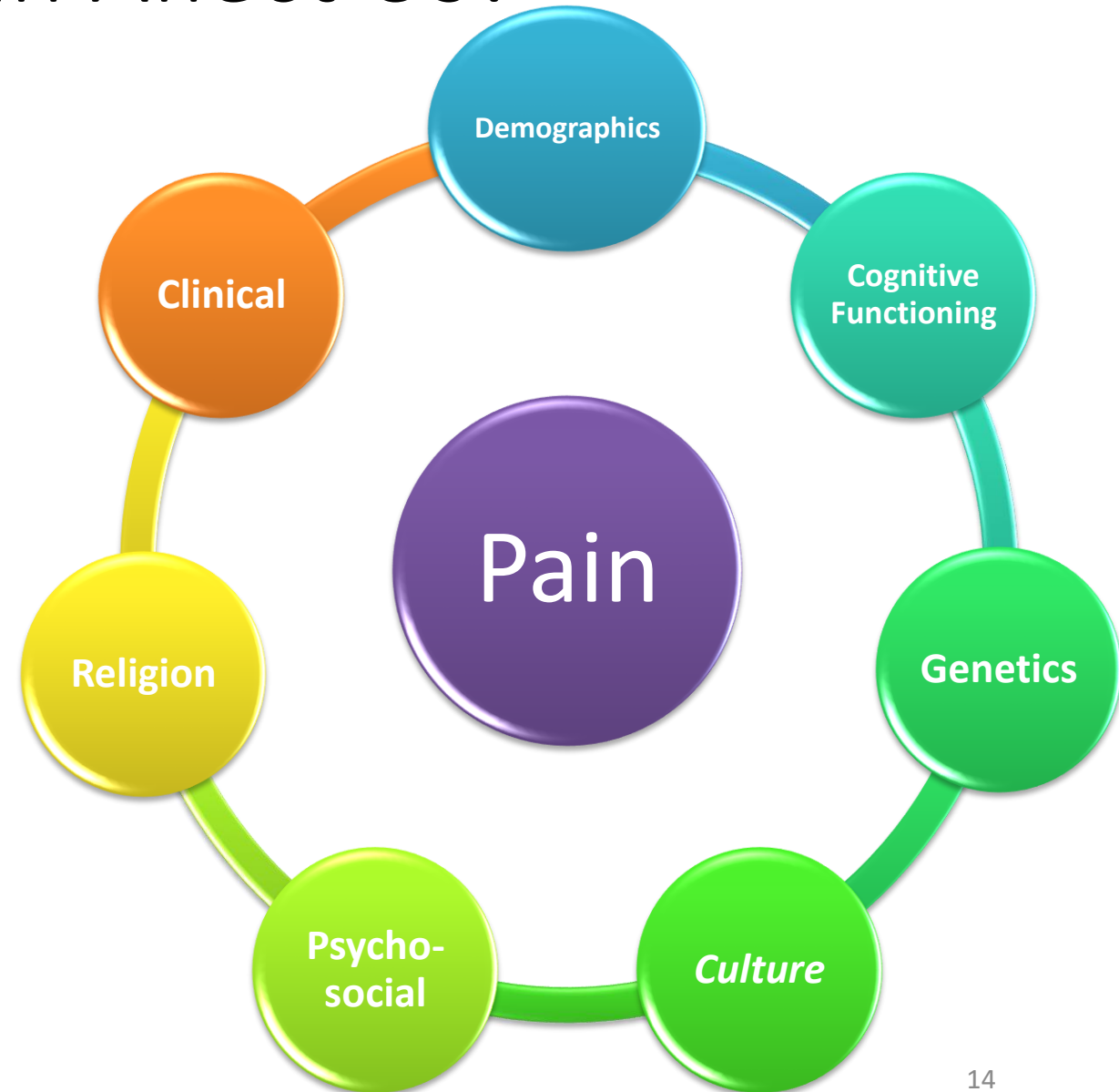
# Challenges Summary- Keeping Balance

- Healthcare providers face the dilemma of balancing safe opioid/analgesic prescribing and high-risk patient recognition with appropriate pain management strategies for those in significant pain while being mindful of different types of pain, individual pain factors and comorbidities.



# How Does Pain Affect Us?

- Pain is **multidimensional**, affecting people physically, psychologically, socially and spiritually.
- Patients' responses to pain may be related to:
  - genetics, age, gender, ethnicity, socioeconomic and psychiatric factors, catastrophizing, culture, religion, previous experiences, patient perceptions and expectations, etc.



# Patient Perceptions

- A patient's response to prescribed pain treatment can be influenced by factors **unrelated** to actual pharmacological treatments.

These factors include:

- Perceived **effective communication** with physicians and nurses by the patient
- Perceived **responsiveness** by the treating team
- Perceived **empathy** by the treating team



# Factors Affecting Patient Response To Painful Stimuli

- Age, Gender, Ethnicity
- Socioeconomic and Psychological factors
- Catastrophizing
- Culture and Religion
- Genetics
- Previous experiences
- Patient perceptions
- Patient expectations





# Patient Response to Pain and Management:

## Age and Gender

- Demographics such as **age, gender, race and ethnicity** have all been reported to influence pain perception.
- Studies on the influences of gender and age have had variable results.
- Overall, patients who identify as female display more sensitivity than males towards most painful conditions. Females also are believed to express their pain more frequently and effectively than males.
- Studies have shown different interpretations by observers for the same facial expressions depending on patient gender.
  - This behavior could explain why patients are managed differently by providers when presenting with the same injury or painful condition.



# Patient Response to Pain and Management:

## Ethnicity

- Ethnicity is associated with pain intensity and interference.
  - One study found African Americans to report higher rates of pain and interference with daily activities such as sleep.



### Tips

Consider the impact of age, gender and ethnicity on pain assessment and management but beware of labeling or stereotyping- treat the **individual** patient!

# Patient Response to Pain and Management:

## Culture and Religion

- Culture and Religion/Personal Values/Coping Mechanisms
  - How patients cope with pain can be influenced by their existing social support system.
  - Those with strong cultural and religious ties tend to have stronger support mechanisms for dealing with their pain.
  - Variations in cultural norms can influence how a patient expresses their pain and how they want their pain to be managed.



# Patient Response to Pain and Management:

## Socioeconomic and Psychological Factors

- Health disparities research indicates that patients living in **rural** areas and who are of lower **socioeconomic status** tend to report higher levels of chronic pain, pain related disability, and depression. **Depression** and pain often co-exist (30-60% of pain patients also report depression).
- **Previous pain experiences** can alter activity within certain brain regions responsible for pain processing resulting in persistent pain.
- Additionally, **mood disorders and other psychiatric disorders** have been linked to the development of chronic pain. This co-existence has important clinical and financial implications. These patients often report more pain, greater functional disability, worse clinical prognosis, and accrue higher healthcare costs.

# Patient Response to Pain and Management:

## Pain Catastrophizing

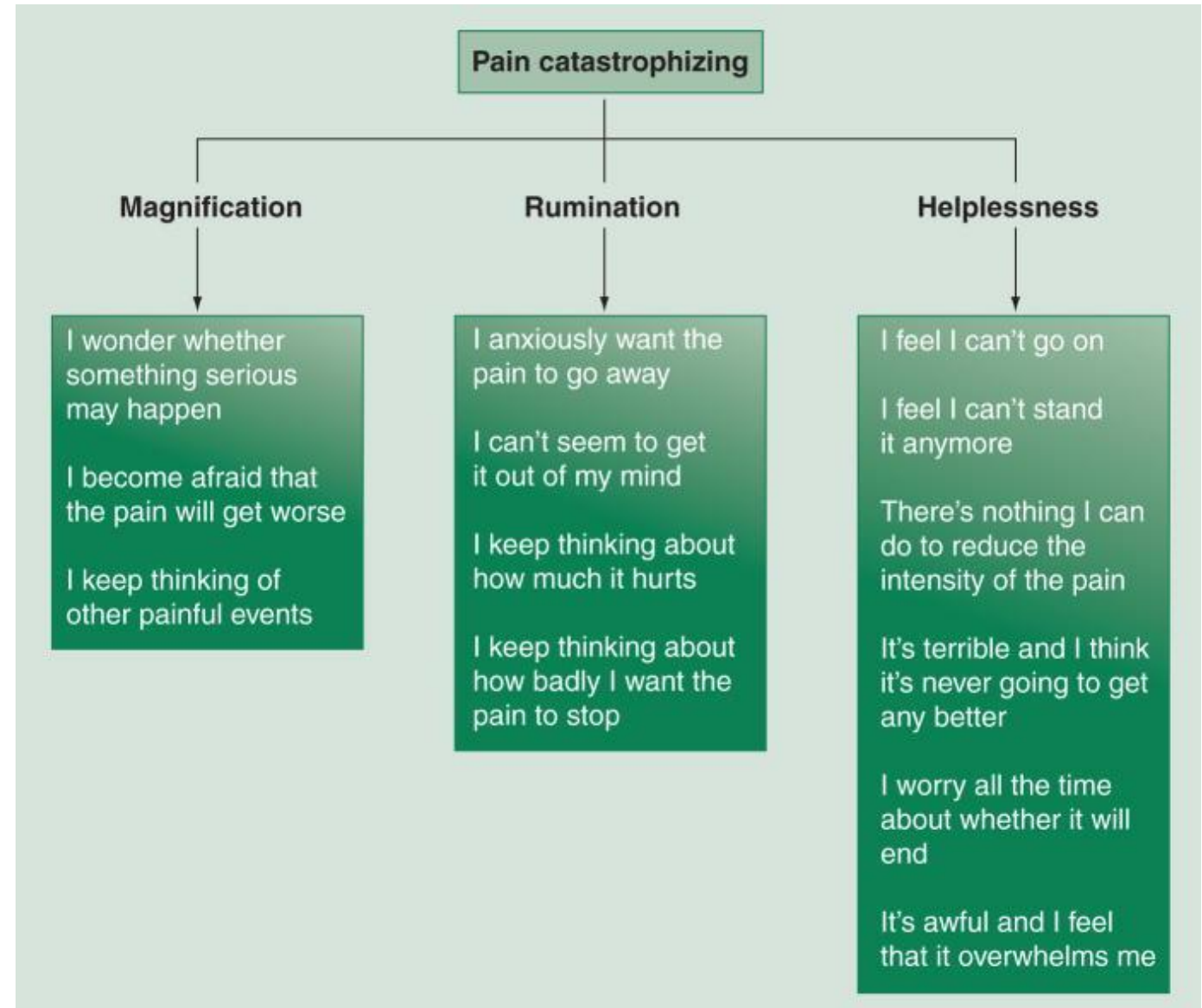
- **Pain catastrophizing** is an exaggerative cognitive response to an anticipated or actual painful stimulus and affects how individuals experience and express pain.
- People who catastrophize tend to magnify their pain, ruminate about their pain, and feel helpless in managing their pain.
- Pain catastrophizing shares similarities with depression and anxiety. It has been associated with pain-related outcomes such as pain severity, activity interference and disability, depression, changes in social support networks, more frequent healthcare visits, and opioid usage.





## Examples Of Catastrophizing

- **Magnification:** the response that symptoms that can be or are greater than expected. Ex: *"I'm afraid that something serious might happen"*
- **Rumination:** when an individual focuses repeatedly on attributes of an event that evoke a negative emotional response. Ex: *"I can't stop thinking about how much it hurts"*
- **Helplessness:** the belief that there is nothing that anyone can do to improve a bad situation. Ex: *"There is nothing I can do to reduce the intensity of my pain"*.





# Patient Response to Pain:

## Genetics

- Genetic polymorphisms play an integral role in how patients respond to painful stimuli and treatment.
- For example, populations within certain ethnic groups are known to carry genetic mutations of the liver CYP450 enzymes responsible for drug metabolism.
  - Some patients are “**ultra-rapid metabolizers**” of certain drugs such as codeine. This means they convert codeine to morphine more rapidly than other patients, resulting in potential supra-therapeutic dosing.
  - Some patients are “**slow metabolizers**” and do not efficiently metabolize codeine, and thus never achieve therapeutic levels.
- Caucasian and African American populations have approximately equal proportions of fast and slow metabolizers, whereas nearly 90% of certain Asian groups are fast acetylators.

## 2. Defining and Classifying Pain

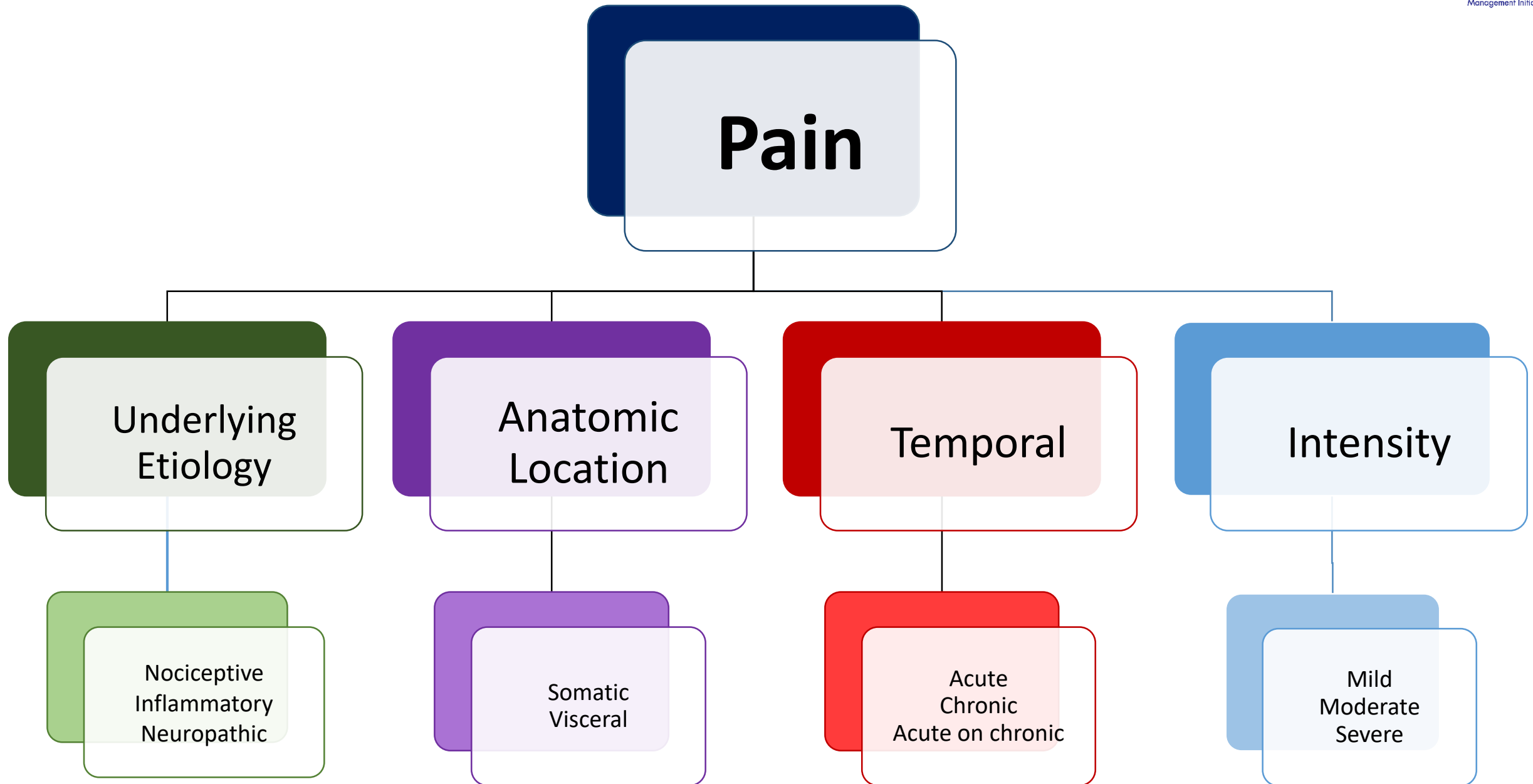




# Classification of Pain

- Determining the context, history of present illness and type of pain is complex and time consuming but is essential to developing a successful management plan.
- Pain may be classified by **underlying etiology**, **anatomic location**, **temporal nature**, and **intensity**.
  - **Underlying etiology** refers to the source of the experienced pain.
  - **Anatomic location** refers to the site of pain within the body
  - **Temporal nature** refers to the duration of the pain.
  - **Intensity** refers to the degree or level of the pain experience.

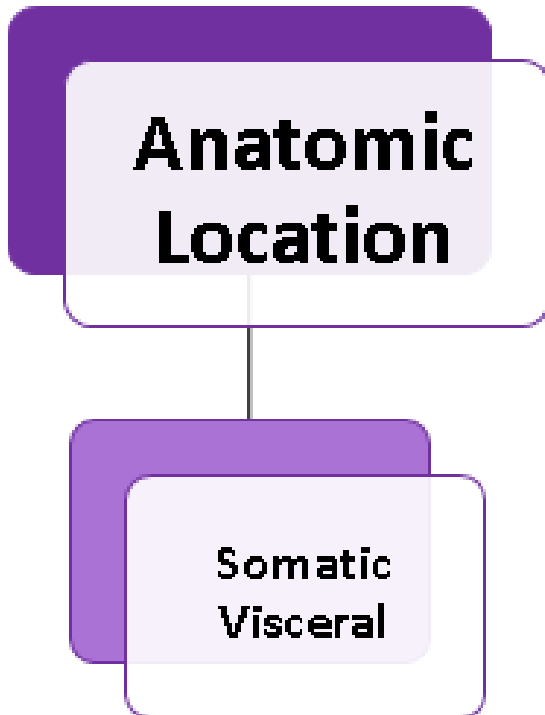




## Underlying Etiology

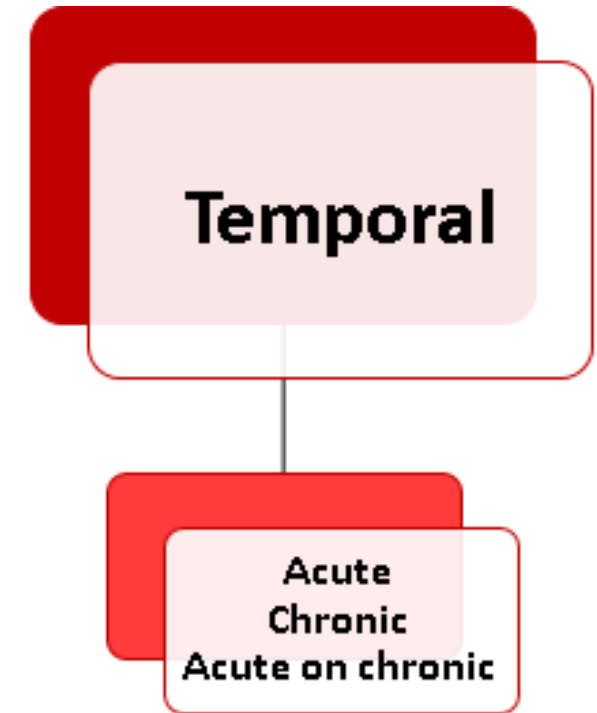
Nociceptive  
Inflammatory  
Neuropathic

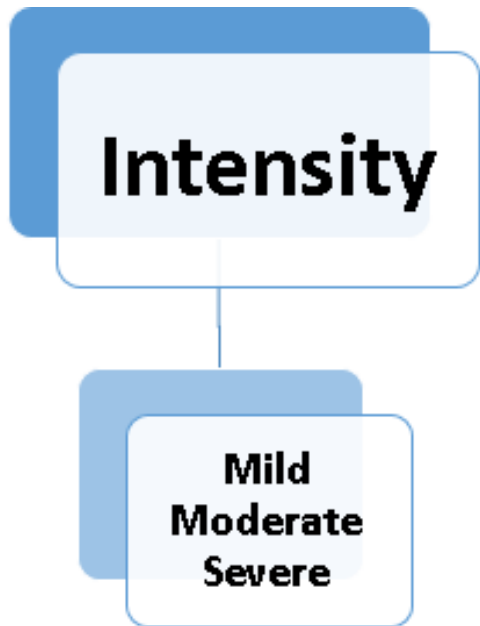
- **Nociceptive Pain** is the result of direct tissue injury from a noxious stimulus. Nociceptive pain can be further classified as somatic or visceral pain.
  - Examples include bone fracture, new surgical incision, and acute burn injury.
- **Inflammatory Pain** is the result of released inflammatory mediators that control nociceptive input and are released at sites of tissue inflammation.
  - Examples include appendicitis, rheumatoid arthritis, inflammatory bowel disease, and late stage burn healing.
- **Neuropathic Pain** is the result of injury to nerves leading to an alteration in sensory transmission. It can be central or peripheral in nature.
  - Examples include diabetic peripheral neuropathic pain, postherpetic neuralgia, chemotherapy induced pain, and radiculopathy.



- **Somatic Pain**, also known as musculoskeletal pain, is pain that occurs from injury to skin, muscle, bone, joint, connective tissue and deep tissues. Typically pain is well-localized, sharp and worse with movement.
  - Examples include lacerations, fractures, and pelvic pain.
- **Visceral Pain** is internal pain and typically occurs from internal organs or tissues that support them. Pain is usually poorly localized and described as vague deep aches, colicky, and/or cramping.
  - Examples include appendicitis, peptic ulcer disease, diverticulitis, endometriosis, and ureteral stones.

- **Acute pain** is defined as lasting less than 3 months and is a neurophysiological response to noxious injury that should resolve with normal healing.
  - Examples include post-operative pain, fractured bones, appendicitis, crush injury to finger, labor and delivery pain.
- **Chronic pain** is defined as lasting more than 3 months or beyond the expected course of an acute disease or after complete tissue healing. Chronic pain extends beyond the time of normal wound healing with the development of multiple neurophysiological changes in the central nervous system.
  - Examples include low back pain, neck pain, and chronic pancreatitis.
- **Acute on Chronic pain** refers to times of acute exacerbations of a chronic painful syndrome or new acute pain in a person suffering from a chronic condition.
  - Examples include a sickle cell exacerbation in a patient with sickle cell disease or an abscess in a patient with sickle cell disease.





**Pain Intensity** is determined by pain assessment scores in combination with history and physical exam. Pain intensity is subjective and may vary from one patient to another. Pain Scales are used to assess and quantify the intensity of a patients pain. *Remember that each scale has its' own scoring range and levels for mild, moderate or severe pain intensity.*

- Case scenario 1 is an example of the challenges involved in determining intensity where one patient has severe injuries but rates their pain as moderate compared to the patient with minor injuries who complains of severe “pain all over.”

Pain intensity can range from:	Scores typically range from:
Mild	1-4
Moderate	5-7
Severe	8-10

**Table 1. Types of pain, mechanism, and clinical examples**

TYPES OF PAIN	MECHANISM	CINICAL EXAMPLES	PHARMACOLOGICAL TREATMENT OPTIONS*
<b>UNDERLYING ETIOLOGY</b>			
Nociceptive	The result of direct tissue injury from a noxious stimuli.	Bone fracture, fresh surgical incision, and fresh burn injury.	May include both opiate and non-opiate medications depending on injury.
Inflammatory	The result of released inflammatory mediators that control nociceptive input.	Late stages of burn healing, neuritis, and arthritis	Anti-inflammatory agents
Neuropathic	The result of direct injury to nerves leading to an alteration in sensory transmission.	Diabetic neuropathy, peripheral neuropathic pain, and post-herpetic neuralgia.	Tricyclic, selective norepinephrine reuptake inhibitors, gabapentinoids, or antidepressants
Idiopathic	Unknown	Chronic back pain without preceding trauma or obvious inciting event.	May be difficult to adequately address pain since underlying etiology is unknown, especially in emergency settings.
<b>ANATOMIC LOCATION</b>			
Somatic	A-delta-fiber activity located in peripheral tissues	Superficial lacerations, superficial burns, superficial abscess	Topical and/or local anesthetics, opiates, non-opiates
Visceral	C fiber activity located in deeper tissues such as organs	Uterine fibroid pain, pyelonephritis, biliary colic	Opiates
<b>TEMPORAL NATURE</b>			
Acute	A neurophysiological response to noxious injury that should resolve with normal wound healing.	Acute fracture, acute knee sprain	Opiate, non-opiates
Chronic	Pain that extends beyond the time for normal wound healing with resultant development of multiple neurophysiological changes	Chronic low back pain, fibromyalgia, arthritis	Depends on the nature of the pain. Please refer to the module on chronic pain for more detailed information.
Acute-on-chronic	An acute exacerbation of a chronic pain syndrome	Sickle cell disease, cancer, rheumatoid arthritis, acute injury in chronic pain patient	

**\*Nonpharmacologic management options should be considered at any time for any type of pain**

For more information on [Nonpharmacologic Pain Management](#), please refer to the pdf or learning module

# 3. How to Perform a Pain Assessment

- a. Components of the Pain History
- b. Pain Focused Physical Exam





## a. Components of the Pain History

# Pain History Elements and Questions

**The patient's history and physical exam can be an invaluable source when it comes to determining the proper diagnosis and course of treatment.**

Essential elements should include a detailed history of the current pain and, for those that suffer from chronic pain, their previous pain history.

## Basics

1. Onset of recent pain
2. Aggravating and alleviating factors
3. Quality of pain experience
4. Location of pain
5. Severity of pain
6. Circumstances of original pain

## Functionality

1. How is pain affecting current level of function?
2. Is patient working?
3. How is patient coping with pain?

# Pain History Elements and Questions

## Co-morbidities

1. Significant past medical and/or surgical history
2. Chronic diseases (obesity, hypertension, diabetes, etc. )
3. Psychosocial and/or psychiatric co-morbidities
4. Family history of substance abuse

## Psychosocial and psychiatric

1. Depression
2. Suicidal ideation or past suicide attempts
3. Past psychiatric admissions
4. Physical, sexual and/or emotional abuse.



Consider using the mnemonics **OPQRST**, **SOCRATES** and **QISS TAPED** to assess pain.

# Pain History Elements and Questions

## Essential elements of Pain History – Basics

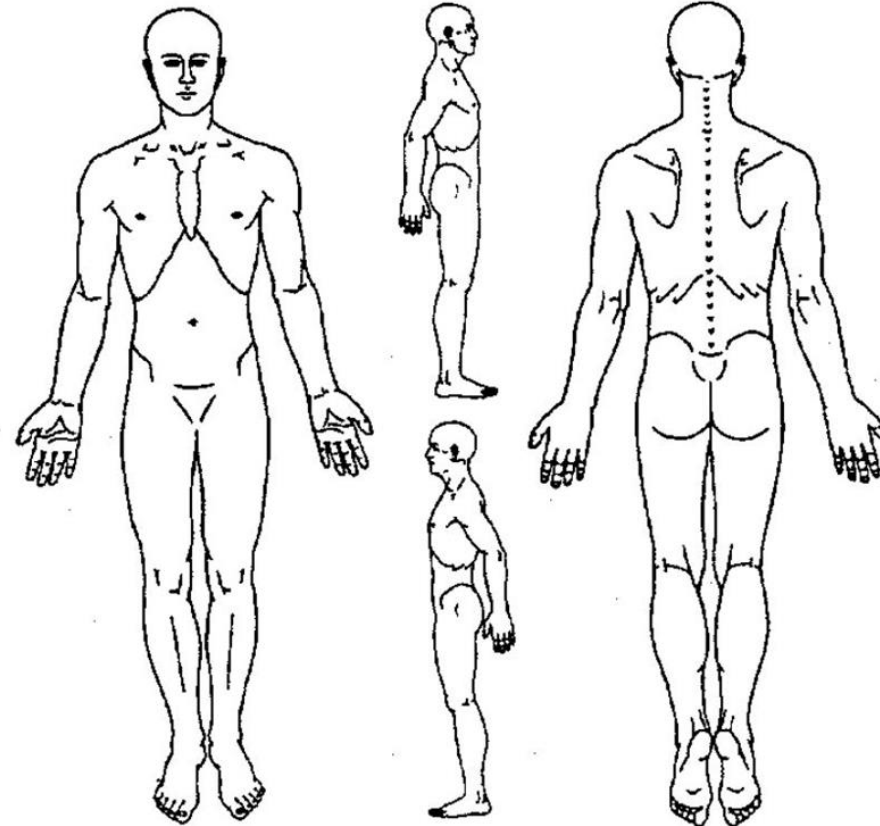
Basic Elements	Description
1. Onset of recent pain	<ul style="list-style-type: none"> <li>When did the pain start and what was the patient doing when it started</li> <li>Was the onset sudden, gradual, or an exacerbation of a chronic problem</li> </ul>
2. Aggravating and alleviating factors	<ul style="list-style-type: none"> <li>What makes the pain better and what makes it worse?</li> <li>How does physical activity or position affect pain?</li> <li>Do any nonpharmacological therapies or medications relieve the pain?</li> </ul>
3. Quality of pain experience	<ul style="list-style-type: none"> <li>Ask the patient “Can you describe the pain?” Ideally, this will elicit descriptions of the patient's pain: whether it is sharp, dull, crushing, burning, tearing, or some other feeling, along with the pattern, such as intermittent, constant, or throbbing.</li> </ul>
4. Location of pain	<ul style="list-style-type: none"> <li>Where pain is on the body and whether it radiates (extends) or moves to any other area?</li> </ul>
5. Severity of pain	<ul style="list-style-type: none"> <li>Ask the patient to describe the intensity of pain at baseline and during acute exacerbations, typically done using a pain scale</li> </ul>
6. Circumstances of original pain	<ul style="list-style-type: none"> <li>Identify when the pain started, under what circumstances, duration, onset (sudden/gradual), frequency, whether acute/chronic.</li> </ul>

# Consider using a patient pain diagram at check-in or triage (if stable)

## PAIN DIAGRAM

On the diagrams below mark where you are experiencing pain, right now. Use the letters below to indicate the type and location of your sensations.

Key: A – ACHE  
P – PINS & NEEDLES  
B – BURNING  
S – STABBING  
N – NUMBNESS  
O – OTHER



# Pain History Elements and Questions

## Mnemonics for obtaining pain history

### OPQRST

- **O**nset of event
- **P**rovocation and palliation of symptoms
- **Q**uality
- **R**egion and radiation
- **S**everity
- **T**iming

### SOCRATES

- **S**ite
- **O**nset
- **C**haracter
- **R**adiation
- **A**ssociations
- **T**ime course
- **E**xacerbating/Relieving factors
- **S**everity

### QISS TAPED

- **Q**uality
- **I**mpact
- **S**ite
- **S**everity
- **T**emporal
- **A**ggravating and alleviating
- **P**ast response and preferences
- **E**xpectations and goals
- **D**iagnostics and physical exam

# OPQRST

<b>O</b>	<b>Onset of event</b>	<ul style="list-style-type: none"> <li>What was the patient doing when it started? Were they active, inactive, and or stressed?</li> <li>Did that specific activity prompt or start the onset of pain?</li> <li>Was onset of pain sudden, gradual or part of an ongoing chronic problem</li> </ul>
<b>P</b>	<b>Provocation and palliation of symptoms</b>	<ul style="list-style-type: none"> <li>Is the pain better or worse with: <ul style="list-style-type: none"> <li><b>Activity.</b> Does walking, standing, lifting, twisting, reading, etc... have any effect of the pain?</li> <li><b>Position.</b> Which position causes or relieves pain? Provide examples to the patient-- sitting, standing, supine, lateral, etc...</li> <li><b>Adjuvant.</b> Which type of medication relieves the pain (Tylenol, Ibuprofen, etc.. )? Does the use of heat or ice packs alleviate pain? What type of alternative therapy (massage, acupuncture) have you used before?</li> <li>Does any movement, pressure (such as palpation) or other external factor make the problem better or worse? This can also include whether the symptoms relieve with rest.</li> </ul> </li> </ul>
<b>Q</b>	<b>Quality</b>	<ul style="list-style-type: none"> <li>Ask the patient to describe the quality of pain – is it throbbing, dull, aching, burning, sharp, crushing, shooting, etc...?</li> <li>Questions can be open ended "Can you describe it for me?" or leading</li> <li>Ideally, this will elicit descriptions of the patient's pain: whether it is sharp, dull, crushing, burning, tearing, or some other feeling, along with the pattern, such as intermittent, constant, or throbbing.</li> </ul>

# OPQRST

R	Region and radiation	<ul style="list-style-type: none"> <li>Where pain is on the body and whether it radiates (extends) or moves to any other area? Referred pain can provide clues to underlying medical causes.</li> <li><i>Location</i>: body diagrams may help patients illustrate the distribution of their pain.</li> <li><i>Dermatome map</i> – may help determine the relationship between sensory location of pain and spinal nerve segment (see figure next slide).</li> <li><i>Referred vs Localized</i>: <b>referred pain</b> (also known as reflective pain) is feeling pain in a location other than the original site of the painful stimulus. <b>Localized pain</b> is when pain typically stays in one location and does not spread.</li> </ul>
S	Severity	<ul style="list-style-type: none"> <li>Ask the patient to describe the intensity of pain at baseline and during acute exacerbations.</li> <li>The pain score (usually on a scale of 0 to 10) where 0 is no pain and 10 is the worst possible pain. This can be comparative (such as "... compared to the worst pain you have ever experienced") or imaginative ("... compared to having your arm ripped off by a bear"). If the pain is compared to a prior event, the nature of that event may be a follow-up question.</li> </ul>
T	Timing	<ul style="list-style-type: none"> <li>Identify when the pain started, under what circumstances, duration, onset (sudden/gradual), frequency, whether acute/chronic.</li> <li>How long the condition has been going on and how it has changed since onset (better, worse, different symptoms)?</li> <li>Whether it has ever happened before, and how it may have changed since onset, and when the pain stopped if it is no longer currently being felt?</li> </ul>



# SOCRATES

<b>S</b>	Site	Where is the pain? Or the maximal site of the pain.
<b>O</b>	Onset	When did the pain start, and was it sudden or gradual? Include also whether if it is progressive or regressive.
<b>C</b>	Character	What is the pain like? An <u>ache</u> ? Stabbing?
<b>R</b>	Radiation	Does the pain radiate anywhere? (See also <u>Radiation</u> .)
<b>A</b>	Associations	Any other signs or <u>symptoms</u> associated with the pain?
<b>T</b>	Time course	Does the pain follow any pattern?
<b>E</b>	Exacerbating/Relieving factors	Does anything change the pain?
<b>S</b>	Severity	How bad is the pain?

# QISS TAPED

Q	Quality	What were your first symptoms? What words would you use to describe the pain? (achy, sharp, burning, squeezing, dull, icy, etc...) Besides sensations you consider to be "pain," are there other unusual sensations, such as numbness?
I	Impact	How does the pain affect you? How does the pain impact your sleep, activity, mood, appetite (other - work, relationships, exercise, etc.) What does the pain prevent you from doing? (Depression screen) Do you feel sad or blue? Do you cry often? Is there loss of interest in life? Decreased or increased appetite? (Anxiety screen) Do you feel stressed or nervous? Have you been particularly anxious about anything? Do you startle easily?
S	Site	Show me where you feel the pain. Can you put your finger/hand on it? Or show me on a body map? Does the pain move/radiate anywhere? Has the location changed over time?
S	Severity	On a 0-10 scale with 0 = no pain and 10 = the worst pain imaginable, how much pain are you in right now? What is the least pain you have had in the past (24 hours, one week, month)? What is the worst pain you have had in the past (24 hours, one week, month)? How often are you in severe pain? (hours in a day, days a week you have pain)?

# QISS TAPED

<b>T</b>	Temporal Characteristics	When did the pain start? Was it sudden? Gradual? Was there a clear triggering event? Is the pain constant or intermittent? Does it come spontaneously or is it provoked? Is there a predictable pattern? (e.g., always worst in the morning or in the evening? Does it suddenly flare up?)
<b>A</b>	Aggravating and Alleviating Factors	What makes the pain better? What makes the pain worse? When do you get the best relief? How much relief do you get? How long does it last?
<b>P</b>	Past Response, Preferences	How have you managed your pain in the past? (Ask about both drug and non-drug methods) What helped? What did not help? (Be specific about drug trials - how much and how long?) What medications have you tried? Was the dose increased until you had pain relief or side effects? How long did you take the drug? Are there any pain medicines that have caused you an allergic or other bad reaction? How do you feel about taking medications? Have you tried physical or occupational therapy? What was done? Was it helpful? Have you tried spinal or other injections for pain treatment? What was done? Was it helpful?
<b>E</b>	Expectations, Goals, Meaning	What do you think is causing the pain? How may we help you? What do you think we should do to treat your pain? What do you hope the treatment will accomplish? What do you want to do that the pain keeps you from doing? What are you most afraid of? (Uncovers specific fears, such as fear of cancer, which should be acknowledged and addressed.)
<b>D</b>	Diagnostics & Physical Exam	Examine and inspect site, Perform a systems assessment and examination as indicated Review imaging, laboratory and/or other test results as indicated

# Pain History Elements and Questions

## Medical and Surgical History

Medical or surgical issues related to patient's pain or treatment may include:

<b>Cancer</b>	<ul style="list-style-type: none"> <li>• Different types of pain may be caused by multiple etiologies: <ul style="list-style-type: none"> <li>• <u>Tumors</u>: involvement of bone, vessels, nerves, body organs</li> <li>• <u>Diagnostic procedures</u>: may be painful such as biopsies, lumbar punctures, or venipuncture</li> <li>• <u>Treatment</u>: radiation, chemotherapy, or surgical excision</li> </ul> </li> </ul>
<b>Recent Surgery</b>	<ul style="list-style-type: none"> <li>• Incisional pain</li> <li>• Complications such as anastomotic leak, bleeding, compartment syndrome, etc..</li> </ul>
<b>Other Conditions</b>	<ul style="list-style-type: none"> <li>• Diabetes which can lead to neuropathic pain</li> <li>• Herpes zoster which can lead to radicular pain</li> <li>• Migraines which can lead to mixed etiology</li> </ul>



# Patient Factors to Consider When Assessing Pain

**Assessing** pain in certain special populations can be challenging and requires multiple considerations such as:

- Age
- Level of development
- Communication skills/language
- Cognitive skills
- Prior pain experiences
- Associated beliefs



# Medical and Pain Communication Cards

Communication cards are used to assist healthcare providers in communicating with scared, nonverbal or non-English speaking patients and families!

- History taking and assessment
- Pain, mechanism of injury
- Explanation of treatments
- Procedures and testing
- Discharge instructions

**Communication Cards**  
for Children & Adults

Communication cards are used to assist EMS, emergency triage and other healthcare providers in communicating with scared, nonverbal or non-English speaking patients and families!

- History taking and assessment
- Pain, mechanism of injury
- Explanation of treatments
- Procedures and testing
- Discharge instructions

*Spanish version now available*

The 18 cards use emojis to explain a particular topic or aspect of medical

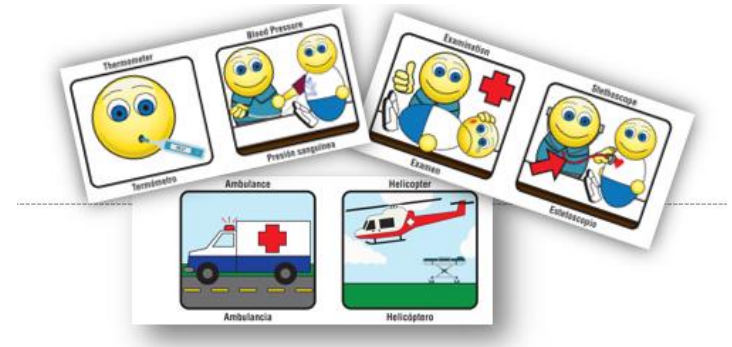
Great for EMS, clinical settings and hospitals!

Cards are attached on a ring clip and made of durable material that can be cleaned and used with a dry erase marker

For more information visit:  
<http://pami-emergency.med.jax.ufl.edu/>  
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Funding provided by Florida Medical Malpractice Joint Underwriting Association, University of Florida COF Jacksonville Dept. of Emergency Medicine (PAMI & PECU), Children's Medical Center Hospital & Florida EMB-C Program

Jan 2019



Download and print your own set here  
[Medical Communication Cards](http://Medical Communication Cards) or scan the QR code

## b. Pain Focused Physical Exam

# Pain Assessment: Physical Examination

During initial pain assessment, physical examination of the patient should be conducted.

You should be examining the patient's:	Examples
<b>Appearance</b>	obese, emaciated, histrionic, flat affect
<b>Posture</b>	splinting, scoliosis, kyphosis
<b>Gait</b>	antalgic, hemiparetic, using assisting devices
<b>Facial Expression</b>	grimacing, tense, diaphoretic, anxious
<b>Vital Signs</b>	sympathetic overactivity, temperature asymmetries



# Pain Assessment: Physical Examination

You should be examining the <b>Painful Area(s)</b> :	Example
<b>Inspection</b>	<ul style="list-style-type: none"> <li>• Skin: color changes, hair loss, flushing, goose bumps, sweating</li> <li>• Muscle: atrophy or spasm</li> <li>• Edema</li> </ul>
<b>Palpation</b>	<ul style="list-style-type: none"> <li>• Demarcation of the painful area</li> <li>• Detection of changes in pain intensity within the area</li> <li>• Trigger points</li> <li>• Changes in sensory or pain processing</li> </ul>
<b>Musculoskeletal system</b>	<ul style="list-style-type: none"> <li>• Flaccidity: extreme weakness (may be from paralysis)</li> <li>• Abnormal movements: neurologic damage or impaired sense of proprioception, reduced sense of light touch</li> <li>• Limit range of motion: disc disease, arthritis, pain</li> </ul>
<b>Neurological exam</b>	<ul style="list-style-type: none"> <li>• Cranial nerve exam</li> <li>• Motor strength</li> <li>• Spinal nerve function: deep tendon reflexes, pinprick, proprioception</li> <li>• Coordination: Romberg's test, toe-to-heel, finger-to-nose, rapid hand movement</li> </ul>

# Pain Assessment: Physical Examination

## 1. Note the patient's vital signs as they can provide a clue to pain severity

- An elevation in blood pressure and heart rate can occur secondary to pain and inadequate control of pain.
- However, normal vital signs should not negate a patient's reported pain. Always review vital signs.

# Pain Assessment: Physical Examination

## 2. Take cues from your patient

- Patients will often assume a position of comfort.
- Observe vocalizations (crying child), facial expressions, body posture, movements, and motor response (decreased movement).
- Observe physiological clues such as skin flushing, diaphoresis, and/or vital sign abnormalities.
- Consider the patient's baseline mental status. Are they able to effectively communicate their pain to you?
- Perform a focused exam taking into account the information given by the patient. The exam should also assess the patient's functionality.
- A sensory exam should always be conducted in patients with pain especially neuropathic pain.

# 4. Pain Assessment Scales

- a. Adult Pain Assessment Scales
- b. Pediatric Pain Assessment Scales

# Pain Assessment Scales

**As a healthcare provider, it is essential to know and understand which pain assessment tools and scales are used in your institution.**

- Pain scales are typically applied to all pain types. However, chronic and cancer-related pain may require more complex evaluation tools.
- Although pain is multi-factorial, the majority of pain scales assess pain **intensity**.
- There are different validated pain scales available for a variety of patient populations such as:
  - ✓ **adults**
  - ✓ **pediatrics**
  - ✓ **elderly**
  - ✓ **non-verbal**
- Not all pain scales are equal and one should be chosen based on the patient.
  - For example, it would be inappropriate to use a pain scale intended for adults, such as the Defense and Veterans Pain Rating Scale 2.0, when assessing a three-year-old child.



# Pain Assessment Using Pain Scales

- Once a pain scale is chosen, interpretation of the score is not so straightforward.
  - There is no defined score or threshold for what score correlates to actual pain and to what intensity the pain is felt by the patient.
  - Using the same scale for two different patients doesn't allow for comparison of pain intensity. For example, a patient with a score of 9 on the Numerical Rating Scale may not necessarily be experiencing more pain than one with a score of 6 on the same scale.
  - Because of the subjective nature of standardized pain scales, patient functionality may be the best indicator of pain intensity.
- Pain scales **DO NOT** take into account patient genetics, past experiences, comorbidities, or other pain influencing factors.
- In patients with preexisting pain it is important to determine their baseline pain level.

**Tips**

*Select a scale and be consistent!*

# Pain Assessment Using Pain Scales

- When using a pain scale in a verbal adult it is best to ground the scale by providing context for the patient.
  - For example, ask the patient at which level on the pain scale would they take an over-the-counter pain medication? For those with chronic pain, what level of pain do they experience every day?
- Surrogate reporting (pain history obtained from a parent, caregiver or loved one) of a non-verbal patient's pain and behavior or activity changes can also aid in pain assessment.
  - Try to determine who really provides the patient's daily care and is knowledgeable about their history, disease, and past pain management or experiences.



Don't forget that abnormal vital signs **or** a change in vital signs can also serve as an indirect marker for pain.

# Examples of Pain Scales

Pain Scales*	Verbal, Alert and Oriented	Non-verbal, GCS <15 or Cognitive Impairment
<u>Adult</u>	<ol style="list-style-type: none"> <li>1. Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)</li> <li>2. Visual Analogue Scale (VAS)</li> <li>3. Defense and Veterans Pain Rating Scale (DVPRS 2.0)</li> </ol>	<ol style="list-style-type: none"> <li>1. Adult Non-Verbal Pain Scale (NVPS)</li> <li>2. Assessment of Discomfort in Dementia (ADD)</li> <li>3. Behavioral Pain Scale (BPS)</li> <li>4. Critical-Care Observation Tool (CPOT)</li> </ol>
<u>Pediatric</u>	<p><b>3 yo and older</b></p> <ol style="list-style-type: none"> <li>1. Wong Baker Faces</li> <li>2. Oucher (3-12yrs)</li> <li>3. Numerical Rating Scale (NRS) (7-11yrs)</li> </ol> <p><b>8 yo and older</b></p> <ol style="list-style-type: none"> <li>1. Visual Analogue Scale (VAS)</li> <li>2. Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)</li> </ol>	<p><b>Birth – 6 mos</b></p> <ol style="list-style-type: none"> <li>1. Neonatal Infant Pain Scale (NIPS)</li> <li>2. Neonatal Pain Assessment and Sedation Scale (N-PASS)</li> <li>3. Neonatal Facial Coding System (NFCS)</li> <li>4. CRIES</li> </ol> <p><b>Infant and older</b></p> <ol style="list-style-type: none"> <li>1. Revised Faces, Legs, Activity, Cry, and Consolability (r-FLACC)</li> <li>2. Non Communicating Children's Pain Checklist (NCCPC-R)</li> <li>3. Children's Hospital of Eastern Ontario Pain Scale (CHEOPS) (ages 1-7)</li> </ol>

\*This is a short list of pain scales. Determine which pain assessment tools are used by your agency or facility.  
To learn more about the different scales, visit [PAMI](#)





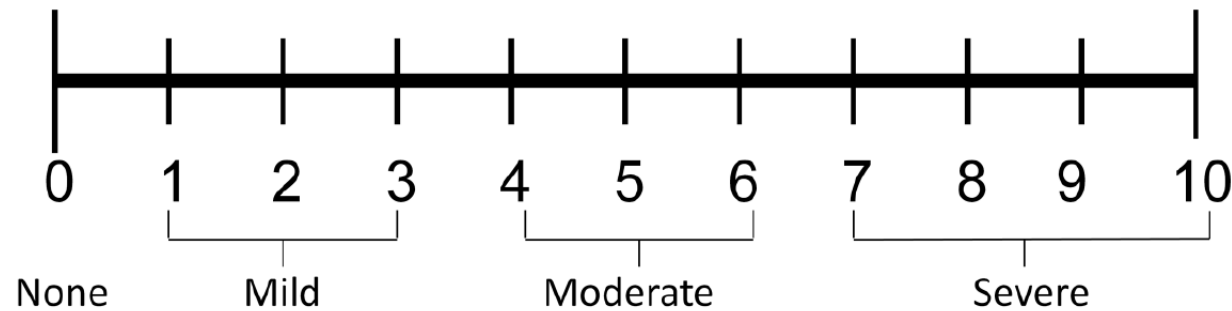
## a. Adult Pain Assessment Scales

# Adult Pain Scales: Verbal, alert and oriented

Measurement Scale	Description
<b>Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)</b>	Self-report scale. Eleven point scale that requires understanding of numbers, addition and subtraction.
<b>Verbal rating scale (VRS)</b>	Five pain levels are indicated in large print on a sheet give to the patient: no, pain, mild pain, moderate pain, severe pain, unbearable pain.
<b>Visual Analogue Scale</b>	A 100-mm rule with a movable cursor: “no pain” is written at he left end of the horizontal line along which the cursor is moved, and “maximal pain” at the right end.
<b>Defense and Veterans Pain Rating Scale 2.0 (DVPRS)</b>	Self-report scale. Eleven point scale that requires the patient to identify pain by numerical rating, color intensity, facial expression, and pain disruption. Followed by four supplemental questions evaluating the biopsychosocial impact of pain.

# Verbal Numeric Scale (VNS) Numeric Rating Scale (NRS)

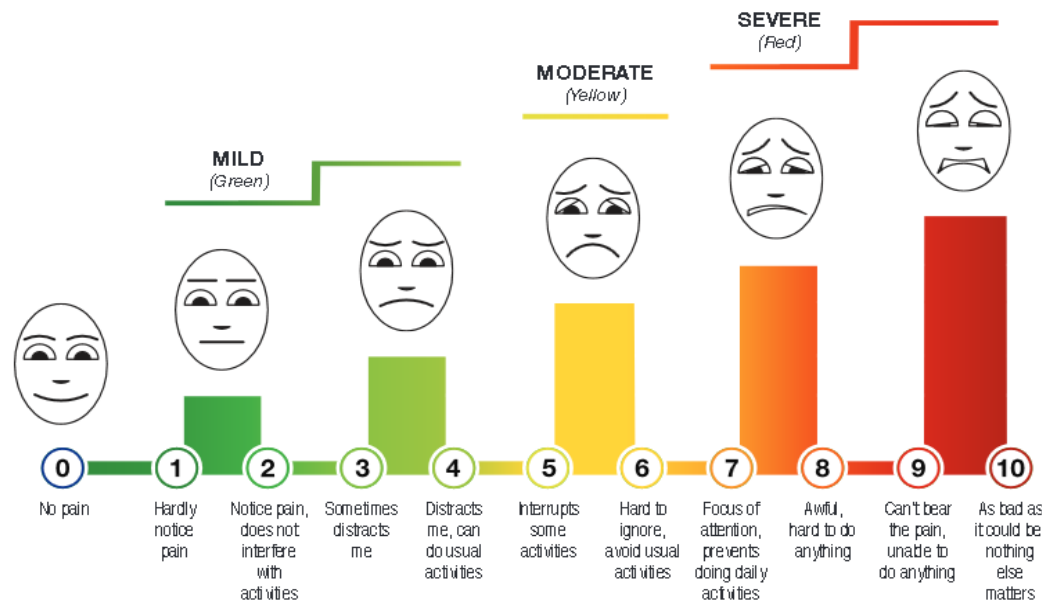
*“Please indicate the intensity of current, best, and worst pain levels over the past 24 hours on a scale of 0 (no pain) to 10 (worst pain imaginable)”*



Comparative Pain Scale		
	0	No pain. Feeling perfectly normal.
<b>Minor</b>  Does not interfere with most activities. Able to adapt to pain psychologically and with medication or devices such as cushions.	1 <b>Very Mild</b>	Very light barely noticeable pain, like a mosquito bite or a poison ivy itch. Most of the time you never think about the pain.
	2 <b>Discomforting</b>	Minor pain, like lightly pinching the fold of skin between the thumb and first finger with the other hand, using the fingernails. Note that people react differently to this self-test.
	3 <b>Tolerable</b>	Very noticeable pain, like an accidental cut, a blow to the nose causing a bloody nose, or a doctor giving you an injection. The pain is not so strong that you cannot get used to it. Eventually, most of the time you don't notice the pain. You have <i>adapted</i> to it.
<b>Moderate</b>  Interferes with many activities. Requires lifestyle changes but patient remains independent. Unable to adapt to pain.	4 <b>Distressing</b>	Strong, deep pain, like an average toothache, the initial pain from a bee sting, or minor trauma to part of the body, such as stubbing your toe real hard. So strong you notice the pain all the time and <i>cannot completely adapt</i> . This pain level can be simulated by pinching the fold of skin between the thumb and first finger with the other hand, using the fingernails, and squeezing real hard. Note how the simulated pain is initially piercing but becomes dull after that.
	5 <b>Very Distressing</b>	Strong, deep, piercing pain, such as a sprained ankle when you stand on it wrong or mild back pain. Not only do you notice the pain all the time, you are now so preoccupied with managing it that your normal lifestyle is curtailed. Temporary personality disorders are frequent.
	6 <b>Intense</b>	Strong, deep, piercing pain so strong it seems to partially dominate your senses, causing you to think somewhat unclearly. At this point you begin to have trouble holding a job or maintaining normal social relationships. Comparable to a bad non-migraine headache combined with several bee stings, or a bad back pain.
<b>Severe</b>  Unable to engage in normal activities. Patient is disabled and unable to function independently.	7 <b>Very Intense</b>	Same as 6 except the pain completely dominates your senses, causing you to think unclearly about half the time. At this point you are effectively disabled and frequently cannot live alone. Comparable to an average migraine headache.
	8 <b>Utterly Horrible</b>	Pain so intense you can no longer think clearly at all, and have often undergone severe personality change if the pain has been present for a long time. Suicide is frequently contemplated and sometimes tried. Comparable to childbirth or a real bad migraine headache.
	9 <b>Excruciating Unbearable</b>	Pain so intense you cannot tolerate it and demand pain killers or surgery, no matter what the side effects or risk. If this doesn't work, suicide is frequent since there is no more joy in life whatsoever. Comparable to throat cancer.
	10 <b>Unimaginable Unspeakable</b>	Pain so intense you will go unconscious shortly. Most people have never experienced this level of pain. Those who have suffered a severe accident, such as a crushed hand, and lost consciousness as a result of the pain and not blood loss, have experienced level 10.

# Defense and Veterans Pain Rating Scale 2.0 (DVPRS)

## Defense and Veterans Pain Rating Scale



v 2.0

## DoD/VA PAIN SUPPLEMENTAL QUESTIONS

For clinicians to evaluate the biopsychosocial impact of pain

1. Circle the one number that describes how, during the past 24 hours, pain has interfered with your **ACTIVITY**:

0 1 2 3 4 5 6 7 8 9 10  
Does not interfere Completely interferes

2. Circle the one number that describes how, during the past 24 hours, pain has interfered with your **SLEEP**:

0 1 2 3 4 5 6 7 8 9 10  
Does not interfere Completely interferes

3. Circle the one number that describes how, during the past 24 hours, pain has affected your **MOOD**:

0 1 2 3 4 5 6 7 8 9 10  
Does not affect Completely affects

4. Circle the one number that describes how, during the past 24 hours, pain has contributed to your **STRESS**:

0 1 2 3 4 5 6 7 8 9 10  
Does not contribute Contributes a great deal

\*Reference for pain interference: Cleeland OS, Ryan KM. Pain assessment: global use of the Brief Pain Inventory. Ann Acad Med Singapore 23(2): 129-138, 1994.

v 2.0

# Adult Pain Scales: Non-verbal, GCS <15 or Cognitive Impairment

Measurement Scale	Description
<b>Adult Non-Verbal Pain Scale (NVPS)</b>	Behavioral scale. Based on FLACC scale and contain behavioral dimensions and physiology dimensions that are graded by severity.
<b>Pain Assessment in Advanced Dementia (PAINAD) Scale</b>	Assesses pain in patients with dementia. Total scores range from 0 to 10 (based on a scale of 0 to 2 for five items: breathing. Vocalization, facial expression, body language, and consolability), higher score indicates more severe pain
<b>Behavioral Pain Scale (BPS)</b>	Behavioral scale. Three observational items (facial expression, upper limbs, and compliance with ventilation). Higher score, greater discomfort.
<b>Critical-Care Observation Tool (CPOT)</b>	Behavioral scale. Used for intubated and nonintubated critical care patients. Four domains (facial expressions, movements, muscle tension, and ventilator compliance). Higher score, great pain level

# Adult Non-Verbal Pain Scale (NVPS)

Categories	0	1	2
Face	No particular expression or smile.	Occasional grimace, tearing, frowning, wrinkled forehead.	Frequent grimace, tearing, frowning, wrinkled forehead.
Activity (movement)	Lying quietly, normal position.	Seeking attention through movement or slow, cautious movement.	Restless, excessive activity and/or withdrawal reflexes.
Guarding	Lying quietly, no positioning of hands over areas of body.	Splinting areas of the body, tense.	Rigid, stiff.
Physiology (vital signs)	Stable vital signs	Change in any of the following: * SBP > 20 mm Hg. * HR > 20/minute.	Change in any of the following: * SBP > 30 mm Hg. * HR > 25/minute.
Respiratory	Baseline RR/SpO <sub>2</sub> Compliant with ventilator	RR > 10 above baseline, or 5% ↓ SpO <sub>2</sub> mild asynchrony with ventilator	RR > 20 above baseline, or 10% ↓ SpO <sub>2</sub> severe asynchrony with ventilator

# Pain Assessment in Advanced Dementia (PAINAD) Scale

**Instructions:** Observe the patient for five minutes before scoring his or her behaviors. Score the behaviors according to the following chart. Definitions of each item are provided on the following page. The patient can be observed under different conditions (e.g., at rest, during a pleasant activity, during caregiving, after the administration of pain medication).

Behavior	0	1	2	Score
Breathing Independent of vocalization	<ul style="list-style-type: none"> <li>Normal</li> </ul>	<ul style="list-style-type: none"> <li>Occasional labored breathing</li> <li>Short period of hyperventilation</li> </ul>	<ul style="list-style-type: none"> <li>Noisy labored breathing</li> <li>Long period of hyperventilation</li> <li>Cheyne-Stokes respirations</li> </ul>	
Negative vocalization	<ul style="list-style-type: none"> <li>None</li> </ul>	<ul style="list-style-type: none"> <li>Occasional moan or groan</li> <li>Low-level speech with a negative or disapproving quality</li> </ul>	<ul style="list-style-type: none"> <li>Repeated troubled calling out</li> <li>Loud moaning or groaning</li> <li>Crying</li> </ul>	
Facial expression	<ul style="list-style-type: none"> <li>Smiling or inexpressive</li> </ul>	<ul style="list-style-type: none"> <li>Sad</li> <li>Frightened</li> <li>Frown</li> </ul>	<ul style="list-style-type: none"> <li>Facial grimacing</li> </ul>	
Body language	<ul style="list-style-type: none"> <li>Relaxed</li> </ul>	<ul style="list-style-type: none"> <li>Tense</li> <li>Distressed pacing</li> <li>Fidgeting</li> </ul>	<ul style="list-style-type: none"> <li>Rigid</li> <li>Fists clenched</li> <li>Knees pulled up</li> <li>Pulling or pushing away</li> <li>Striking out</li> </ul>	
Consolability	<ul style="list-style-type: none"> <li>No need to console</li> </ul>	<ul style="list-style-type: none"> <li>Distracted or reassured by voice or touch</li> </ul>	<ul style="list-style-type: none"> <li>Unable to console, distract, or reassure</li> </ul>	
TOTAL SCORE				

(Warden et al., 2003)

**Scoring:**

The total score ranges from 0-10 points. A possible interpretation of the scores is: 1-3=mild pain; 4-6=moderate pain; 7-10=severe pain. These ranges are based on a standard 0-10 scale of pain, but have not been substantiated in the literature for this tool.

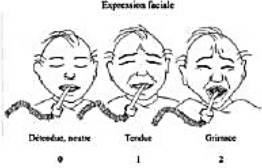
# Behavioral Pain Scale (BPS)

Table 1. Behavioral pain scale

Item	Description	Score
Facial expression	Relaxed	1
	Partially tightened (e.g., brow lowering)	2
	Fully tightened (e.g., eyelid closing)	3
	Grimacing	4
Upper limbs	No movement	1
	Partially bent	2
	Fully bent with finger flexion	3
	Permanently retracted	4
Compliance with ventilation	Tolerating movement	1
	Coughing but tolerating ventilation for most of the time	2
	Fighting ventilator	3
	Unable to control ventilation	4



# Critical-Care Observation Tool (CPOT)

Indicator	Score	Description
<b>Facial expression</b>   <p>Caroline Arbour, RN, B.Sc., PhD(student) School of Nursing, McGill University</p>	Relaxed, neutral 0	No muscle tension observed
	Tense 1	Presence of frowning, brow lowering, orbit tightening and levator contraction or any other change (e.g. opening eyes or tearing during nociceptive procedures)
	Grimacing 2	All previous facial movements plus eyelid tightly closed (the patient may present with mouth open or biting the endotracheal tube)
<b>Body movements</b>	Absence of movements or normal position 0	Does not move at all (doesn't necessarily mean absence of pain) or normal position (movements not aimed toward the pain site or not made for the purpose of protection)
	Protection 1	Slow, cautious movements, touching or rubbing the pain site, seeking attention through movements
	Restlessness/Agitation 2	Pulling tube, attempting to sit up, moving limbs/thrashing, not following commands, striking at staff, trying to climb out of bed
<b>Compliance with the ventilator (intubated patients)</b>  OR <b>Vocalization (extubated patients)</b>	Tolerating ventilator or movement 0	Alarms not activated, easy ventilation
	Coughing but tolerating 1	Coughing, alarms may be activated but stop spontaneously
	Fighting ventilator 2	Asynchrony: blocking ventilation, alarms frequently activated
	Talking in normal tone or no sound 0	Talking in normal tone or no sound
	Sighing, moaning 1	Sighing, moaning
	Crying out, sobbing 2	Crying out, sobbing
<b>Muscle tension</b>  Evaluation by passive flexion and extension of upper limbs when patient	Relaxed 0	No resistance to passive movements
	Tense, rigid 1	Resistance to passive movements

## b. Pediatric Pain Assessment Scales

# Pediatric Pain Scale Descriptions

Measurement Scale	Age Range	Description
<b>Birth - 6 months</b>		
<b>Neonatal Infant Pain Scale (NIPS)</b>	<i>Preterm and full term neonates</i>	Behavioral scale.
<b>Neonatal Pain Assessment and Sedation Scale (N-PASS)</b>	<i>Preterm and full term neonates</i>	Behavioral and physiologic scale.
<b>Neonatal Facial Coding System (NFCS)</b>	<i>32 weeks gestation to 6 months</i>	Facial muscle group movement, brow budge, eye squeeze, nasolabial furrow, open lips, stretch mouth lip purse, taut tongue, and chin quiver
<b>CRIES</b>	<i>32 weeks gestation to 6 months</i>	Behavioral and physiologic scale.
<b>Infant and older (non-verbal children)</b>		
<b>Faces, Legs, Activity, Cry, and Consolability (FLACC)</b>	<i>2 months to 7 years, critically ill, cognitively impaired, and older than three years of age unable to utilize a self-report scale.</i>	Behavioral scale. Scored in a range of 0–10 with 0 representing no pain. The scale has five criteria, which are each assigned a score of 0, 1 or 2.
<b>Non Communicating Children's Pain Checklist (NCCPC-R)</b>	<i>3-19 years (with cognitive impairment)</i>	30 items that assess seven dimensions: vocal, eating/sleeping, social, facial, activity, body/limb, and physiologic signs
<b>3 years and older</b>		
<b>Wong Baker Faces</b>	<i>3 years and older</i>	Self-report scale. Please refer to specific references for those alternative face scales.
<b>Oucher</b>	<i>3 -12 years</i>	Self-report tool consisting of a vertical numerical scale and a photo scale with expressions of "hurt" to "no hurt."
<b>8 years and older</b>		
<b>Visual Analogue Scale (VAS)</b>	<i>8 years and older</i>	Self-report scale. Consists of pre-measured vertical or horizontal line, where the ends of the line represent extreme limits of pain intensity. Requires understanding of numbers, addition and subtraction.
<b>Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)</b>	<i>8 years and older</i>	Self-report scale. Eleven point scale that requires understanding of numbers, addition and subtraction.

# Pediatric Pain Scales:

## Birth to 6 months

Measurement Scale	Age Range	Description
<b>Birth - 6 months</b>		
<b>Neonatal Infant Pain Scale (NIPS)</b>	<i>Preterm and full term neonates</i>	Behavioral scale.
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<b>CRIS</b>	<i>32 weeks gestation to 6 months</i>	Behavioral and physiologic scale.

# Neonatal Infant Pain Scale (NIPS)

## Pain Assessment Tools Neonatal/Infant Pain Scale (NIPS)

(Recommended for children less than 1 year old) - A score greater than 3 indicates pain

Pain Assessment		Score
<b>Facial Expression</b>		
0 – Relaxed muscles	Restful face, neutral expression	
1 – Grimace	Tight facial muscles; furrowed brow, chin, jaw, (negative facial expression – nose, mouth and brow)	
<b>Cry</b>		
0 – No Cry	Quiet, not crying	
1 – Whimper	Mild moaning, intermittent	
2 – Vigorous Cry	Loud scream; rising, shrill, continuous (Note: Silent cry may be scored if baby is intubated as evidenced by obvious mouth and facial movement.	
<b>Breathing Patterns</b>		
0 – Relaxed	Usual pattern for this infant	
1 – Change in Breathing	Indrawing, irregular, faster than usual; gagging; breath holding	
<b>Arms</b>		
0 – Relaxed/Restrained	No muscular rigidity; occasional random movements of arms	
1 – Flexed/Extended	Tense, straight legs; rigid and/or rapid extension, flexion	
<b>Legs</b>		
0 – Relaxed/Restrained	No muscular rigidity; occasional random leg movement	
1 – Flexed/Extended	Tense, straight legs; rigid and/or rapid extension, flexion	
<b>State of Arousal</b>		
0 – Sleeping/Awake	Quiet, peaceful sleeping or alert random leg movement	
1 – Fussy	Alert, restless, and thrashing	

The NIPS (Lawrence et al., 1993) was developed at Children’s Hospital of Eastern Ontario. The NIPS assesses six behavioral indicators in response to painful procedures in preterm newborns (gestational age < 37 weeks) and full-term newborns (gestational age > 37 weeks to 6 weeks after delivery).

# Neonatal Pain Assessment and Sedation Scale (N-PASS)

Assessment Criteria	Sedation		Normal	Pain / Agitation	
	-2	-1	0	1	2
<b>Crying Irritability</b>	No cry with painful stimuli	Moans or cries minimally with painful stimuli	Appropriate crying Not irritable	Irritable or crying at intervals Consolable	High-pitched or silent-continuous cry Inconsolable
<b>Behavior State</b>	No arousal to any stimuli No spontaneous movement	Arouses minimally to stimuli Little spontaneous movement	Appropriate for gestational age	Restless, squirming Awakens frequently	Arching, kicking Constantly awake or Arouses minimally / no movement (not sedated)
<b>Facial Expression</b>	Mouth is lax No expression	Minimal expression with stimuli	Relaxed Appropriate	Any pain expression intermittent	Any pain expression continual
<b>Extremities Tone</b>	No grasp reflex Flaccid tone	Weak grasp reflex ↓ muscle tone	Relaxed hands and feet Normal tone	Intermittent clenched toes, fists or finger splay Body is not tense	Continual clenched toes, fists, or finger splay Body is tense
<b>Vital Signs HR, RR, BP, SaO<sub>2</sub></b>	No variability with stimuli Hypoventilation or apnea	< 10% variability from baseline with stimuli	Within baseline or normal for gestational age	↑ 10-20% from baseline SaO <sub>2</sub> 76-85% with stimulation - quick recovery ↑	↑ > 20% from baseline SaO <sub>2</sub> ≤ 75% with stimulation - slow recovery ↑ Out of sync with vent

# Pediatric Pain Scales:

## Infant and older (nonverbal children)

Measurement Scale	Age Range	Description
<b>Infant and older (non-verbal children)</b>		
<b>Faces, Legs, Activity, Cry, and Consolability (FLACC)</b>	<i>2 months to 3 years, critically ill, cognitively impaired, and older than three years of age unable to utilize a self-report scale.</i>	Behavioral scale. A revised FLACC (r-FLACC) was developed for children with cognitive impairment (CI). It contains the same core components as the original FLACC.
<b>Non Communicating Children's Pain Checklist (NCCPC-R)</b>	<i>3-19 years (with cognitive impairment)</i>	30 items that assess seven dimensions: vocal, eating/sleeping, social, facial, activity, body/limb, and physiologic signs
<b>Children's Hospital of Eastern Ontario Pain Scale (CHEOPS)</b>	<i>1-7 years</i>	Observational scale for measuring postoperative pain in children.

# Faces, Legs, Activity, Cry, and Consolability (FLACC)

FLACC Behavioral Pain Assessment Scale			
CATEGORIES	SCORING		
	0	1	2
<b>Face</b>	No particular expression or smile	Occasional grimace or frown; withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
<b>Legs</b>	Normal position or relaxed	Uneasy, restless, tense	Kicking or legs drawn up
<b>Activity</b>	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
<b>Cry</b>	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs; frequent complaints
<b>Consolability</b>	Content, relaxed	Reassured by occasional touching, hugging, or being talked to; distractable	Difficult to console or comfort



# Children's Hospital of Eastern Ontario Pain Scale (CHEOPS)

Parameter	Finding	Points
cry	no cry	1
	moaning	2
	crying	2
	screaming	3
facial	smiling	0
	composed	1
	grimace	2
child verbal	positive	0
	none	1
	complaints other than pain	1
	pain complaints	2
	both pain and non-pain complaints	2
torso	neutral	1
	shifting	2

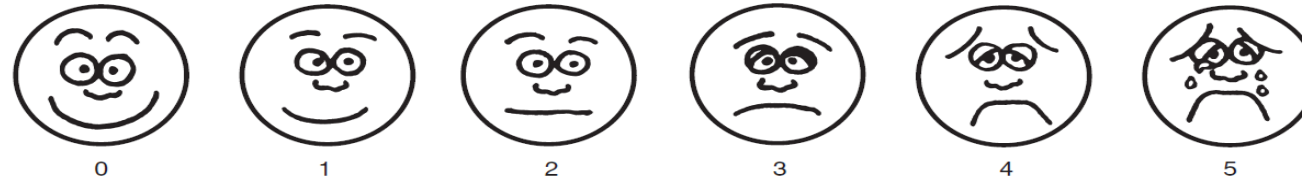
Parameter	Finding	Points
	tense	2
	shivering	2
	upright	2
	restrained	2
touch	not touching	1
	reach	2
	touch	2
	grab	2
	restrained	2
legs	neutral	1
	squirming kicking	2
	drawn up tensed	2
	standing	2
	restrained	2

# Pediatric Pain Scales: 3 years and older

Measurement Scale	Age Range	Description
<b>3 years and older</b>		
<b>Wong Baker Faces</b>	<i>3 years and older</i>	Self-report scale. Please refer to specific references for alternative face scales.
<b>Oucher</b>	<i>3 -12 years</i>	Self-report tool consisting of a vertical numerical scale and a photo scale with expressions of “hurt” to “no hurt.”

# Wong Baker Faces

## Wong-Baker FACES Pain Rating Scale



- 0 = VERY HAPPY, NO HURT
- 1 = HURTS JUST A LITTLE BIT
- 2 = HURTS A LITTLE MORE
- 3 = HURTS EVEN MORE
- 4 = HURTS A WHOLE LOT
- 5 = HURTS AS MUCH AS YOU CAN IMAGINE  
(Don't have to be crying to feel this much pain)

Explain to the person that each face is for a person who feels happy because he has no pain (no hurt) or sad because he has some or a lot of pain. Face 0 is very happy because he doesn't hurt at all. Face 1 hurts just a little bit. Face 2 hurts a little more. Face 3 hurts even more. Face 4 hurts a whole lot. Face 5 hurts as much as you can imagine, although you don't have to be crying to feel this bad. Ask the person to choose the face that best describes how he is feeling.

Rating scale is recommended for persons age 3 years and older.

**Brief word instructions:** Point to each face using the words to describe the pain intensity. Ask the child to choose face that best describes own pain and record the appropriate number.

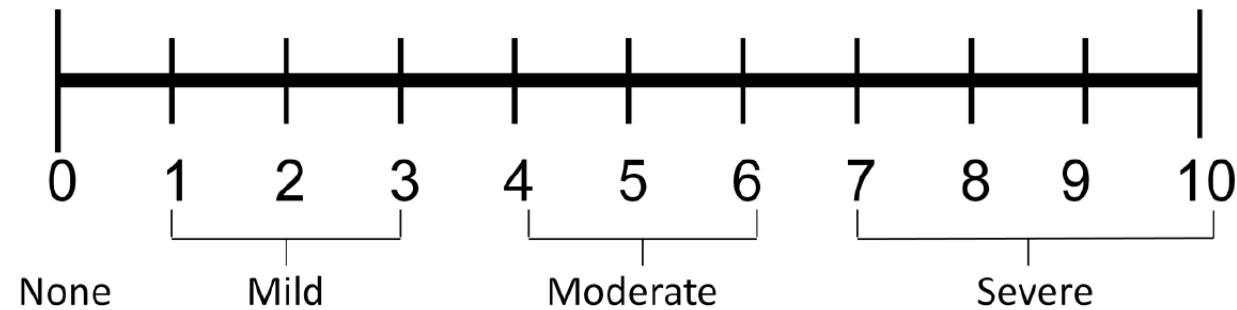
From Wong D.L., Hockenberry-Eaton M., Wilson D., Winkelstein M.L., Schwartz P.: Wong's Essentials of Pediatric Nursing, ed. 6, St. Louis, 2001, p. 1301. Copyrighted by Mosby, Inc. Reprinted by permission.

# Pediatric Pain Scales: 8 years and older

Measurement Scale	Age Range	Description
<b>8 years and older</b>		
<b>Visual Analogue Scale (VAS)</b>	<i>8 years and older</i>	Self-report scale. Consists of pre-measured vertical or horizontal line, where the ends of the line represent extreme limits of pain intensity. Requires understanding of numbers, addition and subtraction.
<b>Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)</b>	<i>8 years and older</i>	Self-report scale. Eleven point scale that requires understanding of numbers, addition and subtraction.

# Verbal Numeric Scale (VNS)/ Numeric Rating Scale (NRS)

*“Please indicate the intensity of current, best, and worst pain levels over the past 24 hours on a scale of 0 (no pain) to 10 (worst pain imaginable)”*



# 5. Management of Pain

- a. General principles of pain management
- b. Re-assessment of pain
- c. Consequences of Unrelieved Pain

a. General Principles of Pain Management

- *Stepwise approach*
- *Pharmacologic management*
- *Nonpharmacologic modalities*
- *Patient safety considerations*
- *Transitions of care and discharge planning*

# General Principles of Pain Management

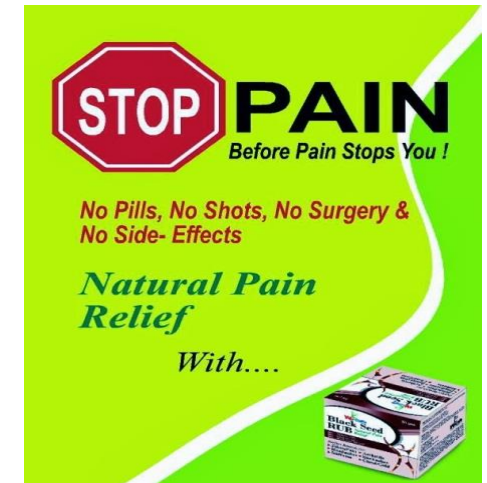
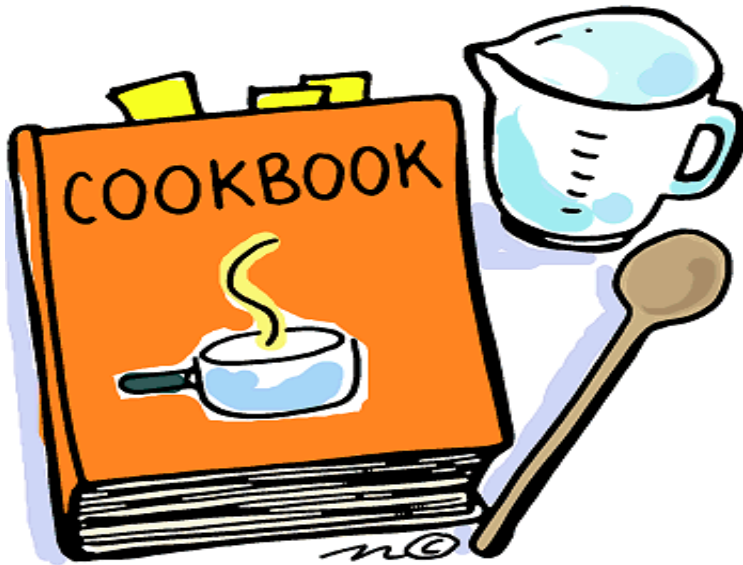
In this section general principles of pain management will be reviewed.  
Due to the changing landscape of pain management, specific pharmacological and nonpharmacologic treatments will not be discussed.

For more detailed information on specific pain management, therapies and treatments refer to the other [PAMI modules](#), PAMI stepwise approach and the PAMI Pain Management and [Dosing Guide](#).



# Pain Management: Putting it All Together

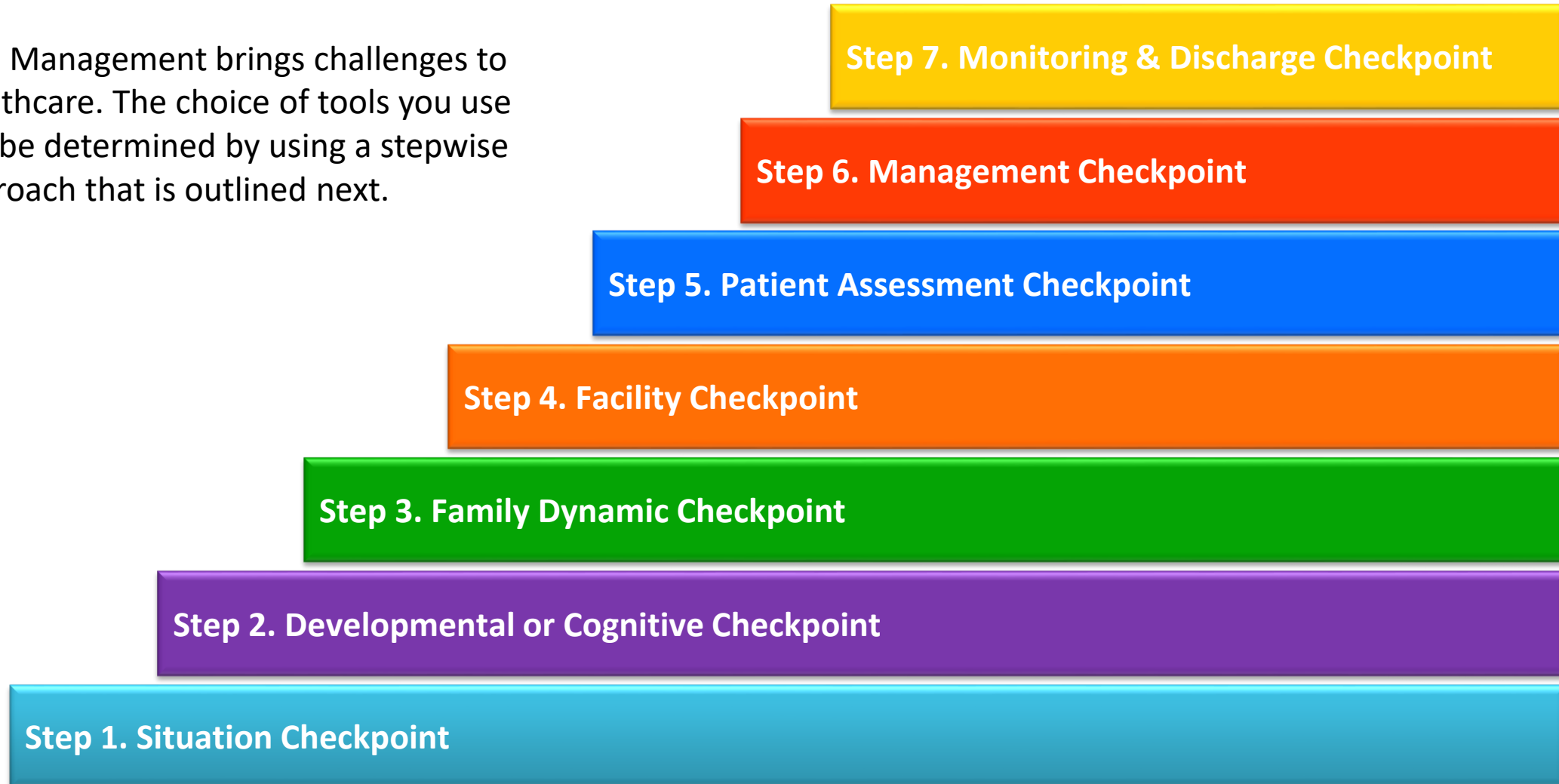
- No Perfect Recipe or “Cookbook”
- No Universal Recipe



# Overview of PAMI Stepwise Approach to Pain

(Adapted to Setting- ED, Hospital, EMS)  
Ideal approach not always possible

Pain Management brings challenges to healthcare. The choice of tools you use can be determined by using a stepwise approach that is outlined next.



# Step 1: Determine the Situation: What are you trying to accomplish or manage?

## Step 1. Situation Checkpoint

- Pain only
- Pain and anxiety or agitation
- Anxiety only
- Agitation only
- Procedure that will induce pain or anxiety- transport, IV,.....
- Chronic pain condition exacerbation

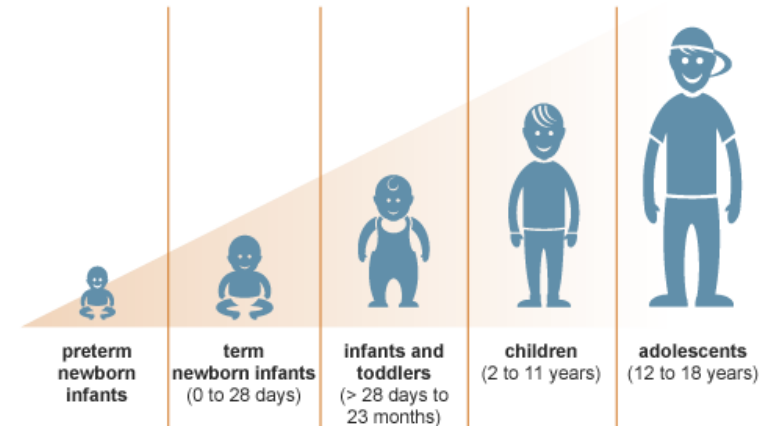
Determination accomplished after triage, history, and exam



# Step 2: Perform a Developmental Checkpoint

## Step 2. Perform a Developmental or Cognitive Checkpoint

- What is the developmental stage of patient?
- Is development normal for age?
  - Developmental delay
  - Autism
  - Special health care needs
  - Mental health concerns
  - Recent traumatic events
- Regression to lower developmental stage



**What are characteristics of developmental stage in response to pain?  
How do you adapt your approach based on developmental level?**



# Responses to Pain by Age or Development

Age Group	Understanding of Pain	Behavioral Response	Verbal Description
		<b>Preschoolers</b>	
3–6 years (preoperational)	Pain is a hurt; Does not relate pain to illness; may relate pain to an injury; <i>Often believes pain is punishment</i> ; Unable to understand why a painful procedure will help them feel better or why an injection takes the pain away	Active physical resistance, directed aggressive behavior, strikes out physically and verbally when hurt, low frustration level	Has language skills to express pain on a sensory level; Can identify location and intensity of pain, denies pain, may believe his or her pain is obvious to others
		<b>School-Age Children</b>	
7–9 years (concrete operations)	Doesn't understand cause of pain; Understands simple relationships between pain and disease and need for painful procedures to treat disease ; May associate pain with feeling bad or angry; recognize psychologic pain related to grief and hurt feelings	Passive resistance, clenches fists, holds body rigidly still, suffers emotional withdrawal, engages in <i>plea bargaining</i>	Can specify location and intensity of pain and describes pain physical characteristics in relation to body parts
10–12 years (transitional)	Better understanding of relationship between an event and pain; More complex awareness of physical and psychologic pain,(moral dilemmas , mental pain)	May pretend comfort to project bravery, <i>may regress with stress and anxiety</i>	Able to describe intensity and location with more characteristics, able to describe psychologic pain
		<b>Adolescents</b>	
13–18 years (formal operations)	Has a capacity for sophisticated and complex under-standing of causes of physical and mental pain; Recognizes pain has qualitative and quantitative characteristics; <i>Can relate to pain experienced by others</i>	Want to behave in socially acceptable manner -like adults; controlled response; May not complain if given <i>cues</i> from other healthcare providers	More sophisticated descriptions with experience; may think nurses are in tune with their thoughts, so don't need to tell nurse about their pain

# Step 3: Family Dynamic Checkpoint

## Step 3. Family Dynamic Checkpoint

- Who is with the patient?- family, caregiver, etc.
- Who is the legal guardian?
- Who actually cares for the patient?
- Who do you want at the bedside?
- Consider culture, past experiences, time commitments, family personality, and family stress level



# Step 4: Facility (Agency/Community) Checkpoint

## Step 4. Facility Checkpoint

- Staffing and setting
  - Community, rural, children's hospital
- Provider experience, team capabilities and expertise
- Existing hospital/agency pain or procedural sedation policies
- Acuity and overcrowding of the ED, hospital or clinic
- Other priorities- MCI, natural disaster, etc.
- Equipment, monitoring, backup



# Step 5: Patient Assessment Checkpoint

## Step 5. Patient Assessment Checkpoint

- Review history, assessment and risk factors
- Chronic illness-previous painful experiences, recent surgery
- Psychiatric and mental considerations
- Injury severity, +/- contraindications to opioids or sedation
- Body habitus
  - Weight- ideal or real? Obesity?





# Step 6: Management Checkpoint: Choose Your “Recipe”



## Step 6. Management Checkpoint

- No magic recipe, must individualize and adjust “Ingredients”
- Pharmacologic “ingredients”
  - Route: oral, nasal, IV, nebulized, topical, nerve blocks
  - Type: sucrose, NSAID, opioids, anxiolytics, ketamine
- Nonpharmacologic “ingredients”
  - Everyone needs a little child life 101- distraction, music, virtual reality, etc.
  - Engage caregivers and parents- coaching, therapeutic language

Always consider nonpharmacologic options +/- medications:

Will pain duration be short (removal of FB, laceration repair), prolonged (burn) or chronic (rheumatologic)?



# Step 7: Monitoring And Discharge Checkpoint

## Step 7. Monitoring & Discharge Checkpoint

- Joint Commission standards
- Document reassessments
- Patient should be back to baseline and tolerating fluids at discharge
- Consider falls prevention and transportation- especially for patients on opioids or sedating medications
- Discharge planning and instructions
- Pain plan



# Pharmacologic and Nonpharmacologic Management

- <http://pami.emergency.med.jax.ufl.edu/resources/dosing-guide/>

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## Opioid Prescribing and Equianalgesic Chart

Generic (Brand)	Onset (O) and Duration (D)		Approximate Equianalgesic Dose		Recommended <u>STARTING</u> dose for ADULTS		Recommended <u>STARTING</u> dose for CHILDREN (> 6 mo)	
	Oral	IV	Oral	IV	Oral	IV	Oral	IV
<b>Morphine (MSIR®) [CII]</b>	O: 30-60 min D: 3-6 h	O: 5-10 min D: 3-6 h	30 mg	10 mg	15-30 mg q 2-4 h	2-10 mg q 2-4 h	0.3 mg/kg q 4 h	<b>0.1 mg/kg q 2-4 h</b>
Morphine extended release (MS Contin®) [CII]	O: 30-90 min D: 8-12 h	—	30 mg	10 mg	15-30 mg q 12 h	—	0.3-0.6 mg/kg q 12 h	—
Hydromorphone (Dilaudid®) [CII]	O: 15-30 min D: 4-6 h	O: 15 min D: 4-6 h	7.5 mg	1.5 mg	2-4 mg q 4 h	0.5-2 mg q 2-4 h	0.06 mg/kg q 4 h	0.015 mg/kg q 4 h
<b>Hydrocodone/APAP 325 mg (Norco 5, 7.5, 10®) [CII] Hycet (7.5 mg/325 mg per 15 mL)</b>	O: 30-60 min D: 4-6 h	—	30 mg	—	5-10 mg q 6 h	—	<b>0.1-0.2 mg/kg q 4-6 h</b>	—
<b>Fentanyl [CII] (Sublimaze® Duragesic®) <i>Patch for opioid tolerant patients ONLY</i></b>	Transdermal O: 12-24 h D: 72 h per patch	O: immediate D: 30-60 min	—	100 mcg (0.1 mg)	Transdermal 12-25 mcg/h q 72 h	50 mcg q 1-2 h	Transdermal 12-25 mcg/h q 72 h	<b>1-2 mcg/kg q 1-2 h (max 50 mcg/dose)</b>

# Non-Opioid Analgesics

Generic (Brand)	Adult	Pediatric (<12 yo)
Acetaminophen (Tylenol®)	325-650 mg PO q 4-6 h Max: 4 g/d or 1 g q 4 h	15 mg/kg PO q 4-6 h Max: 90 mg/kg/d
Acetaminophen IV (Ofirmev®) Use only if not tolerating PO	1 g IV q 6 h Max: 4 g/d or 650 mg q 4 h prn pain	<50 kg 15 mg/kg IV q 6 h or 12.5 mg/kg IV q 4 h prn pain Max: 75mg/kg/d
Celecoxib (Celebrex®)	100-200 mg PO daily to q 12 h Max: 400 mg/d	>2 yo 50 mg PO BID
Ibuprofen (Motrin®)	400-800 mg PO q 6 to 8 h Max: 3200 mg/d	10 mg/kg PO q 6 to 8 h Max: 40 mg/kg/d or 2400 mg/d
Ketorolac (Toradol®)	15-30 mg IV/IM q 6 h Max: 120 mg/d x 5 d	0.5-1 mg/kg/ dose IM/IV q 6 h Max: 15-30 mg q 6 h x 5 d
Naproxen (Naprosyn®)	250-500 mg PO q 8 to 12 h Max: 1500 mg/d	5 mg/kg PO q 12 h Max: 1000 mg/d



## Intranasal\* and Nebulized Medications

Generic	Dose	Max Dose	Comments
Fentanyl	IN: 1.5-2 mcg/kg q 1-2 h Neb: 1.7-3 mcg/kg	3 mcg/kg or 100 mcg	Divide dose equally between each nostril
Midazolam (5 mg/mL)	IN: 0.3 mg/kg	10 mg or 1 mL per nostril (total 2 mL)	Divide dose equally between each nostril
Ketamine	See Ketamine table		
Lidocaine	Neb: 4% (40 mg/mL) 100-200 mg or 2.5-5 mL	4.5 mg/kg total or 300 mg	>5 mg/kg associated with serious toxicity

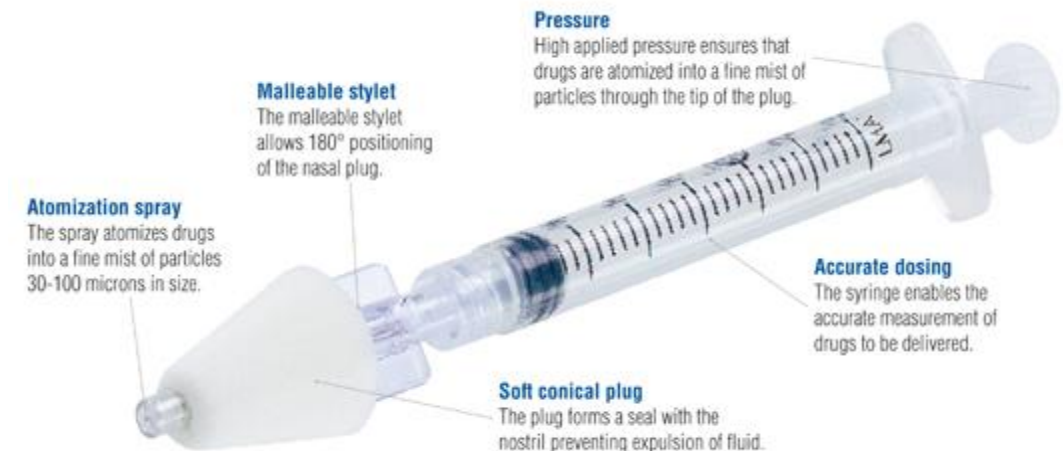
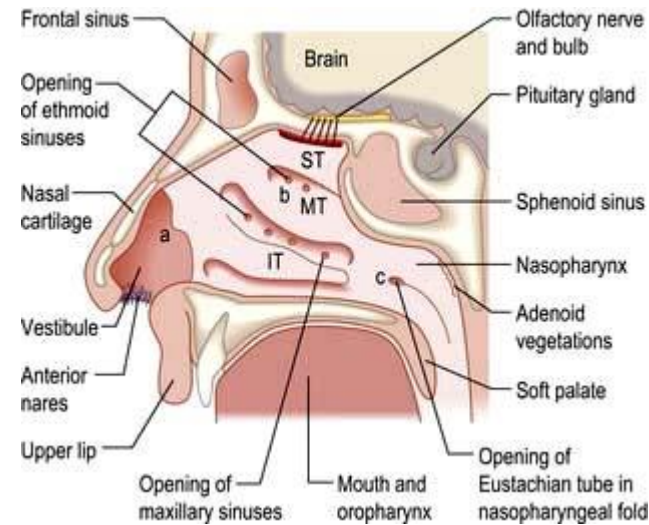
## Ketamine (Ketalar®) Indications and Dosing

Indications	Starting Dose
Procedural Sedation	<b>IV: <u>Adult</u></b> 0.5-1.0 mg/kg; <b><u>Ped</u></b> 1-2mg/kg; <b>IM:</b> 4- 5 mg/kg
Sub-dissociative Analgesia^	<b>IV:</b> 0.1 to 0.3 mg/kg; <b>IM:</b> 0.5-1.0 mg/kg; <b>*IN:</b> 0.5-1.0 mg/kg
Excited Delirium Syndrome	<b>IV:</b> 1 mg/kg; <b>IM:</b> 4- 5 mg/kg

# Intranasal Medications

- Use concentrated solution
  - Ketamine 50 mg/ml\*
  - Fentanyl 50 mcg/ml\*
  - Midazolam 5mg/ml
- Use an atomizer
  - If > 1ml divide between nares
  - Aim spray toward turbinates/pinna

\*Rapid CSF levels





# Ketamine Pharmacology

- Blockade of N-methyl D-aspartate (*NMDA*) *receptors*, peripheral Na<sup>+</sup> channels and  $\mu$ -opioid receptors providing ***sedation, amnesia, and analgesia.***
- High lipid solubility
  - allows rapid crossing of the blood-brain barrier,
  - *quick onset of action* (peak concentration at 1 minute-IV)
- Rapid recovery to baseline

# Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Acute Pain Management

- From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists (Reg Anesth Pain Med 2018;43: 456–466)
- Evidence supports the use of *subanesthetic* ketamine for acute pain in a variety of contexts, including as a stand-alone treatment, as an adjunct to opioids, and, to a lesser extent, as an intranasal formulation.

# New Emphasis on Nonpharmacologic Methods of Treating Pain

- Nonpharmacologic pain management techniques should be considered along with pharmacologic techniques and may:
  - improve assessment
  - decrease or avoid the use of opioids or anxiolytics
  - decrease time and recovery for procedures
  - decrease adverse events

# New Emphasis on Nonpharmacologic Methods of Treating Pain

## Painting Analogy

Think of nonpharmacologic management as your “base coat” or “primer” before applying additional coats of analgesic treatment. With the right base coat foundation, you have a better chance of painting a patient’s symptoms a more tolerable and long-lasting new color.

(PEM Playbook: <http://pemplaybook.org/podcast/pediatric-pain/>)



# The Importance of Incorporating Nonpharmacologic Methods When Treating Pain

In an effort to encourage multimodal approaches, hospitals are now required to incorporate nonpharmacologic interventions in pain management plans.

These pain assessment and management requirements are designed to improve the quality and safety of care provided by Joint Commission-accredited hospitals.

Click on the link to find out more!

[https://www.jointcommission.org/assets/1/18/Joint\\_Commission\\_Enhances\\_Pain\\_Assessment\\_and\\_Management\\_Requirements\\_for\\_Accredited\\_Hospitals1.PDF](https://www.jointcommission.org/assets/1/18/Joint_Commission_Enhances_Pain_Assessment_and_Management_Requirements_for_Accredited_Hospitals1.PDF)



# Categorization of Nonpharmacologic Interventions

## Cognitive-Behavioral Interventions

Psychologic preparation, education, information

Distraction (passive or active): Video games, TV, movies, phone, lighted or interactive toy, virtual reality

Relaxation techniques (breathing, meditation, etc.)

Music

Guided imagery

Training and coaching

Coping statements: “I can do this”

## Physical (Sensory) Interventions

Positioning

Cutaneous stimulation

Nonnutritive sucking, sucrose

Pressure

Hot or cold treatments

Others

Adapted from: Murray KK, Hollman GA. Non-pharmacologic interventions in children during medical and surgical procedures. In: Tobias JD, Cravero JP, eds. *Procedural Sedation for Infants, children, and adolescents*; Section on Anesthesiology and Pain Medicine. American Academy of Pediatrics ; 2016.

# Nonpharmacologic Interventions

- Pain can sometimes be adequately managed using nonpharmacologic interventions such as ice, splinting, distraction, etc.
- These management options can be applied singly or as adjuncts along with pharmacological options.

For additional information and resources refer to the [website](#) and the [Nonpharmacologic PAMI module](#).

[Click here for more information on nonpharmacologic management options.](#)





# Develop Your Own Distraction & Nonpharmacologic Pain Toolkit

[Virtual Reality](#)



[Distraction &  
Nonpharmacologic  
Pain Toolkit](#)



## b. Re-assessment of Pain

# Re-assessment of Pain

- **Timely reassessment** of pain is essential. One of the most common mistakes made in pain management is **failure of reassessment** after an intervention (pharmacologic or nonpharmacologic).
- Pain level should be reassessed **after an intervention**, such as medication administration, and **once the intervention has had time to exert its effect**.
- The timeframe and frequency for re-assessment will depend on the setting.
  - For example, re-assessments will be performed frequently and over a shorter time course in acute care settings, like the ED, compared to outpatient settings.
  - In the acute care settings, consider reassessing pain level 30 minutes after IV and 60 minutes after PO administration of a medication.

# Re-assessment of Pain

- The same scale or scoring system used previously should be used on re-assessment for consistency.
- All patients do not respond to identical management in the same manner due to genetic and other factors.
- Appropriate monitoring for respiratory depression should be used especially when using pain relievers with sedating effects (opioids).
- Pain should always be reassessed at time of discharge or within an appropriate time interval in the outpatient setting.

***The literature suggests that a 33% to 50% decrease in pain intensity is clinically meaningful from a patient's perspective and represents a reasonable standard of intervention efficacy for acute and chronic pain.***

## c. Consequences of Unrelieved Pain

# Consequences of unrelieved acute pain

## Psychological Impacts

- The [psychological impact](#) of untreated pain can include post-traumatic stress disorder, anxiety, catastrophizing, and depression.

## Chronic pain syndromes

- [Chronic pain syndromes](#) can develop as a consequence of untreated acute pain mechanisms including spinal cord hyper-excitability.

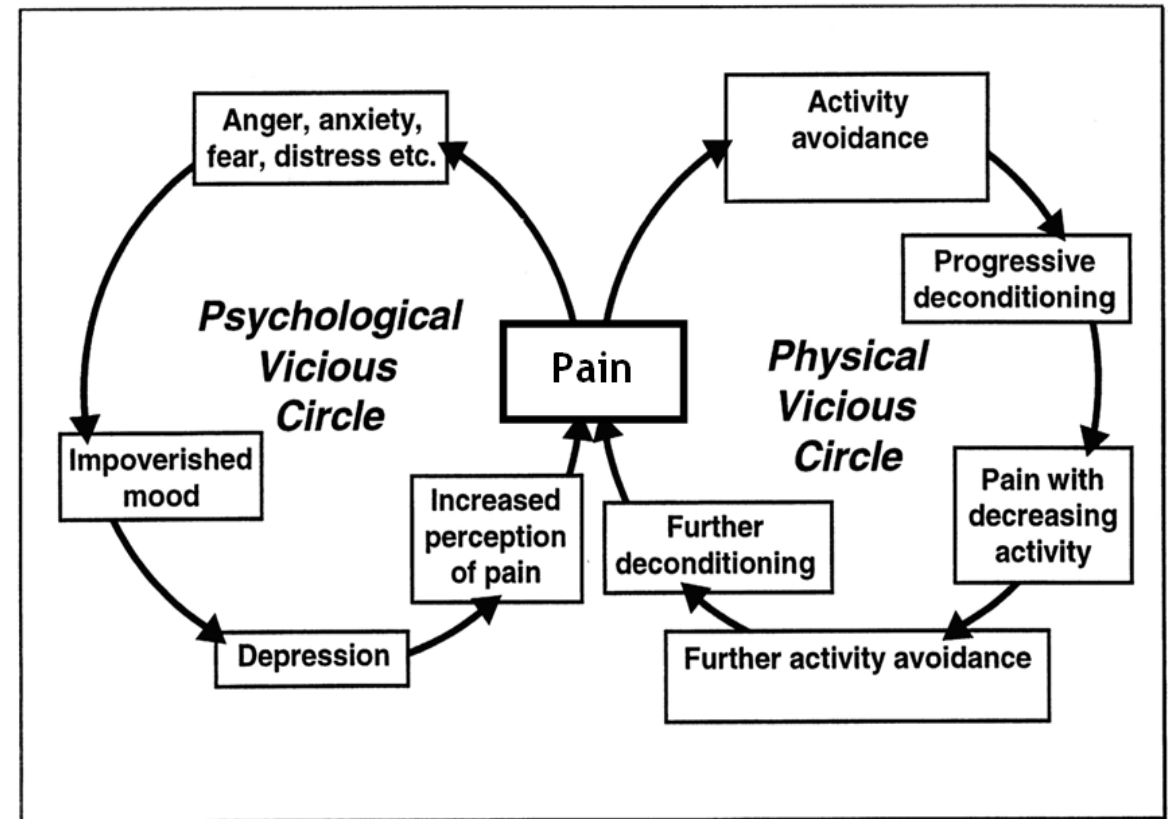
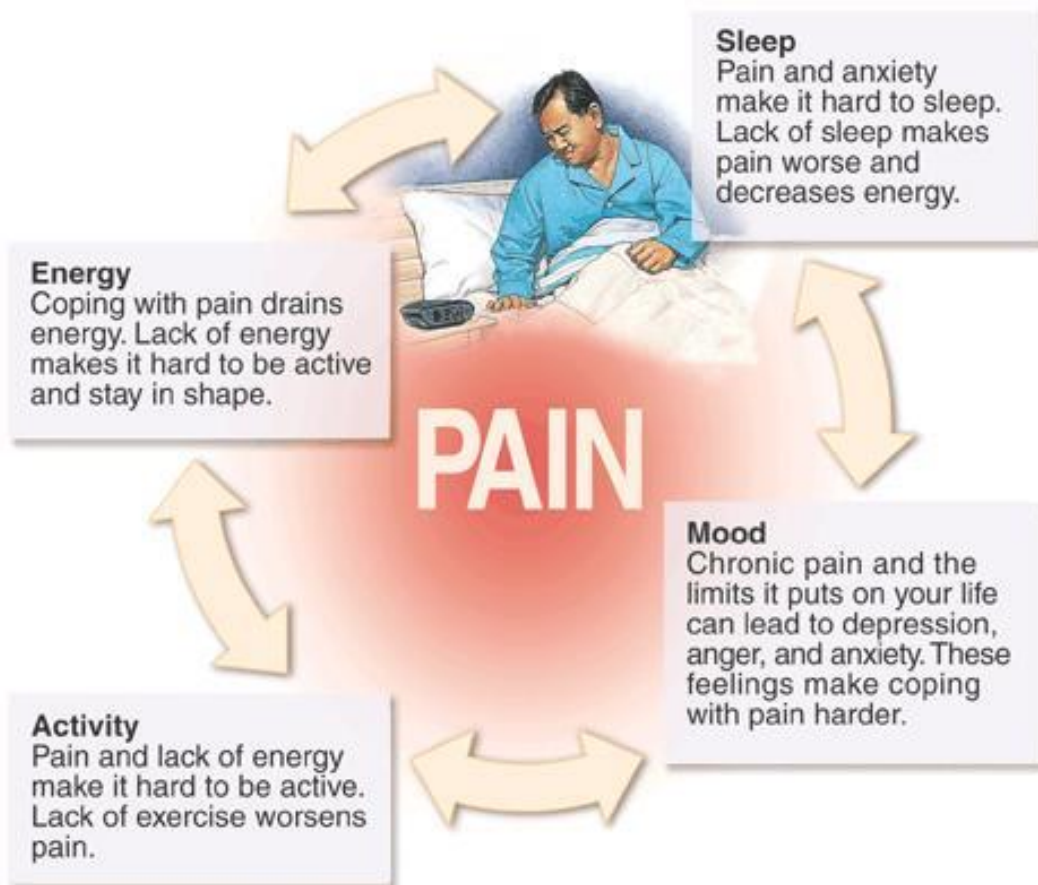
## Mortality and Morbidity

- Increased [mortality and morbidity](#) can result from unrelieved acute pain. This can occur through increased oxygen demand, increased metabolic rate, cardiovascular and pulmonary complications, and impaired immune function.



# Chronic Pain Syndrome

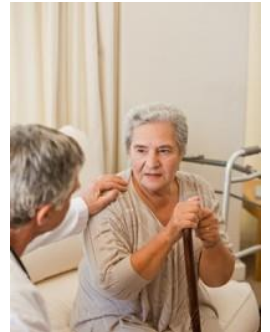
Chronic pain can affect sleep, mood, activity, and energy level. It has both *physical and psychological* affects that can result in a detrimental cycle.



## 6. Discharge Planning and Transitions of Care

# Discharge Planning for Patients with Pain

- Appropriate discharge planning should take into account what interventions the patient has received during the visit and transportation home.
  - How will the patient safely arrive home? *Consider patient transportation and driving precautions, especially after receiving a sedating medication*
  - Are they ambulating at their baseline without assistance?
  - Could the treatment or medication still be exerting its effects (i.e. lethargy as a side effect of morphine)?
- An important consideration during discharge planning is whether the patient will be able to safely take the prescribed medications at home. Also consider if the patient will be able to obtain the prescribed medications from their pharmacy? (ie cost, supply, etc.).
  - Patients should be educated on the proper use of their prescribed medications with clear and easy to understand instructions: potential side effects, interactions with other prescribed medications and any adverse effects.
  - Has the patient been advised to:
    - Not drive while taking their prescribed opioid
    - Not combine their medication with alcohol
    - Not take more than prescribed especially for acetaminophen containing products
    - Store medications safely and dispose of unused tablets properly





# Pain Management Transitions of Care

**Sound management** of pain during transitions of care is important because:

- ✓ It reduces return visits
- ✓ Expedites return to normal activities and work
- ✓ Helps reduce risk of acute pain progressing to chronic pain

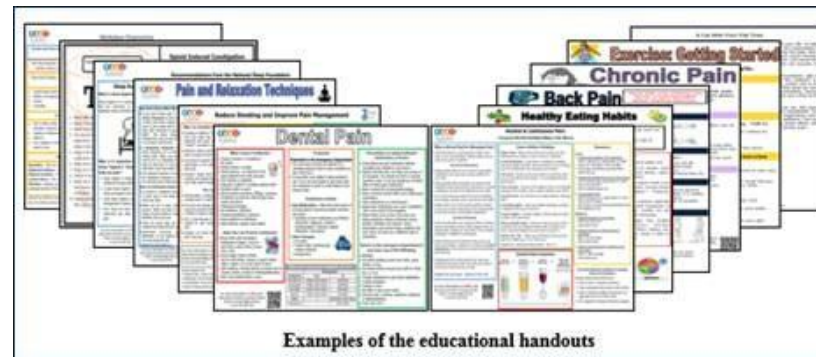
Patients often take 4-6 weeks to experience pain reduction after an acute injury! Yet national guidelines support limiting opioid prescriptions to a week or less.

***This is why use of multimodal interventions and timely follow up is important.***

# PAMI Discharge Planning Toolkit for Pain

Detailed discharge instructions are a key element of reducing risk and return visits for ED patients with painful conditions and those discharged with pain medication prescriptions.

See PAMI website for more information and to download the Discharge Planning Toolkit for Pain



[PAMI Discharge Planning Toolkit](#)

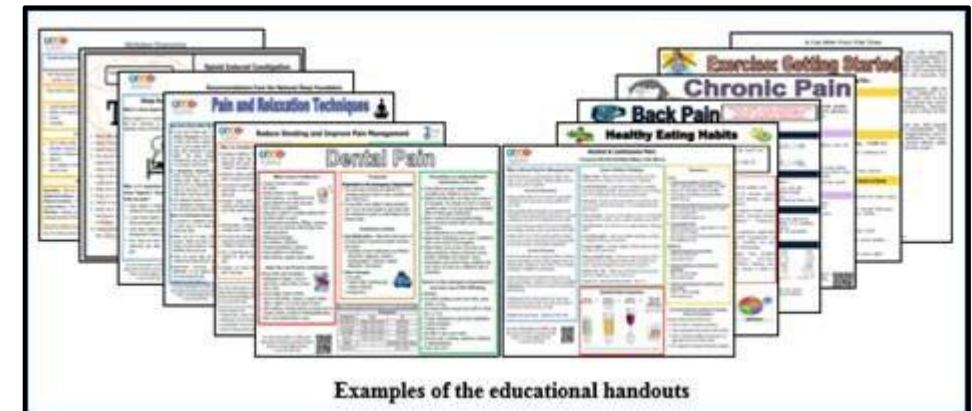
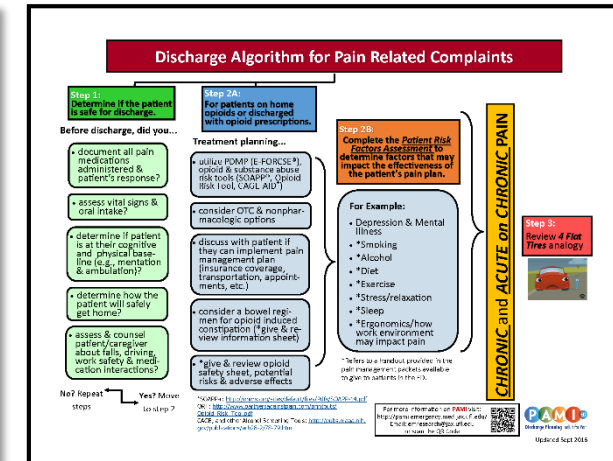
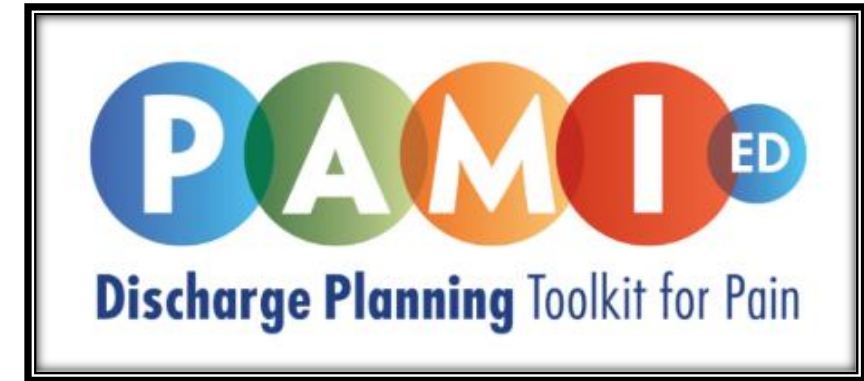
# Discharge Planning Toolkit for Pain

## Algorithms

- Safe practices
- Screening for opioid use disorders
- Identification of pain “risk factors”

## Patient discharge handouts and videos

- Tips for managing pain at home without opioids
- Utilized by pain and other clinics
- Can be incorporated into EMR D/C instructions



Examples of the educational handouts

# Remind patients in pain that they are like a car with 4 flat tires

- Medications only pump up one of the tires
- How will they “pump” up the other tires?
- Review the “Car with 4 flat tires analogy” developed by the American Chronic Pain Association

<https://www.youtube.com/watch?v=5RIi6OUK2A>



# 7. Patient Safety, Regulatory and Legal Aspects of Pain Management

# Institution, Local, State, and Federal Regulations



Providers **must** be familiar with regulations regarding pain management at their institution and at the local, state, and federal levels.

Most states now have PDMPs (prescription drug monitoring programs) and opioid legislation.

# 8. Case Scenario Discussion



# Case Scenario 1



A 54 year-old non-English speaking male is brought to the ED by EMS after sustaining a motorcycle collision approximately 20 minutes prior to arrival. He has an obvious deformity to his left femur and multiple areas of “road rash.” He received no pain medications prior to arrival. His left leg is splinted. His eyes are closed and he appears to be praying. After physical exam and x-rays, it is determined that he has a left femur fracture and profuse areas of abrasions and denuded skin contaminated with dirt and gravel.

A second patient arrives during your assessment of the first patient. Patient number 2 is a 23 year-old female that was involved in the same accident. She was the restrained backseat passenger in a pick-up truck, reports “pain all over” and is crying hysterically. After a thorough exam she is determined to have mild musculoskeletal strain and one small contusion of her forehead.

- ☐ What factors account for the different reactions to pain in these two patients?
- ☐ What are the potential barriers to adequately assessing their pain?



# Case Scenario 1 Discussion

- Patients respond to and express their degree of pain differently due to a number of psychosocial factors. The severity of injury alone does not always dictate the degree of a patient's pain.
- In this case, patient 1 objectively has sustained more severe injuries. However, patient 2 presents with a more intense and dramatic response to her injury and situation.
- There are many barriers the treatment team faces when assessing and treating these two patients, including language barriers (patient 1), lack of previous physician-patient relationship, simultaneous evaluation of potentially critical patients, and lack of knowledge regarding past pain experiences.

## Case Scenario 2

A 3 year-old right-handed male presents to his pediatrician's office with his caregiver who reports that the child has complained of pain in his right arm since yesterday. When questioned the child denies pain, but cries and pulls away when any part of the right upper extremity is touched. He has no obvious deformity or swelling to either arm.

- ☐ **How would your approach to pain assessment in this child differ from that of an adult? From an adolescent?**



# Case Scenario 2 Discussion

- Pediatric patients require a different pain assessment approach from adults as they often cannot adequately communicate their pain symptoms or the severity.
  - There are several resources clinicians can use in addition to patient report. These include pediatric pain scales, observation of the patient's behavior, and question
  - You notice the patient to be playful and interactive, but not using his right arm. Although the child is attempting his normal behaviors (such as playing), he is doing so through *compensation*. This is confirmed via his caregiver stating that he has been favoring his left arm.
  - You hand him two toys and he attempts to hold both toys using his left hand. As he is distracted with the toys, you are able to palpate his entire upper extremity and determine that his pain is localized to the elbow.
- Through the use of observation, surrogate history provided by the caregiver, and distraction you are able to localize the patient's pain.

# Case Scenario 3

- A 53 year-old male with chronic back pain underwent knee replacement one week ago. He presents to his primary care doctor complaining of persistent post-op pain. The patient reports his prescribed opioid is not controlling his pain. His pain has greatly limited his ability to perform his daily living activities.

☐ **How would you manage this patient's pain? What important questions regarding his history should be asked?**

## Case Scenario 3

- This patient suffers with chronic back pain which he treats with a prescription opioid. It is important to ask the patient how long he has been receiving prescription opioids and at what dose. Also if he was prescribed any new medications after his surgery.
- Upon further inquiry, the patient indicates that he has been taking the same opioid medication at the same dose for three years. It has always controlled his pain until his knee surgery. He reports that he was not given any new prescriptions for pain after his surgery. He was told that he should take ibuprofen as needed for pain.

## Case Scenario 3

- In this case, the patient is suffering with an increase in his baseline pain due to his recent surgery. The prescription opioid which had controlled his pain for years is no longer effective given this increase in pain. It is important to recognize that patients who have taken the same prescription opioids for significant period of time may need an increase in dose. Additionally, this patient would likely benefit from a multimodal approach utilizing other non-opioid pharmacologic and nonpharmacologic adjuncts.

# 9. Summary

# Summary

- ✓ Pain is complex and multifactorial.
- ✓ There are several different classifications of pain depending on location and etiology.
- ✓ Successful management of pain relies on a thorough pain history and exam, a stepwise approach, timely re-assessments, and appropriate selection of pharmacological and nonpharmacologic management options.
- ✓ There is no test that can adequately identify or measure pain.
- ✓ Chronic pain is a potential outcome of untreated acute pain.
- ✓ Discharge planning must take into account several safety concerns and should be centered on patient education.





# *Strive to Obtain the Complete Picture!*

It is difficult to gain a comprehensive understanding of all the factors associated with a patient's pain in one encounter. For example:

- The back pain patient who has called several times in one week to get an appointment with his primary care doctor has an important project due for work. He sustained a back injury 1 week ago in a motor vehicle accident. He was hit by a drunk driver with no insurance. His pain is uncontrolled and is interfering with his ability to run his lawn maintenance business.
- The demanding patient in bed 10 wanting pain medication for her migraine may be anxious to get home to her mother who has end-stage cancer. She has been overwhelmed balancing work, childcare and her mother's care and appointments and forgot to refill her own maintenance medications.
- The “whiner” you are transporting to the ED with sickle cell pain is an honor student who has never called 911 before for pain and accidentally left his medications at his parent's home while on a weekend visit home from college.



The PAMI website offers access to learning module handouts, PAMI Pain Management and Dosing Guide, resources, nonpharmacologic and discharge toolkits, best practices and recent pain news.

We welcome your feedback on all PAMI materials and are interested in how you use them to improve patient safety, pain education and clinical care.

Please email [emresearch@jax.ufl.edu](mailto:emresearch@jax.ufl.edu).

For more information please visit <http://pami.emergency.med.jax.ufl.edu/>



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