Community Principles of Pain Management

PRACTICE PRINCIPLES

Practice Guidelines and Principles: Guidelines and Principles are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines and Principles should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs.

Purpose and Scope:
Chronic pain and prescription opioid misuse are both major public health problems that exist across the continuum of care. Pain is a major driver for visits to physicians, a major reason for taking medications, a major cause of disability, and a key factor in quality of life and productivity. These principles aim to identify and promote the essential elements of acute, chronic and palliative pain assessment and management for both children and adults, as well as recognize the risks of opioid use disorder.

The Community Principles of Pain Management provide recommendations for primary care clinicians who are assessing, managing and prescribing treatment, including opioids, for acute, chronic pain and active cancer treatment, palliative care, and end-of-life care. The Principles were revised to align with national guidelines developed by a panel of experts and aim to help clinicians meet federal and state regulations. Improving the way opioids are prescribed through clinical practice guidelines and principles can ensure patients have access to safe and effective chronic pain treatments, while reducing the number of people who misuse or overdose from these drugs. Drug overdose deaths and opioid-involved deaths continue to increase in the United States. Deaths from drug overdose are up among men and women, all races, and adults of nearly all ages.

Key Recommendations/Messages:
- While all patients should be screened for pain, identifying a specific etiology for pain is challenging. A complete assessment, including physical, mental, emotional, and spiritual components is helpful in determining the appropriate course of management.
- It is essential to establish and focus treatment on patient specific **SMART (S**pecific, **M**easurable, **A**greed Upon, **R**ealistic, **Ti**me-based) goals that result in improved function and quality of life and reduction in suffering.
- All patients should be engaged in active management of their pain (active approach.) Because chronic pain affects the whole person (body, mind, and spirit), patient-centered nonpharmacologic therapies that acknowledge the patients' roles in their own healing processes have the potential to provide more efficient and comprehensive chronic pain management. Active self-care therapies allow for a more diverse, patient-centered treatment of complex symptoms, promote self-management, and are relatively safe and cost-effective.
- Treat acute pain actively to avoid transition to chronicity.
- Treat chronic pain thoughtfully and systematically.
- Long-term opioid use often begins with treatment of acute pain. When opioids are used for acute pain, clinicians should prescribe the lowest effective dose of immediate-release opioids & no greater quantity than needed for the expected duration of pain severe enough to require opioids.
- Check Prescription Drug Monitoring Program for opioids or benzodiazepines from other sources. Follow State and federal regulations.
- **Use risk assessment tools (e.g. Opioid Risk Tool-Revised), treatment agreements (1 Prescriber, 1 Pharmacy), and medically necessary urine drug testing.**
- **Opioids are not first line for chronic pain**, which should be managed with an active nondrug approach and non-opioid pain relievers, *if possible*.
- Consider opioid therapy based on a careful risk assessment that determines the expected benefits for both pain & function are anticipated to outweigh risks.
- *When opioids are indicated*, establish treatment goals and combine with an active nondrug approach and & nonopioid pharmacologic therapy, as indicated.
- *When opioids are indicated*, develop and document a written treatment plan in the medical record. Review at least annually, using a risk/benefit analysis. Treatment plans must include the goals for pain management and functional improvement based on the patient's diagnosis. A full discussion of how this opioid treatment will be tapered to lower doses or tapered and discontinued, if benefits do not outweigh the risks, is required. The physician must also advise the patient of alternatives to and the risks of alternatives to opioids (informed consent is a discussion of the risks/benefits/alternatives including the alternatives, no treatment, and risks of alternatives).
- *When opioids are indicated*, use a Pain Management Agreement and Informed Consent.

- Continue opioid therapy only if there is clinically meaningful improvement in pain and function that outweighs risks to patient safety.
- If benefits do not outweigh harms of continued opioid therapy, optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.
- **Avoid abrupt cessation of opioids.**
- Address opioid-seeking behavior and addiction behaviors without moving patients to illegal means of obtaining opioids.
- Prescribe Medication-Assisted Therapy (MAT) for opioid use disorder; prescribe naloxone for patients at increased risk for opioid overdosing
- Ensure safe medication disposal to avoid unauthorized access, reduce potential harm, and conserve the environment

When to Refer:

- For acute pain, refer early to appropriate specialist or pain center if diagnosis unclear or pain refractory to treatment.
- For chronic pain, refer "difficult to treat" cases to a physician with pain management expertise.
- For opioid-seeking behavior and addiction behaviors, refer to addiction or pain specialist and community services as needed.

Distributed to: All primary care physicians, specialists and allied health professionals including nurse practitioners, physician assistants, nurses, nursing assistants, rehabilitation specialists, physical therapists, occupational therapists, chiropractors, acupuncturists, other complementary medicine providers, dentists, clergy, psychologists, pharmacologists, social workers, skilled nursing facilities, assisted living centers, homecare agencies, and hospice organizations.

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Approved by: Monroe County Medical Society Quality Committee and the Excellus Health Care Quality Monitoring Committee June 2019; next revision: 2021.

Use the "Shopping Cart" button on the home page of CompassionAndSupport.org or MOLST.org to place a free order for:

- *Pain Management Patient Guide (available in English and Spanish)*
- *Equianalgesic Table for Adults (Pocket Card)*
- *Equianalgesic Table for Pediatrics (Pocket Card)*

The comprehensive Pain Toolkit and all individual components, along with additional resources, can be found in the Pain & Symptoms section of CompassionAndSupport.org: https://compassionandsupport.org/pain-symptoms/pain-guidelines/

Additional web pages include:
Opioid Use Disorder: https://compassionandsupport.org/pain-symptoms/opioid-use-disorder/
Patient Resources: https://compassionandsupport.org/pain-symptoms/patient-resources/
Help with Addiction: https://compassionandsupport.org/pain-symptoms/help-with-addiction/

Information can also be found on the Monroe County Medical Society website: http://mcms.org/communityprinciples

Guidelines and principles are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines & principles should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs.
Approved June 2019. Next Scheduled Update in 2021.

COMMUNITY PRINCIPLES OF PAIN MANAGEMENT (CPPM)

Table of Contents

ADULT GUIDE: ASSESSMENT and MANAGEMENT of PAIN

Assessment and Diagnosis

While all patients should be screened for pain, identifying a specific etiology for pain is challenging. A complete assessment, including physical, mental, emotional, and spiritual components is helpful in determining the appropriate course of management.
All patients should be actively engaged in self-management of their pain (an 'active' approach.) If necessary, therapies that represent a 'passive' approach may be utilized to encourage self-management strategies to help achieve patient centered goals.

History: Assess

- Onset, location, quality, intensity, temporal pattern, aggravating and alleviating factors, associated symptoms
- Characteristics of pain
- Red flags: indicative of underlying pathology
- Yellow flags: Psychosocial factors shown to be indicative of long-term chronicity and disability: A negative attitude that pain is harmful or potentially severely disabling; fear avoidance behavior and reduced activity levels; an expectation that passive, rather than active, treatment will be beneficial; a tendency to depression, low morale, and social withdrawal; social or financial problems
- Review previous methods of treatment, response to treatment & adverse reactions
- Other medical and surgical conditions
- Substance use

Psychosocial History: Assess

- Depression, anxiety, PTSD, sleep pattern, suicide risk
- Impact on quality of life, ADLs & functional status
- Pain coping skills
- Patient, family, and caregiver's cultural and spiritual beliefs
- Secondary gain: psychosocial/financial

Pain, Function & Quality of Life: Assess

- Evaluate pain on all patients using the 0-10 scale (Use Faces Pain Scale – Revised):
  A. mild pain: 1-3
  B. moderate: 4-7 (interferes with work or sleep)
  C. severe: 8-10 (interferes with all activities)
- Capture variation in pain severity at different sites of pain (Use Ransford Pain Drawing)
- Recognize pain varies at different times of day
- Assess impact of pain on function & quality of life (Use PEG Scale: A Three-Item Scale Assessing Pain Intensity and Interference
- Ask the patient what matters most and about personal goals for care

Diagnosis & Treatment Plan

- Order and evaluate appropriate diagnostic testing
- Determine diagnosis
- Develop & document a written treatment plan in medical records.

Treatment

Goals

- Treat acute pain actively to avoid transition to chronicity.
- Treat chronic pain thoughtfully and systematically.
- If possible, identify and address the etiology of pain, including potential confounders (such as psychosocial issues.)
- Maintain an active approach that enables the ability to function safely and productively.
- Allow emergence of emotions associated with pain.
- Establish patient specific SMART (Specific, Measurable, Agreed Upon, Realistic, Time-based) goals that result in improved function and quality of life & reduction in suffering.

Nonpharmacologic Therapy: Active Approach

- Patient and Family Education
- Cognitive Behavioral Therapy; Supportive Psychotherapy
- Community and Web-based Support Group
- Exercise: Yoga, Tai Chi, Qi Gong, Walking, Water Therapy
- Meditation, Mindful Practice; Visualization/Interactive Guided Imagery
- Physical Therapy; Chiropractic/Osteopathic Care
- Prayer, Spiritual & Pastoral Support
- Relaxation Techniques: Biofeedback

Nonpharmacologic Therapy: Passive Approach

- Acupressure (trigger point therapy)
- Acupuncture (trigger point therapy)
- Counterstimulation: TENS
- Cutaneous Stimulation: Ice, Heat
- Manipulation/Manual Therapies
- Massage, Music, Hydrobath
- Therapeutic Touch, Reiki, Healing Touch

Pharmacologic Therapy

- Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for treatment of pain.
- For neuropathic pain, use anti-epilepsy drugs (AEDs) first
- Use adjuvant therapies or analgesics as needed
- Opioids are not first line for chronic pain, which should be managed with an active approach and non-opioid pain relievers, if possible.
- Consider opioid therapy based on a careful risk assessment that determines the expected benefits for both pain & function are anticipated to outweigh risks. If opioids are used, establish treatment goals, combine w/active approach & nonopioid analgesics as indicated.
- When opioids are indicated establish treatment goals, combine with an active approach & adjuvant medication as indicated. See Opioid Guidelines on Equianalgesic Table for Adults.
- Avoid combination with potentiator drugs (i.e. benzodiazepines)

Management and Monitoring

General

- Reassess pain, quality of life and function regularly, focusing on patient-centered goals
- Follow amount and duration of response
- Partner with patient/family in setting goals of care
- Balance function vs. acceptable control of pain

Referrals

Acute pain

- Refer early to appropriate specialist or Pain Center, if diagnosis unclear or pain refractory to treatment

Chronic pain

- Set realistic chronic care goals
- Transition from passive recipient to patient-directed management.
- Refer "difficult to treat" cases (H/O substance abuse, neuropathic pain, rapidly escalating opioid doses) to physician with pain management expertise

Special Considerations for Patients on Opioids

- Use risk assessment tools (e.g. ORT-R), treatment agreements, and medically necessary urine drug testing for compliance/diversion
- Check Prescription Drug Monitoring Program for opioids or benzodiazepines from other sources
- Follow state and federal regulations
- Evaluate benefits & harms w/patients in 1-4 wks. of starting opioid for chronic pain or dose escalation.
- Consider co-prescribing naloxone in at-risk patients (i.e. H/O substance abuse, high MME dose, polypharmacy)
- Review safe disposal of opioids
- Evaluate benefits & harms of continued therapy with patients every 3 months or more frequently.
- If benefits do not outweigh harms of continued opioid therapy, optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids.
- Avoid abrupt cessation of opioids
- Address opioid-seeking behavior and addiction behaviors without moving patients to illegal means of obtaining opioids. Refer to addiction or pain specialist and community services as needed

Special Situations

Anxiety and depression: See Depression Guidelines
Verbally non-communicative patients: See Nurse's Guide

Assessment and Diagnosis

While all patients should be screened for pain, identifying a specific etiology for pain is challenging. A complete assessment, including physical, mental, emotional, and spiritual components is helpful in determining the appropriate course of management. All patients and families, where appropriate, should be actively engaged in self-management of their pain.

History: Assess

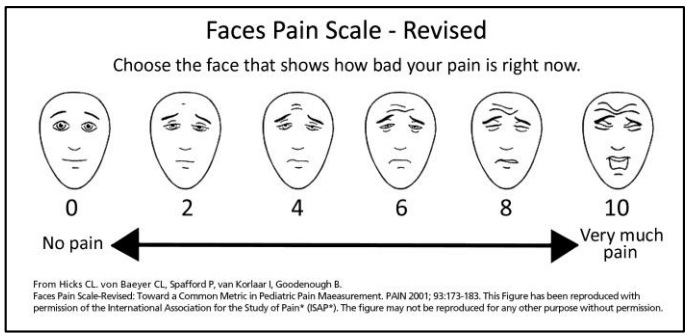
- Onset, location, quality, intensity, temporal pattern, aggravating and alleviating factors, associated symptoms
- Characteristics of pain; previous methods of treatment
- Other medical and surgical conditions.• Substance use

Psychosocial History: Assess

- Depression, anxiety, PTSD, sleep pattern, suicide risk
- Impact on quality of life, ADLs & performance status
- Patient, family, and caregiver's cultural and spiritual beliefs
- Secondary gain: psychosocial/financial

Assessment

- Order and evaluate appropriate diagnostic testing
- Evaluate pain on all patients using the age/developmentally appropriate scale:
  1. Numeric scale & FPS-R: Adolescents and older children
     - A. mild pain: 1-3
     - B. moderate: 4-7 (interferes with work or sleep)
     - C. severe: 8-10 (interferes with all activities)
  2. Faces Pain Scale-Revised (FPS-R): Younger children (~6-10 years old)
  3. FLACC-revised scale: <6 years old/developmentally delayed
  4. NIPS: Neonatal Infant Pain Score



From Hicks CL. von Baeyer CL, Spafford P, van Korlaar I, Goodenough B. Faces Pain Scale-Revised: Toward a Common Metric in Pediatric Pain Maeasurement. PAIN 2001; 93:173-183. This Figure has been reproduced with permission of the International Association for the Study of Pain* (ISAP*). The figure may not be reproduced for any other purpose without permission.

Diagnostic Terms

Somatic pain: localized; ache, throb, or gnaw
Visceral pain: often referred; cramp, pressure, deep ache, squeeze
Neuropathic pain: burns, electric shock, hot, stab, numb, itch, tingle
Acute Pain: ↑HR, HBP, diaphoresis, pallor, fear, anxiety
Chronic pain: sleep difficulties, loss of appetite, psychomotor retardation, depression, career/relationship change

Treatment

Goals

- Treat acute pain aggressively to avoid chronic pain
- Treat chronic pain thoughtfully and systematically
- Identify and address the cause of pain
- Maintain alertness, ability to function safely/productively
- Allow emergence of feelings other than pain
- Intervene as noninvasively as possible
- Negotiate target with patient/family

Non-Pharmacological Therapy

- Patient/Family Education (Consider Child life)
- Community & Web-based Support Groups
- Cognitive Behavioral Therapy; Supportive Psychotherapy
- Physical Therapy; Chiropractic/Osteopathic Care; Massage
- Exercise: Yoga, Tai Chi, Qi Gong, Walking, Water Therapy
- Cutaneous Stimulation: Ice, Heat; Counterstimulation: TENS
- Acupuncture & Acupressure (trigger point Rx)
- Relaxation techniques: Biofeedback, Music, Hydrobath, Reiki, Therapeutic Touch, Healing Touch
- Meditation, Mindful Practice, Visualization/Interactive Guided Imagery; Prayer; Spiritual & Pastoral Support

Pharmacologic Therapy

- Nonpharmacologic therapy and nonopioid pharmacologic therapy are preferred for treatment of pain.
- For neuropathic pain, use anti-epilepsy drugs (AEDs) first
- Use adjuvant therapies or analgesics as needed
- Opioids are not first line for chronic pain, which should be managed with an active approach and non-opioid pain relievers, if possible.
- Consider opioid therapy based on a careful risk assessment that determines the expected benefits for both pain & function are anticipated to outweigh risks. If opioids are used, establish treatment goals, combine w/active approach & nonopioid analgesics as indicated.
- When opioids are indicated (e.g. patients with cancer, post-trauma, palliative and end-of-life care), combine with an active approach & adjuvant medications as indicated. See Opioid Guidelines on Equianalgesic Table for Children.
- Avoid inappropriate use of opioids; prevents potential misuse
- Older children and adolescents are not immune to opioid dependence, addiction, abuse and experimentation. Opioids are often prescribed for acute sports injuries and other trauma: the lowest possible doses and briefest duration of therapy should be used to minimize risk of dependence and addiction.

See Adult Guide & key recommendations on page 1.

Management and Monitoring

General

- Reassess regularly
- Assess pain using tools (i.e. numeric scale, face scale); respond urgently to pain ≥8
- Follow amount and duration of response
- Assess performance status
- Partner with patient/family in setting goals of care
- Balance function vs. complete absence of pain

Referrals and Management

Acute pain

- Refer early to appropriate specialist or Pain Center, if diagnosis unclear or pain refractory to treatment

Chronic pain

- Set realistic chronic care goals
- Transition from passive recipient to patient-directed management of therapies where appropriate
- Refer "difficult to treat" cases (H/O substance abuse, neuropathic pain, rapidly escalating opioid doses) to MD with palliative care or pain expertise

Neuropathic pain

- Use anti-epilepsy drugs (AEDs) first
- Use step 2 drug to help Rx

Special Situations

Anxiety and depression

- Refer to Depression Guidelines

Verbally non-communicative patients

- Infants, children & cognitively impaired all feel pain
- Evaluate patient's non-specific signs: noisy breathing, grinding teeth, bracing, rubbing, crying, agitation

Infants (use appropriate pain scale)

- Start at ¼ - ½ usual dose
- Watch carefully for toxicity from accumulation

Patients with substance abuse history

- May need higher starting dose (tolerance)
- Use prescribing contracts for outpatient use
- Consider abuse-deterrent formulations

Be aware of potential for addiction and misuse

- Encourage established functional goals
- Ensure follow-up

QUEST Principles of Pain Assessment[1]

- Question the child
- Use pain rating scales
- Evaluate behavior and physiological changes
- Secure parent's involvement
- Take cause of pain into account
- Take action and evaluate results

Neonates[2]

Signs of Acute Pain	Signs of Chronic Pain
Crying and moaning	Apathy
Muscle rigidity	Irritability
Flexion or flailing of the extremities	Changes in sleeping and eating patterns
Diaphoresis	Lack of interest in their surroundings
Irritability	
Guarding	
Changes in vital signs and pupillary dilatation	

Older Children

- Children < 6 years old or unable to communicate, clinicians should use the FLACC-revised scale
- Children >~6-10 may use the Faces (FPS-R) scale
- Children over 5 may be able to use descriptor words (stinging, burning)[2]
- Children over 6, who understand the concepts of rank and order, can use scales[2]

Categories of Pain[3]

Procedure-Related Pain

- Anticipation of intensity, duration, coping style and temperament child, type of procedure, history of pain and family support system

Operative Pain and Trauma-Associated Pain

- Postoperative pain management should be discussed prior to surgery
- Control pain as rapidly as possible

Acute Illness

- Determine severity of pain by the particular illness and situation

Pharmacological Therapy[2]

- Oral or IV administration of pain medication is the preferred method.
- Avoid painful IM injections.
- The initial choice of analgesic should be based on the severity and type of pain (see table below).
- IV Opioids can be safely titrated to effect in the pediatric inpatient setting
- For older children PCA is an acceptable form of administering pain medication with proper patient and family education.

Pharmacologic therapy is based on severity of pain:

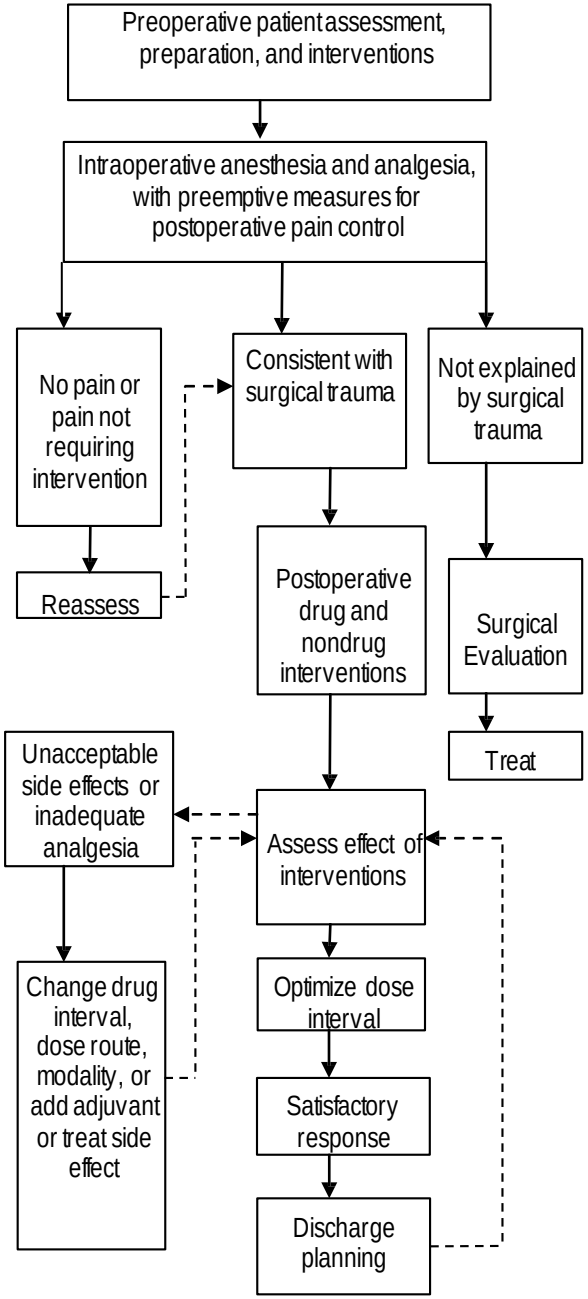
Pain Severity	Analgesic Choice	Examples
Mild (pain score 1-3)	Acetaminophen*(APAP) or NSAID**	Tylenol®, Ibuprofen, Naproxen
Moderate (pain score 4-7)	PO APAP/opioid combinations IV/PO low dose MSO4	Toradol®, Vicodin®, Tylox®
Severe (pain score 8-10)	Opioid	Morphine, Fentanyl®, Hydromorphone

Drug	Oral Dose	
Mild Pain	Children	Adolescents
Ibuprofen**	5-10 mg/kg	400-600 mg q6 hrs prn
Acetaminophen (APAP)*	10-15 mg/kg	300-600 mg q4-6 hrs prn
Use APAP* or ibuprofen** to enhance analgesia		
Moderate or Severe Pain	Children & Adolescents	
Morphine	0.15-0.3 mg/kg/dose q3-4 hrs	
Hydromorphone	0.03-0.06 mg/kg/dose q3-4 hrs	
Oxycodone	0.1-0.2 mg/kg/dose q3-4 hrs	

*Daily dosing of Acetaminophen not to exceed 15 mg/kg/dose or 5 doses per day (75 mg/kg/24 hrs) in children <40 kg and 3000 mg/24 hrs in adolescents ≥40 kg.

**NSAIDs – monitor in patients on anticoagulation therapy and/or history of bleeding disorder; limit use ≤5 days.

Operative Pain Management



1. Baker CM and Wong DL. 1987. Q.U.E.S.T.: A Process of Pain Assessment in Children. *Orthopaedic Nursing*. 6(1):11-21. http://www.wongbakerfaces.org/wp-content/uploads/2010/08/QUEST.pdf. Accessed: 25 August 2014.
2. American Academy of Pediatrics, Committee on Psychosocial Aspects of Child and Family Health and American Pain Society, Task Force on Pain in Infants, Children and Adolescents. 2001. The Assessment and Management of Acute Pain in Infants, Children, and Adolescents. *Pediatrics 108*(3): 793-797. http://pediatrics.aappublications.org/content/108/3/793.full.pdf+html. Accessed: 25 August 2014.
3. Agency for Health Care Policy and Research, United States Department of Health & Human Services. 1992. Clinicians' Quick Reference Guide to Acute Pain Management in Infants, Children and Adolescents: Operative and Medical Procedures. *Journal of Pain and Symptom Management* 7(4):229-42.

PRINCIPLES OF PAIN MANAGEMENT: BEDSIDE NURSING ASSESSMENT TOOL

Assessment and Diagnosis

"Pain is whatever the experiencing person says it is, existing whenever the experiencing person says it does." (McCaffery, 1999)

History & Comprehensive Assessment

- Onset, location, quality, intensity, temporal pattern, aggravating and alleviating factors, associated symptoms
- Characteristics of pain
  Somatic pain: localized; ache, throb, or gnaw
  Visceral pain: often referred; cramp, pressure, deep ache, squeeze
  Neuropathic pain: burns, electric shock, hot, stab, numb, itch, tingle
  Acute Pain: ↑HR, HBP, diaphoresis, pallor, fear, anxiety
  Chronic pain: sleep difficulties, loss of appetite, psychomotor retardation, depression, career/relationship change
- Underlying causes of pain to target treatment
- Impact of pain on physical function (i.e. mobility, ADLs, impact on activities) and psychosocial function (i.e. depression, anxiety, sleep)
- Depression, anxiety, PTSD, sleep pattern, suicide risk
- Patient, family and caregiver's cultural and spiritual beliefs
- Pain coping skills
- Previous and current methods of treatment: effectiveness, adverse events, OTCs
- Other medical and surgical conditions
- Substance use and risk for misuse (e.g. Opioid Risk Tool- Revised)

Routine Assessment of Pain, Function & Quality of Life

- Evaluate pain on all patients using the 0-10 scale (Use Faces Pain Scale – Revised):
  A. mild pain: 1-3
  B. moderate: 4-7 (interferes with work or sleep)
  C. severe: 8-10 (interferes with all activities)
- Capture variation in pain severity at different sites of pain (Use Ransford Pain Drawing)
- Recognize pain varies at different times of day
- Capture the impact of pain on function & quality of life (Use PEG Scale: A Three-Item Scale Assessing Pain Intensity and Interference
- Ask the patient what matters most and personal goals for care

Treatment

Goals

- Based on patient values/preferences considering pain intensity, improved function, and cognitive function.
- Balance pain relief, improved function and adverse events
- Treat acute pain aggressively to avoid chronic pain
- Treat chronic pain thoughtfully and systematically
- Identify and address the cause of pain
- Intervene as noninvasively as possible

Active Approach

- Patient / Family Education
- Cognitive Behavioral Therapy; Supportive Psychotherapy
- Community & Web-based Support Groups
- Exercise: Yoga, Tai Chi, Qi Gong, Walking, Water Therapy
- Meditation, Mindful Practice; Visualization/Interactive Guided Imagery;
- Physical Therapy; Chiropractic/ Osteopathic Care
- Prayer, Spiritual & Pastoral Support
- Relaxation Techniques: Biofeedback,

Passive Approach

- Acupressure (trigger point therapy)
- Acupuncture (trigger point therapy)
- Cutaneous Stimulation: Ice, Heat; Counterstimulation: TENS
- Massage, Music, Hydrobath
- Manipulation/Manual Therapies
- Therapeutic Touch, Reiki, Healing Touch

Pharmacological Therapy

- Dispense medication as ordered using the 5 Rights: patient, drug, dose, route, time)
- Administer analgesics based on assessment of pain severity and available prescriptions
- Evaluate treatment effectiveness based on goal achievement and/or adverse events
- Communicate unrelieved pain or AE to PCP for changes in treatment plan

Anticipate side effects

- Prevent constipation: start senna, miralax
- Nausea: treat with antiemetics or change meds
- Pruritus: treat with antihistamines or change meds
- Mental impairment: avoid driving/hazardous situations until side effect profile stabilizes; reassess safety periodically

Management and Monitoring

General

- Reassess regularly for pain, pain relief & function
- Consistently use valid tools (i.e. numeric scale, face scale); respond urgently to severe pain ≥8
- Clearly document time medication is given and response to pain medication
- Assess mobility and ADL status
- Partner with patient/family in setting goals of care
- Balance function versus complete absence of pain

Special Situations

Anxiety and depression

- Provide emotional support
- Advocate for psychosocial consultation or analgesic management prn

Verbally non-communicative patients

- Cognitively impaired all feel pain but may not be able to communicate pain
- Infants, children feel pain – see Pediatric Guide
- Evaluate patient's behaviors related to discomfort such as grimacing, moaning/groaning, bracing, rubbing, guarding, crying, noisy breathing, grinding teeth, frightened facial expressions, tense, fidgeting, agitation, disruptive behavior
- Use valid and reliable nonverbal pain behavior tool appropriate to the population (e.g. PAINAD)
  Please Note: Similar findings are often seen in terminal restlessness.
- Autonomic changes in acute pain may be blunted in dementia

Older adults or people with renal or hepatic disease

- Watch carefully for toxicity from accumulation

Prevent opioid misuse/abuse

- Monitor for signs of misuse and/or abuse
- Encourage established functional goals
- Ensure follow-up and evaluation of treatment effectiveness

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Pain Assessment in Advanced Dementia- PAINAD (Warden, Hurley, and Volicer, 2003) *

ITEMS	0	1	2	SCORE
Breathing Independent of vocalization	Normal	Occasional labored breathing. Short period of hyperventilation	Noisy labored breathing. Long period of hyperventilation. Cheyne-stokes respirations.	
Negative vocalization	None	Occasional moan or groan. Low- level of speech with a negative or disapproving quality	Repeated troubled calling out. Loud moaning or groaning. Crying	
Facial expression	Smiling or inexpressive	Sad, frightened, frown	Facial grimacing	
Body language	Relaxed	Tense. Distressed pacing. Fidgeting	Rigid. Fists clenched. Knees pulled up. Pulling or pushing away. Striking out	
Consolability	No need to console	Distracted or reassured by voice or touch	Unable to console, distract or reassure	
TOTAL*				

* Total scores range from 0 to 10 (based on a scale of 0 to 2 for five items), with a higher score indicating more severe pain (0="no pain" to 10="severe pain").

Instructions: Observe the older person both at rest and during activity/with movement. For each of the items included in the PAINAD, select the score (0, 1, or 2) that reflects the current state of the person's behavior. Add the score for each item to achieve a total score. Monitor changes in the total score over time and in response to treatment to determine changes in pain. Higher scores suggest greater pain severity.

Note: Behavior observation scores should be considered in conjunction with knowledge of existing painful conditions and surrogate report from an individual knowledgeable of the person and their pain behaviors.

Remember that some patients may not demonstrate obvious pain behaviors or cues.

*** Please Note: Similar findings are often seen in terminal restlessness.**

Reference: Warden V, Hurley AC, and Volicer V. 2003. Development and psychometric evaluation of the Pain Assessment in Advanced Dementia (PAINAD) Scale. *Journal of the American Medical Directors Association 4*(1): 9-15.

Developed at the Geriatric Research, Education Clinical Center at Edith Nourse Rodgers Memorial Veterans Medical Center, Bedford, MA.

Reviewed and Approved: June 2019; Next Scheduled Update in 2021.

Non-opioid Pharmacologic Therapy for the Treatment of Chronic Pain in Adults

The guidelines for the Management of Chronic Pain released by the CDC in 2016 recommends using nonpharmacologic and non-opioid therapies as the initial option for the treatment of chronic pain in adults. The following chart summarizes the uses and cautions that apply to many of the non-opioid analgesic medications. Doses are not definitive and must be individualized to the specific needs of the patient. Choice of agent should take into account other concurrent medical conditions and treatment modalities. The common use in chronic pain management represents both FDA approved indications and off-label uses. Some medications have multiple effects that can be used to treat the patient's pain as well as other comorbid conditions that are often found to co-exist with chronic pain (e.g. depression, anxiety, insomnia). Neuropathic pain encompasses multiple conditions, such as painful polyneuropathy (e.g. diabetic neuropathy), post-herpetic neuralgia, and central neuropathic pain.

Non-opioid Pharmacologic Therapy for Chronic Pain in Adults[a, 2]

Drug	Common Use(s)	Suggested Dose(s)	Clinical Considerations
Analgesics			
Acetaminophen[15]	Musculoskeletal pain	Up to 3,000-4000mg/day, divided doses dependent on formulation	• Not anti-inflammatory • Acetaminophen's recommended maximum daily dose (MDD) is 3000mg if patient is self-treating or 4000mg if their health care professional instructs them to do so. The MDD may be decreased for patients who consume alcohol (e.g. >3 alcoholic beverages per day) or have elevated liver enzymes
NSAID, COX-2 selective NSAID	Musculoskeletal pain	Indication specific	• Assess risk of nephrotoxicity, drug interactions, CV disease and GI toxicity prior to prescribing; administer with PPI or H2 blocker if GI intolerance or high risk; risk of cardiac adverse events (ibuprofen > naproxen); COX 2 agents maybe preferred agents for cardiac & renal safety; consider topical agents for individuals unable to use oral therapy
Anticonvulsants			
Carbamazepine[7-9]	Trigeminal or glossopharyngeal neuralgia	**Initial:** 100mg/day, frequency is formulation dependent **Titration:** increase weekly by 100-200mg/day **Effective:** 200-400mg three times daily	• **Common AEs:** dizziness, drowsiness, ataxia, nausea, vomiting, xerostomia, weakness, blurred vision • **Major AEs:** aplastic anemia and agranulocytosis, serious dermatologic reactions (e.g. toxic epidermal necrolysis, Stevens-Johnson syndrome), test for HLA-B*1502 allele prior to initiating treatment in patients with Asian ancestry, including South Asian Indians, as they have an increased likelihood of carrying this allele • Consider monitoring blood levels, particularly after dosage adjustment. Watch for drug-drug interactions. Monitor liver function tests
Gabapentin[3-5,7,8,14]	Neuropathic pain, fibromyalgia	**Initial:** 100-300mg, 1-3x/day **Titration:** increase every 5 to 7 days by 300mg/day **Effective:** 900-3600mg/day, divided doses • DPN: 1800-3600mg/day, divided doses **Duration of adequate trial:** 3-8 weeks for titration plus 2 weeks at maximum dosage	• **Common AEs:** somnolence, dizziness, ataxia, fatigue, peripheral edema • **Major AEs:** Stevens-Johnson syndrome, suicidal thoughts and behavior, seizures after rapid discontinuation, thrombocytopenia • Requires renal dose adjustment • Slow initiation is recommended and should be done until minimal effective dose reached or intolerable side effects. When discontinuing, taper off gradually over at least 1 week
Pregabalin[3-5,7,8,10,14] *Brand only available (Lyrica®) *Controlled substance: C-V	Neuropathic pain, fibromyalgia	**Initial:** 25-75mg, 1-3x/day **Titration:** increase weekly by 50-150mg/day **Effective:** 300-600mg/day in divided doses • DPN: 300-600mg/day • Fibromyalgia: 150-450mg/day • SCI, post-herpetic neuralgia: 150-600mg/day **Duration of adequate trial:** 4 weeks	• **Common AEs:** somnolence, dizziness, peripheral edema, headache, ataxia, fatigue, xerostomia, weight gain • **Major AEs:** angioedema, hepatotoxicity, rhabdomyolysis, suicidal thoughts and behavior, seizures after rapid discontinuation, thrombocytopenia • Renal dose adjustment needed • Slow initiation is recommended, for example: 75mg at bedtime for a week, then increase by 50-75mg every 5 days as tolerated. When discontinuing, taper off gradually over at least 1 week • This product is more expensive compared to gabapentin.

Drug	Common Use(s)	Suggested Dose(s)	Clinical Considerations
Valproic acid[8,9]	Neuropathic pain	**Initial:** 500mg/day **Effective:** no specific dosing, doses as high as 1,200mg/day have been studied	• **Common AEs:** headache, drowsiness, dizziness, nausea, abdominal pain, tremor, weakness • **Major AEs:** peripheral edema, hepatotoxicity, pancreatitis, patients with mitochondrial disease (avoid use) • Considered to be 3rd drug for neuropathic pain. Watch for drug-drug interactions
Antidepressants **Note:** all antidepressants take approximately two weeks to exert their full analgesic effect at any particular dose[7]			
TCAs[3-9,14,15] Amitriptyline	Neuropathic pain, fibromyalgia, depression, chronic pain, insomnia	**Initial:** 10-25mg/day **Titration:** increase weekly by 10mg/day **Effective:** 25-150mg/day • DPN: 25-100mg/day Duration of adequate trial: 6-8 weeks with at least 2 weeks at maximum tolerated dose	• **Common AEs:** xerostomia, somnolence, fatigue, headache, dizziness, insomnia, orthostatic hypotension, anorexia, nausea, urinary retention, constipation, blurred vision, accommodation, disturbance, mydriasis, weight gain • **Major AEs:** delirium, cardiac arrhythmias, conduction abnormalities, myocardial infarction, heart failure exacerbation, stroke, seizures, hepatotoxicity, bone marrow suppression, suicidal thoughts and behavior, shift to mania in bipolar disorder, neuroleptic malignant syndrome, serotonin syndrome, severe hyponatremia, fragility bone fractures • **NOTE:** TCAs, in general, should be avoided in patients >65 years of age due to their adverse effects. Nortriptyline and, to a lesser extent, desipramine are the TCAs of choice in the elderly. As secondary amines, they are associated with less anticholinergic, antihistaminic, and orthostatic hypotension. Cardiac toxicity is equal amongst the TCAs. Avoid use in dementia. Desipramine and nortripytline doses should be limited to 25-50mg/day in the elderly.
Nortriptyline	Neuropathic pain, fibromyalgia, depression, chronic pain, myofascial pain, orofacial pain, insomnia		
Desipramine	Neuropathic pain, depression		
SNRIs[3-9, 14,15] Duloxetine	C-MSP (includes chronic low back pain or osteoarthritis of the knees), neuropathic pain, GAD, Major Depressive Disorder, fibromyalgia	**Initial:** 20-30mg/day **Titration:** may increase up to 60mg/day after one week **Effective:** 60-120mg/day **Duration of adequate trial:** 4 weeks	• **Common AEs** for both duloxetine and venlafaxine: nausea, somnolence, dizziness, constipation, dyspepsia, diarrhea, xerostomia, anorexia, headache, diaphoresis, insomnia, fatigue, decreased libido • **Major AEs** for both duloxetine and venlafaxine: Stevens-Johnson syndrome, hepatotoxicity, hypertensive crisis, gastrointestinal hemorrhage, delirium, myocardial infarction, cardiac arrhythmias, glaucoma, suicidal thoughts and behavior, shift to mania in patients with bipolar disorder, seizures, severe hyponatremia, fragility bone fractures, serotonin syndrome, neuroleptic malignant syndrome • Duloxetine has more adrenergic activity and may potentially be "better" for chronic pain. Although it may be started at 60mg/day, there can be a higher incidence of side effects (e.g. nausea), especially in older adults (>65 years), so initiating at a lower dose is recommended. • Renal and hepatic dose adjustment is needed for both duloxetine and venlafaxine
Venlafaxine	Neuropathic pain, GAD, Major Depressive Disorder, panic disorder, social phobia, fibromyalgia	**Initial:** 37.5mg/day Titration: increase weekly by 37.5mg/day **Effective:** 150-225mg/day, single dose extended-release formulation • DPN: 75-225mg/day **Duration of adequate trial:** 4-6 weeks	
Milnacipran *Brand only available (Savella®)	Fibromyalgia	**Initial/titration:** 12.5mg once on day 1, then 12.5mg twice daily on days 2-3, 25mg twice daily on days 4-7, then 50mg twice daily thereafter **Effective:** 100-200mg/day, divided doses	• **Common AEs:** Headache, insomnia, hot flash, nausea, constipation, palpitations, increased heart rate, hypertension, xerostomia, migraine • **Major AEs**: Suicidal thoughts and behavior • Potent inhibitor of norepinephrine and serotonin reuptake (3:1) with no significant activity for serotonergic receptors

Drug	Common Use(s)	Suggested Dose(s)	Clinical Considerations
Skeletal Muscle Relaxants			
Cyclobenzaprine[9,13,15]	Muscle spasm	**Dose:** 5mg 3x/day, may increase up to 10mg 3x/day if needed	• **Common AEs:** drowsiness, dizziness, xerostomia, headache, confusion • Use not recommended in moderate to severe hepatic impairment • **NOTE:** This is on the Beer's list as a high-risk medication in the elderly as it has moderate anticholinergic burden. Closely related to TCAs so should not be used in combination with other TCAs. Do not use longer than 2 to 3 weeks. Avoid long-term use in chronic pain.
Baclofen[9.13,15]	Spasticity	**Dose:** 5mg 3x/day, may increase up to 40-80 mg/day as needed	• **Common AEs:** hypotonia, drowsiness, urinary retention, urinary frequency, constipation, xerostomia, dizziness, paresthesia, hypertonia • **Major AEs:** seizure • **NOTE:** This is on the Beer's list as a high-risk medication in the elderly. Abrupt withdrawal of oral therapy has been associated with hallucinations and seizures; gradual dose reductions (over ~1 to 2 weeks) are recommended in the absence of severe adverse reactions.
Methocarbamol[9,13,15]	Muscle spasm	**Dose:** 1.5g 4 times/day for 2-3 days (up to 8 g/day may be given in severe conditions), then decrease to 4-4.5g/day in 3-6 divided doses	•**AEs:** bradycardia, flushing, hypotension, syncope, dizziness, nausea, urine discoloration (brown, black or green) •**NOTE:** This is on the Beer's list as a high-risk medication in the elderly. It is available in Canada as an OTC.
Tizanidine[9,15]	Spasticity	**Dose:** 2mg up to 3x daily, maximum 36mg daily	•**Common AEs:** hypotension, orthostatic hypotension (may be limiting factor), drowsiness, dizziness, xerostomia, weakness, bradycardia, constipation, anxiolytic •Gradually taper dose by 2-4mg daily when discontinuing therapy •Renal dose adjustment needed
Metaxalone[9.13]	Musculoskeletal conditions	**Dose:** 800mg 3 to 4 times daily	•**AEs:** dizziness, drowsiness, headache, irritability, nervousness, GI upset, hemolytic anemia, leukopenia •**NOTE:** This is on the Beer's list as a high risk medication in the elderly. Use with caution in liver disease.
Carisoprodol[9,13,15] *Controlled substance: C-IV	Musculoskeletal conditions	**Dose:** 250 to 350mg 3 times daily and at bedtime for a maximum recommended duration of 2 to 3 weeks	•**Common AEs:** drowsiness, dizziness, headache •**NOTE:** Avoid due to addictive potential as it is part of the **"Holy Trinity" of addiction**, which is a regimen that includes at least 1 opioid, a benzodiazepine, and carisoprodol. It is on the Beer's list as a high risk medication in the elderly. In patients with a history of long-term use or high doses, it should be tapered off slowly (e.g., over 14 days) to avoid withdrawal symptoms such as anxiety, insomnia, or irritability. Avoid use in chronic pain.
Topical Medications			
Lidocaine patch[5,7,9,12,14]	Neuropathic pain, localized pain	**Dose:** Apply patch to painful area. Patch may remain in place for a maximum of 12 hours in any 24-hour period **Duration of adequate trial:** 3 weeks	• Avoid use on traumatized mucosa, skin irritations • Up to 3 patches may be applied in a single application and may be cut to shape • The 5% prescription strength ($6/patch) may require prior approval through the insurer whereas the OTC 4% patch is also effective and less expensive ($3/patch)
Diclofenac gel/patch[9,15]	Localized musculoskeletal pain	**Osteoarthritis:** apply 4g to lower extremities 4x daily or 2g to upper extremities **Acute pain** (strains, sprains, contusions): 1 patch applied twice daily to most painful area	• Avoid use on non-intact/damaged skin including dermatitis, eczema, burns or wounds • Diclofenac patch needs to be removed prior to MRI procedures

Drug	Common Use(s)	Suggested Dose(s)	Clinical Considerations
Capsaicin OTC cream, patch[5,9,15,16]	Localized muscle and joint pain, DPN	**Muscle/joint pain:** *Cream:* Apply thin film to affected areas 3-4 times daily. *Patch:* concentration dependent **DPN:** Cream (0.075%) applied 4 times/day	• **Common AEs:** Causes increased burning during initial use, which usually lessens within 72 hours with repeated use. Should not be used in acute herpes zoster due to risk of mucosal contact. • Avoid use on wounds, damaged/irritated skin. Do not cover with bandage or use with external heat source. Instruct patients to use a glove or plastic bag for application and wash their hands following use. • An adequate trial usually requires four applications daily, around the clock, for at least three to four weeks.
Isosorbide dinitrate spray[5]	DPN	**Dose:** 30mg at bedtime applied to bottom of feet	
Methyl Salicylate, Menthol, Camphor[15,16]	Counterirritants	Apply no more often than 3 to 4 times daily for up to 7 days • Temporary relief of minor aches and sprains of muscles and joints • Simple backache, arthritis pain, strains, bruises, and sprains	• Product availability: come in various forms (e.g. balms, creams, gels, and patches) under several different brands (e.g. BenGay®, Icy Hot®, Salonpas®) and either alone or in different combinations of counterirritants • Methyl salicylate: localized reactions (e.g. skin irritation or rash) and systemic reactions (e.g. salicylate toxicity) may occur

Abbreviations: NSAID - Nonsteroidal Anti-Inflammatory Drug. **AE –** adverse effect. **SCI –** spinal cord injury. **C-MSP –** chronic musculoskeletal pain. **GAD –** generalized anxiety disorder. **TCA –** tricyclic antidepressant. **SNRI –** serotonin-norepinephrine reuptake inhibitor. **OTC –** over-the-counter. **DPN –** diabetic peripheral neuropathy. **CV** – cardiovascular. **GI** – gastrointestinal. **PPI** – proton pump inhibitor. **H_2 blocker** – histamine H_2 antagonist.

a. This resource was initially adapted from the CPPM toolkit that has been in place since 2002. This resource was expanded in depth by Greater Rochester Independent Practice Association (GRIPA). This tool is now included in the CPPM Toolkit with permission of GRIPA.

The Community Principles of Pain Management (CPPM) is a professional resource approved by the Excellus Health Care Quality Monitoring Committee and the Monroe County Medical Society Quality Collaborative. It can be found on the Pain Guidelines web page: https://compassionandsupport.org/pain-symptoms/pain-guidelines/ at https://CompassionAndSupport.org/

References: 1. The STOP measure: safe and transparent opioid prescribing to promote patient safety and reduced risk of opioid misuse. AHIP's safe, transparent opioid prescribing (STOP) initiative. America's Health Insurance Plans. February 2018. 2. Community principles of pain management (CPPM) . 3. Hooten MW. Chronic pain and mental health disorders: shared neural mechanisms, epidemiology, and treatment. Symposium on pain medicine. *Mayo Clin Proc.* 2016;(91)7:955-970. 4. Diabetic neuropathy: a position statement by the American Diabetes Association. *Diabetes Care.* 2017;40:136-154. 5. Snyder MT, Gibbs LM, and Lindsay TJ. Treating painful diabetic peripheral neuropathy: an update. *Am Fam Physician.* 2016;94(3):227-234. 6. Hutchison LC and Sleeper RB. Fundamentals of geriatric pharmacotherapy: an evidence-based approach. ASHP publications. 2015. 7. Moulin DE, Clark AJ, Gilron, et al. Pharmacological management of chronic neuropathic pain – consensus statement and guidelines from the Canadian Pain Society. *Pain Res Manage*. 2007; 12(1): 12-21. 8. Attal N, Cruccu G, Baron R, Haanpaa M, et al. EFNS guidelines on the pharmacological treatment of neuropathic pain: 2010 revision. *European Journal of Neurology*. 2010, 17:1113-1123. 9. Lexicomp® [online database]. (accessed 2018 Feb 02). Hudson, Ohio. Wolters Kluwer Clinical Drug Information, Inc. 10. Drugs@FDA: FDA Approved Drug Products. Lyrica [monograph]. www.accessdata.fda.gov/drugsatfda_docs/label/2016/021446s032,022488s011lbl.pdf (accessed 2018 Feb 22). 11. Bauman TJ and Stricklan S. Pain management. In: Dipiro JT, Talbert RL, Yee GC, eds. Pharmacotherapy a pathophysiologic approach. New York: McGraw-Hill; 2008:989-1003. 12. Castro E and Dent D. A comparison of transdermal over-the-counter lidocaine 3.6% and placebo for back pain and arthritis. *Pain Manag.* 2017. 13. American Geriatrics Society 2015 Beers Criteria Update Expert Panel. American Geriatrics Society 2015 updated beers criteria for potentially inappropriate medication use in older adults. *J Am Geriatr Soc.* 2015. 14. Dworkin RH, O'Connor AB, Backonja M et al. Pharmacologic management of neuropathic pain: evidence-based recommendations. *Pain.* 2007;132:237-251. 15. American Chronic Pain Association. ACPA resource guide to chronic pain management: an integrated guide to medical, interventional, behavioral, pharmacologic and rehabilitation therapy. 2017. 16. Wright E. Musculoskeletal injuries and disorders. In: Berardi SR, Ferreri SP, Hume AL, eds. Handbook of nonprescription drugs. An interactive approach to self-care. Washington, DC: APhA; 2009: 95-113.

This document is for informational purposes only. For more up to date information please refer to the medication's package insert available on the FDA website (www.accessdata.fda.gov/scripts/cder/drugsatfda/). Decisions regarding the pharmacological management of a patient's condition should be made based on the individual needs of the patient (i.e. frequency of dosing, duration of action needed).

Guidelines and principles are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines & principles should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs. Approved in June 2019; Next Scheduled Update in 2021

Non-Pharmacologic Interventions for Pain

ACTIVE	
Exercise	Exercise is defined as physical activity that is planned and structured. There are many different types of exercise, including aerobic, strengthening, and flexibility, and this should be considered when interpreting evidence. There is a moderate level of evidence supporting exercise as an intervention for chronic LBP (www.effectivehealthcare.ahrq.gov/low-back-pain). The benefit of exercise for pain control likely comes from the impact of exercise on the endogenous opioid system and on central pain modulatory systems. Patients with some chronic pain conditions seem to have a dysfunctional endogenous pain modulatory system, which should be considered when prescribing exercise. The prescription of exercise for chronic pain must address the biomechanical issues and the psychosocial factors that contribute to the patient's pain and disability. Patient education, coordination of care within the health care team, and selecting an exercise regimen that is meaningful to and achievable by the patient are all-important components to promote a successful rehabilitation program. Exercise therapy for chronic pain. Kroll HR. Phys Med Rehabil Clin N Am. 2015 May;26(2):263-81 Exercise, not to exercise, or how to exercise in patients with chronic pain? Applying science to practice. Daenen L, Varkey E, Kellmann M, Nijs J.
Yoga/Tai Chi	Yoga is a movement and spiritual discipline that originated in India. There is a growing body of evidence supporting yoga as an effective approach to treating chronic pain conditions, including low back pain, osteoarthritis, and fibromyalgia. https://nccih.nih.gov/health/yoga Yoga has been found to reduce pain and improve function in these populations (Nahin RL et al. Evidence-based evaluation of complementary health approaches for pain management in the united states. 2016; 91 (9): 1292-1306.). Yoga required active participation, can be practiced individually or in groups, and can be combined with mindfulness practices. Tai Chi is another movement discipline, originally developed as a martial art form in China, which entails the performance of slow, gentle, focused movements. There is evidence to support Tai Chi as effective in reducing chronic pain associated with osteoarthritis and low back pain. (Kong, L. J. *et al.* Tai Chi for Chronic Pain Conditions: A Systematic Review and Meta-analysis of Randomized Controlled Trials. *Sci. Rep.* **6**, 25325; doi: 10.1038/srep25325 (2016). Tai Chi also requires active participation, individually or in groups.

Mindfulness Meditation	Although there is not a large pool of evidence available on the effectiveness of meditation on pain, recent individual studies are promising, for example: Zeidan F, Adler-Neal AL, Wells RE, et al. Mindfulness-meditation-based pain relief is not mediated by endogenous opioids. *Journal of Neuroscience.* 2016;36(11):3391-3397 – this study found that meditation was effective in reducing experimentally induced pain. Two RCT's, one published in *JAMA*, found meditation to be effective in treating chronic low back pain: Cherkin DC, Sherman KJ, Balderson BH, Cook AJ, Anderson ML, Hawkes RJ, Hansen KE, Turner JA. Effect of Mindfulness-Based Stress Reduction vs Cognitive Behavioral Therapy or Usual Care on Back Pain and Functional Limitations in Adults With Chronic Low Back Pain A Randomized Clinical Trial. *JAMA.* 2016;315(12):1240-1249. doi:10.1001/jama.2016.2323
Psychological Approaches (Cognitive-Behavioral, Relaxation techniques)	Systematic reviews provide evidence that cognitive-behavioral interventions improve function and decrease pain in the non-specific *low back pain* population when compared to no intervention (Richmond H et al, 2015). Evidence for effectiveness in treating *headaches* is equivocal (Harris P et al, 2015). According to AHRQ, when considered in conjunction with other psychological approaches including relaxation techniques and biofeedback, the strength of evidence is low for reducing pain and improving function in the chronic low back pain population (www.effectivehealthcare.ahrq.gov/low-back-pain.). May include multiple different interventions. CBT is effective in altering mood and catastrophising outcomes, when compared with treatment as usual/waiting list, with some evidence that this is maintained at six months. Behaviour therapy has no effects on mood, but showed an effect on catastrophising immediately post-treatment. Sturgeon JA. Psychological therapies for the management of chronic pain. *Psychology Research and Behavior Management*. 2014;7:115-124. doi:10.2147/PRBM.S44762.
Relaxation Techniques	Relaxation training follows a specific method, process, procedure, or activity with the intent to release physical tension and refocus the mind away from anxious, angry, or disturbing thoughts in order to reduce stress and/or pain and achieve a sense of well-being and calmness Lee C, Crawford C, Hickey A. Active Self-Care Therapies for Pain (PACT) Working Group. Pain Med. 2014 Apr;15 Suppl 1:S21-39. doi: 10.1111/pme.12383.

Superficial Heat	There is moderate level evidence that heat decreases pain and improves function for acute phase low back pain – at 4-5 days. There is low level evidence that heat is more effective than acetaminophen or ibuprofen for acute phase pain. Qaseem A, Wilt TJ, McLean RM, Forciea MA, for the Clinical Guidelines Committee of the American College of Physicians. Noninvasive treatments for acute, subacute, and chronic low back pain: a clinical practice guideline from the American College of Physicians [published online February 14, 2017]. Ann Intern Med. doi:10.7326/M16-2367.

Intervention	Summary Comments
PASSIVE	
Acupuncture	Has been found to be effective in the treatment of a variety of conditions, including chronic low back pain (LBP) and osteoarthritis (OA). NIH considers acupuncture a "reasonable" option for OA (nccih.nih.gov). Low to moderate level of evidence for chronic back pain according to AHRQ (www.effectivehealthcare.ahrq.gov/low-back-pain). Acupuncture is effective for the treatment of chronic pain and is therefore a reasonable referral option. Significant differences between true and sham acupuncture indicate that acupuncture is more than a placebo. However, these differences are relatively modest, suggesting that factors in addition to the specific effects of needling are important contributors to the therapeutic effects of acupuncture. **Acupuncture** for **chronic pain**: individual patient data meta-analysis. Vickers AJ, Cronin AM, Maschino AC, Lewith G, MacPherson H, Foster NE, Sherman KJ, Witt CM, Linde K; **Acupuncture** Trialists' Collaboration. Arch Intern Med. 2012 Oct 22;172(19):1444-53.) Additionally, in a recent systematic review and meta-analysis, acupuncture was found to provide significant relief of low back pain compared to sham acupuncture and no treatment (Yuan QL, Guo TM, Liu L, Sun F, Zhang YG. Traditional Chinese medicine for neck pain and low back pain: a systematic review and meta-analysis PLoS One. 2015;10 (2):e0117146).
Neuromodulation	There is evidence that both dorsal root ganglion and high-frequency stimulation also have analgesic efficacy in certain chronic neuropathic syndromes.

	Deer, TR, et al. (2017, April). Dorsal Root Ganglion Stimulation Yielded Higher Treatment Success Rate for Complex Regional Pain Syndrome and Causalgia at 3 and 12 months: A Randomized Comparative Trial. *Pain, 158*(4), 669-681. Kapural, L, et.al. (2015). Novel 10-kHz High-Frequency Therapy (HF10 Therapy) Is Superior to Traditional Low-Frequency Spinal Cord Stimulation for the Treatment of Chronic Back and Leg Pain; The SENZA-RCT Randomizd Controlled Trial. *Anesthesiology, 123,* 851-60. Turner, J. A., et.al.. (2004). Spinal Cord Stimulation for Patients with Failed Back Surgery Syndrome or Complex Regional Pain Syndrome: A Systematic Review of Effectiveness and Complications. *Pain, 108,* 137-147.
Massage	May be helpful for low back pain. There is a low level of evidence for acute and subacute low back pain (nccih.nih.gov). This is consistent with the findings of the AHRQ analysis for massage as a treatment of acute and subacute low back pain (www.effectivehealthcare.ahrq.gov/low-back-pain.) Similar findings can be found for massage as a treatment for fibromyalgia, neck pain, and osteoarthritis, with generally short-term improvements in pain, and no significant long-term improvements in function (Nahin RL et al. Evidence-based evaluation of complementary health approaches for pain management in the united states. 2016; 91 (9): 1292-1306.)
Manipulation	Manipulation has been studied extensively for the treatment of low back pain (LBP). Manipulation has been found to be effective in reducing pain and improving function in people with LBP. There is low-to-moderate level evidence that it is effective in the chronic LBP population (www.effectivehealthcare.ahrq.gov/low-back-pain.). It is recommended for the treatment of non-specific low back pain in the majority of national clinical guidelines for LBP management. There is less evidence to support its use in the treatment of neck pain. It has been found to be effective in the treatment of some types of headache and osteoarthritis. Chiropractors, Osteopathic Physicians, and Physical Therapists most commonly utilize manipulation in back pain management. Although it is a passive intervention, it is often combined with exercise in patient management.
Electrotherapy/ TENS	Passive physical modalities as a whole have small-to-no effect on treating common pain problems (AHRQ). Systemic reviews suggest that TENS is effective for post-operative pain, osteoarthritis, diabetic neuropathy, and some acute pain

	conditions when applied at adequate intensities. There is insufficient evidence to recommend specific TENS regimes at this time. (Vance, C., Dailey, D., Rakel, B., & Sluka, K. (2014). Using TENS for pain control: the state of evidence. *Pain Management, 4*(3), 197-209 and Chou, R., Gordon, D., de Leon-Casasola, O., Rosenberg, J., et al. (2016). Guidelines on the Management of Postoperative pain. Journal of Pain, 17(2), 131-157)

AHRQ Levels of Evidence:

High: High confidence that the evidence reflects the true effect. Further research is very unlikely to change our confidence in the estimate of effect.

Moderate: Moderate confidence that the evidence reflects the true effect. Further research may change our confidence in the estimate of effect and may change the estimate.

Low: Low confidence that the evidence reflects the true effect. Further research is likely to change our confidence in the estimate of effect and is likely to change the estimate.

Insufficient: Evidence either is unavailable or does not permit a conclusion.

Faces Pain Scale-Revised (FPS-R)

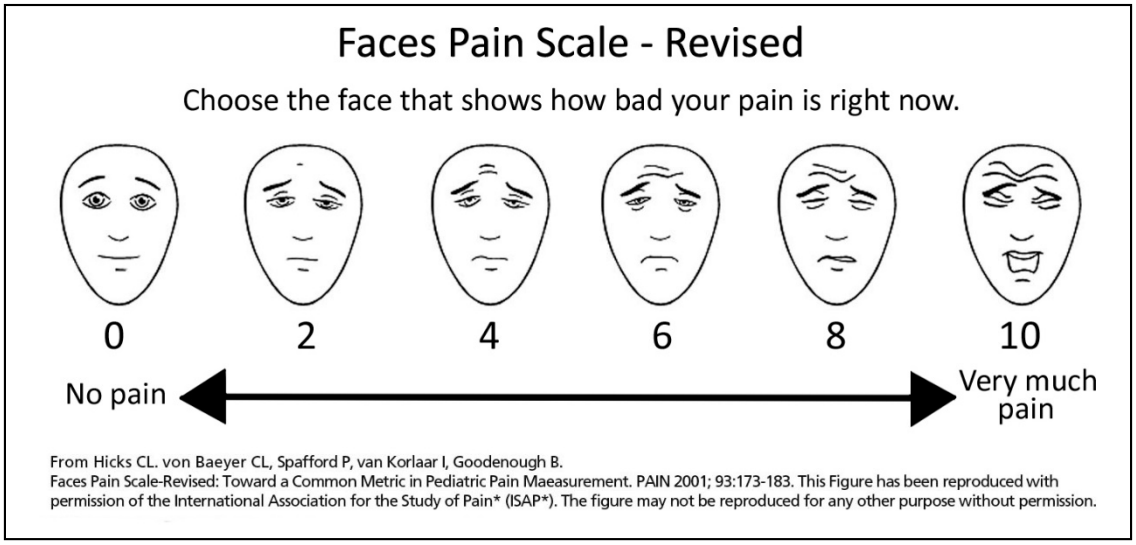
Purpose:
To assess pain intensity in persons who are able to self-report, but unable to use a numeric rating scale (NRS). Some studies show African Americans and Asians prefer the FPS.

When to Use:
1) At admission
2) At each quarterly nursing review
3) Each shift in resident with pain
4) Each time a change in resident pain status is reported
5) Following a pain intervention to evaluate treatment effectiveness

How to Use:
Instruct the person that "The faces show how much pain or discomfort one is feeling. The face on the left shows no pain. Each face shows more and more pain up to the last face that shows the worst pain possible. Point to the face that shows how bad your pain is right now."

Then score the chosen face 0, 2, 4, 6, 8, or 10, counting left to right, so '0' = 'no pain' and '10' = 'very much pain.'

NOTE: This tool is not to be used by the health care provider to look at the resident's facial expression and pick a face.



From Hicks CL. von Baeyer CL, Spafford P, van Korlaar I, Goodenough B.
Faces Pain Scale-Revised: Toward a Common Metric in Pediatric Pain Maeasurement. PAIN 2001; 93:173-183. This Figure has been reproduced with permission of the International Association for the Study of Pain* (ISAP*). The figure may not be reproduced for any other purpose without permission.

Documentation:
Document/record all scores in a location that is readily accessible by other health care providers.

Note:
To use as a pocket guide, print the FPS-R and directions document front to back on card stock paper to create two tools. Cut to size and laminate for increased durability.

Additional information about the Faces Pain Scale-Revised (FPS-R) including instructions in 33 translations can be found at www.painsourcebook.ca.

Reference:
Hicks, C, L., von Baeyer, C.L., Spafford, P.A., van Korlaarl & Goodenough, B. 2001. The Faces Pain Scale–Revised Toward A Common Metric In Pediatric Pain Measurement. *Pain 93*: 173–183.

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The Ransford Pain Drawing

Purpose

This is a useful tool to enable the patient to give the evaluator an idea of where they feel certain symptoms. This may be done in an informal way during the initial intake interview and the drawing will prompt dialogue between the two parties regarding symptoms, their frequency, behavior and when they occurred in relation to others. Alternatively, this may be done in a formal way utilizing the Ransford Pain Drawing (Ransford, et al, 1976). The Ransford Pain Drawing is used to assess the pain and psychodynamics in a patient with low-back pain.

Administration

Provide the patient with a body chart comprising anterior and posterior views of the body. If the informal version is used, ask the client to indicate on the chart where they feel symptoms using a key to describe different symptoms. The evaluator may ask the client to elaborate on each symptom during the process or at the end. The client may make notes on the chart to further describe symptoms.

The Ransford Pain Drawing must be done on a specific body chart with four symptoms described above, namely stabbing, burning, pins and needles, and numbness. The instructions are at the top of the chart and read as follows: “Indicate where your pain is located and what type of pain you feel at the present time. Use the symbols below to describe your pain. Do not indicate areas of pain which are not related to your present condition.”

Ransford showed that the drawings drawn by patients in the study correlated very well with the Hypochondria’s and Hysteria scores on an MMPI (Minnesota Mulitphasic Personality Inventory) taken at the same time.

Scoring

The evaluator should observe the drawing and determine if any of the criteria listed below feature in the drawing. The appropriate score is given and all scores are totaled at the end to reach a final score.

1. Unreal drawing (Poor anatomic localization, scores 2 unless indicated; bilateral pain not weighted unless indicated).

    A. Total leg pain
    B. Lateral whole leg pain (trochanteric area and lateral thigh allowed)
    C. Circumferential thigh pain
    D. Bilateral anterior tibial area pain (unilateral allowed)
    E. Circumferential foot pain (scores 1)
    F. Bilateral foot pain (scores 1)
    G. Use of all four modalities suggested in instructions (We feel patient is unlikely to have “burning areas”, stabbing pain, pins-and-needles and numbness all together; scores 1)

2. Drawing showing expansion or magnification of pain. (May also represent unrelated symptomology. Bilateral pain not weighted.)

    A. Back pain radiating to iliac crest, groin or anterior perineum (each scores 1; coccygeal pain allowed)
    B. Anterior knee pain (scores 1)
    C. Anterior ankle pain (scores 1)
    D. Pain drawing outside the outline; this is a particularly good indication of magnification (scores 1 or 2 depending on extent).

3. "I particularly hurt here" indicators. Some patients need to make sure the evaluator is fully aware of the extent of symptoms (each category scores 1; multiple use of each category is not weighted).

    A. Add explanatory notes
    B. Circle painful areas
    C. Draw lines to demarcate painful areas
    D. Use arrows
    E. Go to excessive trouble and detail in demonstrating the pain areas (using the symbols suggested).

4. "Look how bad I am" indicators.

    A. Additional painful areas in the trunk, head, neck or upper extremities drawn in. Tendency towards total body pain (scores 1 if limited to small areas, otherwise scores 2).

Interpretation

A score of 3 or above indicates poor psychodynamics.

The test is also useful as a distraction test to observe patient behavior while sitting or standing, depending what position he/she is in when doing the drawing.

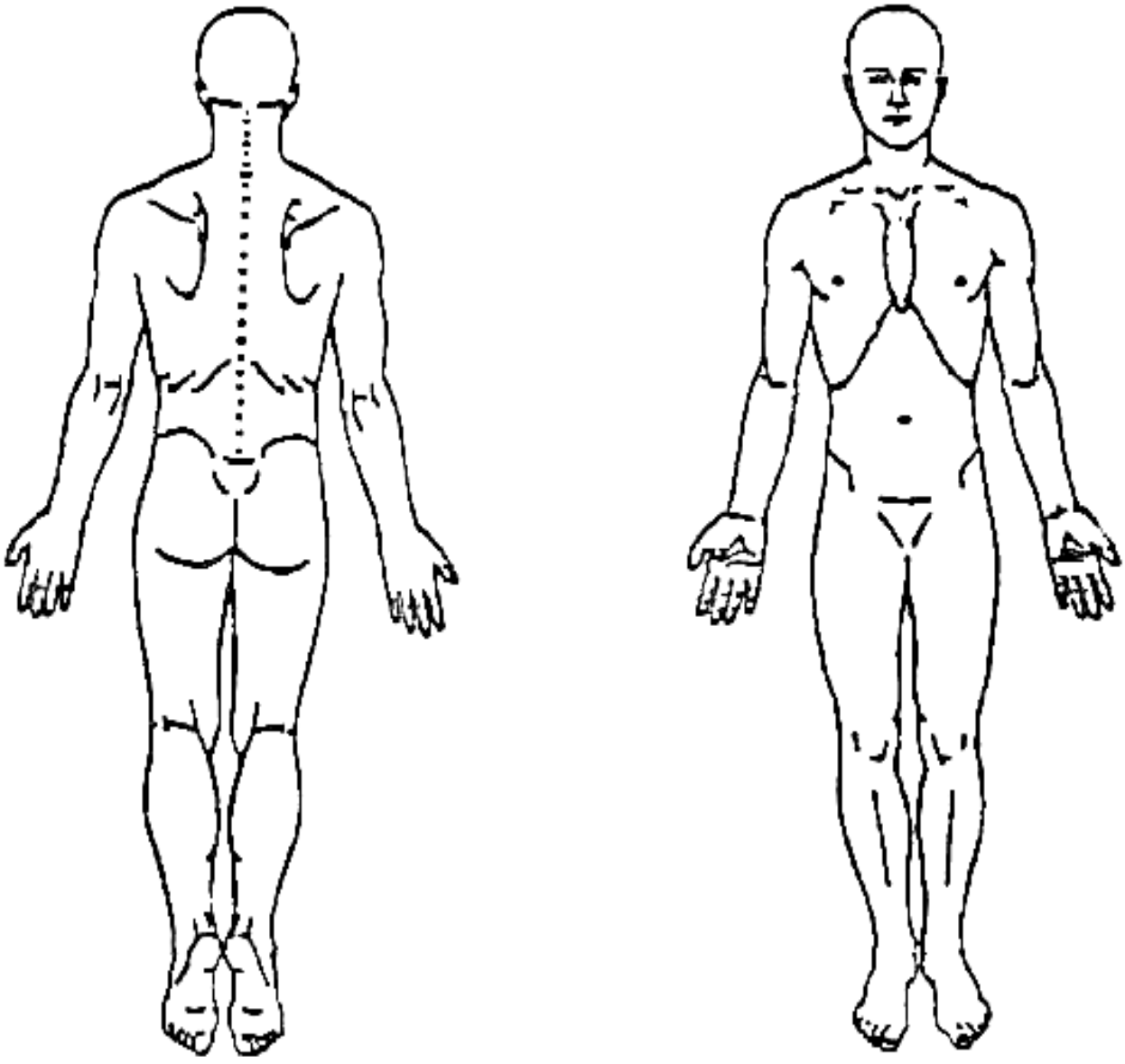
This test takes approximately 5 to 8 minutes to administer and approximately 5 minutes to score.

INSTRUCTIONS

Indicate where your pain is located and what type of pain you feel at the present time. Use the symbols below to describe your pain. Do not indicate areas of pain, which are not related to your present injury or condition.

Key

/// Stabbing	XXX Burning	000 Pins and Needles	= = = Numbness



PEG: A Three-Item Scale Assessing Pain Intensity and Interference

1. **What number best describes your <u>pain on average</u> in the past week?**

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

2. **What number best describes how, during the past week, pain has interfered with your <u>enjoyment of life?</u>**

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

3. **What number best describes how, during the past week, pain has interfered with your <u>general activity</u>?**

0	1	2	3	4	5	6	7	8	9	10
No pain										Pain as bad as you can imagine

From Krebs et al., 2009.

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME:_____ DATE:_____

Over the last *2 weeks,* how often have you been bothered by any of the following problems?
(use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
add columns		+	+	

(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card). TOTAL:

10. If you checked off *any problems,* how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

- Not difficult at all _____
- Somewhat difficult _____
- Very difficult _____
- Extremely difficult _____

A2663B 10-04-2005

PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder

- if there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.
Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up ✓s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying **PHQ-9 Scoring Box** to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

A2662B 10-04-2005

Opioid Risk Tool - Revised (ORT-R)

The revised ORT has clinical usefulness in providing clinicians a simple, validated method to rapidly screen for the risk of developing OUD in patients on or being considered for opioid therapy.

Opioid Risk Tool - OUD (ORT-OUD)

This tool should be administered to patients upon an initial visit prior to beginning or continuing opioid therapy for pain management. A score of 2 or lower indicates low risk for future opioid use disorder; a score of >/= 3 indicates high risk for opioid use disorder.

MARK EACH BOX THAT APPLIES	*YES*	*NO*
Family history of substance abuse		
Alcohol	1	0
Illegal drugs	1	0
Rx drugs	1	0
Personal history of substance abuse		
Alcohol	1	0
Illegal drugs	1	0
Rx drugs	1	0
Age between 16-45 years	1	0
Psychological disease		
ADD, OCD, bipolar, schizophrenia	1	0
Depression	1	0
Scoring totals		

Cheatle, M, Compton, P, Dhingra, L, Wasser, T, O'Brien, C. (2019) Development of the Revised Opioid Risk Tool to Predict Opioid Use Disorder in Patients with Chronic Nonmalignant Pain The Journal of Pain 0 (0) 1-10. Available online: https://www.jpain.org/article/S1526-5900(18)30622-9/fulltext Accessed June 10, 2019.

MEDICATION	EQUIANALGESIC DOSE (for chronic dosing)		USUAL STARTING DOSES for ADULT>50kg* (u1/2 dose for elderly or severe renal or liver disease)		COMMENTS
	IM/IV onset 15-30 min	PO onset 30-60 min	PARENTERAL	PO	
MORPHINE	10 mg	30 mg	2.5-5 mg SC/IV q3-4h (●1.25–2.5 mg)	5-15 mg q3-4h IR or Oral Solution (●2.5-7.5 mg)	IR tablet (15,30mg); Rectal suppository (5, 10, 20, 30mg) Oral solution (2mg/ml, 4 mg/ml); Concentrate (20mg/ml) can give buccally ER tablet (15, 30, 60, 100, 200mg) q8-12h (MS Contin, generics) ER capsule (10, 20, 30, 40, 45, 50, 60, 75, 80, 90, 100, 120, 200mg) q12-24h (Kadian, generics) ER tablet Abuse-Deterrent (A-D) (15, 30, 60, 100mg) q12h (MorphaBond ER) Morphine/Naltrexone capsule (20/0.8, 30/1.2, 50/2, 60/2.4, 80/3.2, 100/4mg) q12-24h – Designed with abuse-deterrent properties (Embeda) **Use carefully in renal failure.**
HYDROCODONE	Not available	30 mg	Not Available	5 mg q3-4h (●2.5 mg)	APAP combo tablet - 2.5-10mg hydrocodone with 300-325mg APAP; APAP combo solution - 2.5-3.3mg hydrocodone with 100-108mg APAP per 5ml IBU combo tablet - 2.5-10mg hydrocodone with 200mg ibuprofen ER capsule A-D (10, 15, 20, 30, 40, 50mg) q12h (Zohydro ER) ER tablet Abuse-Deterrent (20, 30, 40, 60, 80, 100mg) q24h (Hysingla ER) **Use carefully in renal failure.**
OXYCODONE	Not Available	20 mg	Not Available	5-10 mg q3-4h IR or Oral Solution (●2.5 mg)	IR capsule (5mg); IR tablet (5, 10, 15, 20, 30mg); Oral solution (5mg/5ml); Concentrate (20mg/ml) IR tablet A-D ((5, 7.5, 15, 30mg) q4-6h (Oxaydo, RoxyBond) ER tablet A-D (10, 15, 20, 30, 40, 60, 80mg) q8-12h (Oxycontin, generics) APAP combo tablet - 2.5-10mg oxycodone combined with 300-325mg APAP; Ibuprofen & ASA combo also available. **Combos generally not recommended for chronic use.** **Not enough literature regarding dosing in renal failure. Use caution.**
FENTANYL	100 mcg (single dose) t ½ and duration of parenteral doses variable	12 mcg/hr patch per 3 days 231 mcg buccal/SL	25-50 mcg IM/IV q1-3h (●12.5-25 mcg)	Transdermal patch 12 mcg/h q72h (not for use in opioid naïve and in unstable patients because of 12h delay in onset and offset)	Transdermal patch (12, 25, 37.5, 50, 62.5, 75, 87.5, 100mcg/hr) • If transitioning from IV fentanyl to patch, hourly rate is the patch dose; e.g. if patient is on 50mcg/h IV, start with 50mcg patch. **N.B. Incomplete cross-tolerance already accounted for in conversion to fentanyl; when converting to other opioid from fentanyl, generally reduce the equianalgesic amount by 50%.** IV: very short acting; rapid infusion may result in skeletal muscle & chest wall rigidity. IR: Buccal tablet, Nasal solution, SL tablet, Lozenge; SL spray **- Indicated for breakthrough cancer pain only.** **Seek consult.** **Acceptable for use in renal failure, monitor carefully if using long term.**
HYDROMORPHONE	1.5 mg	7.5 mg	0.2-0.6 mg SC/IV q2-3h (●0.2 mg)	1-2 mg q3-4h (●0.5-1 mg)	IR tablet (2,4,8mg); Oral solution (1mg/ml); Suppository (3mg) ER tablet A-D (8, 12, 16, 32mg) q24h (Exalgo, generics) IM is not recommended and to be avoided in the elderly **Use carefully in renal failure.**
OXYMORPHONE	Not Available	10 mg	Not Available	10 mg q4-6h IR tablet (●5 mg)	IR tablet (5, 10mg) ER tablet A-D (5, 7.5, 10, 15, 20, 30, 40mg) – q12h (Opana ER) ER tablet (5, 7.5, 10, 15, 20, 30, 40mg) – q12h (oxymorphone ER – not A-D at time of review) **Use carefully in renal failure and liver impairment.**
BUPRENORPHINE	Not available	24 hour MS dose / Initial patch dose <30 mg / 5 mcg/h 30-80 mg / 10 mcg/h 75–150 mcg buccal film	Not Available	5 mcg/h patch q7 days (opioid-naïve) (no adjustment) 75 mcg buccally q12-24h (37.5 mg severe hepatic failure only)	Transdermal patch (5,7.5,10,15,20mcg/h) q7 days (Butrans, generics) • Maximum dose 20mcg/h per 7 days; initiate tx with 5mcg/hr q7d for opioid naïve patients Buccal film (75,150,300,450,600,750,900mcg) q12-24h (Belbuca) • Initiate treatment with 75mcg film qd or q12h as tolerated, before increasing dose. Dosing for chronic pain, not opioid use disorder Caution for risk of QTc prolongation. **No dosage adjustment required for renal failure.**
TRAMADOL	Not available	300 mg	Not Available	50 mg q4-6h prn (●q12h to start)	IR tablet (50mg); IR/APAP combo 37.5mg with 325mg APAP ER capsule (100, 150, 200, 300mg) q24h (ConZip, generics) ER tablet (100, 200, 300mg) q24h (Ultram ER, generics) **Dosage adjustment required for renal failure**
METHADONE (see separate sheet with detailed dosing information)	3.75mg IV 2 mg PO methadone = 1 mg parenteral methadone	7.5mg Request Palliative Care or Pain Service Consult for higher doses	1.25-2.5 mg q8h (●1.25 mg) Consider Palliative Care or Pain Service Consult	2.5-5 mg q8h (●1.25-2.5 mg) Consider Palliative Care or Pain Service Consult	IR tablet (5,10mg); Solution (1mg/ml, 2mg/ml); Concentrate (10 mg/ml) • Usually q12h or q8h; Long variable t½; and high interpatient variability. • Small dose change makes big difference in blood level; tends to accumulate with higher doses; always write "hold for sedation." • **Because of long half-life, do not use methadone prn unless experienced.** **Acceptable with renal disease.**

* - "Usual starting doses" applies to opioid naïve patients, not for patients who have been on opioids and whose starting dose should take their usual consumption into account.

HALF LIFE (hours)	DURATION (hours)
2 – 4 (IR forms) ~24 (Avinza, generics) 11 – 13 (Kadian)	3 – 5 (IR tabs/soln) 8 – 24 (ER tabs/caps)
3.3-4.5 7 – 9 (ER forms)	3-6 (IR tabs) 12 – 24 (ER forms)
3.2 - 4 (IR) 4.5 (ER tab) 5.6 (ER cap)	4-6 (IR) < 12 (ER)
13-22 (Patch) 7 (Lozenge) 12-22 (Buccal) 15-25 (Intranasal)	48-72 (Patch) 60+ min (Lozenge) 120+ min (Buccal) 120+ min (Intranasal)
2-3 (IR) ~11 [range 8 – 15] (ER)	3 – 4 (IR) ~13 (ER)
7-9 (IR) 9 – 11 (ER)	4-6 (IR) 8 – 12 (ER)
26 (Patch) 27.6 ± 11.2 (Buccal)	168 (Patch) 12-24 (Buccal)
IR: 6.3 ± 1.4; active metabolite 7.4 ± 1.4 ER cap: ~10 [M1 = ~11] ER tab: ~7.9 [M1 = 8.8]	4 – 6 (IR) ~24 (ER)
8-59 (N.B. Huge Variation)	4-8 (single dose studies – increases to 22-48 w/ repeated doses)

GUIDELINES

1. Assess and manage pain in adult patients using the CPPM Adult Guide.

   N.B. Opioids are not first line for chronic pain, even moderate to severe pain, which should be managed with an active approach and non-opioid pain relievers whenever possible. B When opioids are indicated, based on a careful risk assessment, combine with an active and passive approach to nonpharmacologic therapy. Be wary of dose escalation over time due to tolerance.
2. How to dose opioids:
   A. Give baseline medication around the clock.
   B. For breakthrough pain order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV.
   C. For continuous infusion, PRN can be either the hourly rate q 15 min or 10% of total daily dose q 30-60 min.
   D. Adjust baseline upward daily in amount roughly equivalent to total amount of PRN.
   E. Determine acceptable level of pain control that support patient's goals.
3. In general, oral route is preferable, then trans-cutaneous > subcutaneous > intravenous.
4. If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.
5. Use a short-acting medication for acute pain exacerbation. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.
6. Avoid multiple agents of similar duration.
7. When converting from one opioid to another, some experts recommend reducing the equianalgesic dose by 1/3 to 1/2, then titrate as in #2 above.
8. Older adults, or those with severe renal or liver disease, should start on half the usual starting dose. Watch carefully for toxicity from accumulation.
9. Use care with combinations. Ensure total consumption of APAP from ALL sources & ALL purposes does not exceed 3 g/day (2-3 g for frail elders).
10. Patients with substance abuse history may need a higher starting dose due to tolerance. Monitor urine drug screenings. Consider abuse-deterrent opioids &/or co-prescribing naloxone.
11. Refer to product information fentanyl use. Review CPPM methadone and buprenorphine guidelines.
12. Refer to protocol for naloxone use.
13. Avoid codeine and tramadol if breastfeeding.

B-1537 / 11331-17G

Equianalgesic Table for Adults

Half-life, Duration, Dosing and Guidelines

(Tailor care to individual needs.)

Community Principles of Pain Management

Adapted by Specialty Advisory Group, 2002
Reviewed and approved every other year
Reviewed and adopted by AAHPM, 2009

Approved in June 2019.
Next scheduled update in 2021.

Additional pain management resources are available at CompassionAndSupport.org

Compassion and Support
at the End of Life
CompassionAndSupport.org

MEDICATION	EQUIANALGESIC DOSE (for chronic dosing)		USUAL STARTING DOSES Pediatric patients > 6 months (decrease dose by 1/4 to 1/2 for age < 6 months or severe renal or liver disease)		COMMENTS (Not all dosage forms are available for inpatients, consult pediatric pharmacy for availability)
	IM/IV onset 15-30 min	PO onset 30-60 min	PARENTERAL	PO	
MORPHINE	10 mg	30 mg	<40 kg: 0.05-0.1 mg/kg/dose q 2-4 hrs ≥40 kg: 2 - 5 mg q 2-4 hrs	<40 kg: 0.15-0.3 mg/kg/dose q 3-4 hrs ≥40 kg: 5 - 15 mg q 3-4 hrs	Oral Solution (2 mg/ml); Concent. oral solution (20 mg/ml) can be given buccally In some post-op patients, up to 0.2mg/kg IV may be required as an initial IV dose IR tablets (15, 30 mg) ER tablets (15, 30, 60, 100, 200 mg) q8-12h (MS Contin) ER capsules(10,20,30,50,60,70,80,100,130,150,200) q12-24h (Kadian) ER capsules (30,45,60,75,90,120) q24h (Avinza) **Not recommended in renal failure.**
OXYCODONE	Not Available	20 mg	Not Available	<40 kg: 0.1-0.2 mg/kg/dose q 3-4 hrs ≥40 kg: 5 - 10 mg q 3-4 hrs	Oral solution (5mg/5ml); Concentrate (20mg/ml) can be given buccally IR capsule (5mg); IR tablets (5,10,15,20,30) ER tablets (10,15,20,30,40,60,80) q8-12h (Oxycontin)Designed with abuse-deterrantproperties Combos available with acetaminophen or ibuprofen (generally not recommended) **Not enough literature regarding dosing in renal failure. Use with caution.**
HYDROMORPHONE	1.5 mg	7.5 mg	<40 kg: 0.015 mg/kg/dose q 3-4 hrs ≥40 kg: 0.2 - 0.6 mg q 3-4 hrs	<40 kg: 0.03-0.06 mg/kg/dose q 3-4 hrs ≥40 kg: 1 - 2 mg q 3-4 hrs	Oral Solution (1mg/ml); Suppository (3mg); Tablets (2,4,8mg) ER tablets (8,12,16,32mg) - Designed with abuse-deterrent properties **Use carefully with renal failure.**
METHADONE (see text for dosing conversations)	1/2 oral dose 2 mg PO methadone = 1 mg parenteral	24 hour oral morphine / Oral morphine: methadone ratio <30 mg 2:1 31-99 mg 4:1 100-299 mg 8:1 300-499 mg 12:1 500-999 mg 15:1 1000-2100 mg 20:1 >1200mg consider consul	Consult Pediatric Supportive (Palliative) Care or Anesthesia Pain Service	Consult Pediatric Supportive (Palliative) Care or Anesthesia Pain Service	Oral Solution (1mg/ml, 2mg/ml); Concentrate (10 mg/ml) Tablets (5,10mg); Usually q12h or q8h; Long variable t½ and high interpatient variability; Small dose change makes big difference in blood levels; Tends to accumulate with higher doses, always advise "hold for sedation" Because of long half-life, do not use methadone prn unless experienced Many drug interactions with commonly used medications When converting from oral to parenteral, decrease dose by HALF for safety; When converting from parenteral or oral, keep dose the same **Acceptable with renal disease.**
FENTANYL	100 mcg (single dose) t ½ and duration of parenteral doses variable	24 hour MS dose / Initial patch dose 30-59 mg 12 mcg/h 60-134 mg 25 mcg/h 135-224 mg 50 mcg/h 225-314 mg 75 mcg/h 315-404 mg 100 mcg/h	<40 kg: 0.5 - 2 mcg/kg/dose q 1-3 hrs ≥40 kg: 25 - 50 mcg q 1-3 hrs	Consult Pediatric Supportive (Palliative) Care or Anesthesia Pain Service	Transdermal patch (12,25,50,75,100mcg); If transitioning from IV Fentanyl to patch, the hourly rate is the patch dose; eg. if patient is on 50mcg/hr IV, start with a 50mcg patch Buccal film (200-1200mcg), Buccal tablet (100-800mcg), Nasal solution (100 &400mch/act), SL tablet (100-800mcg), Lozenge (200-1600mcg); SL spray (100-1600mcg) Indicated for breakthrough cancer pain only **NB: Incomplete cross-tolerance already accounted for in conversion; when converting to other opioid from fentanyl, generally reduce equianalgesic amount by 50%** IV: very short acting; associated with chest wall rigidity if given quickly or in high dose. **Acceptable in renal failure, monitor carefully if using long term.**
HYDROCODONE	Not available	30 mg	Not Available	<40 kg: 0.2 mg/kg/dose q 4-6 hrs ≥40 kg: 5 - 10 mg q 4-6 hrs	APAP combo tablets - 2.5-10mg hydrocodone with 300-325mg APAP; APAP combo solution - 2.5mg hydrocodone with 108mg APAP per 5ml IBU combo tablets - 2.5-10mg hydrocodone with 200mg ibuprofen ER tablets (10, 15, 20, 30, 40, 50mg) – Not an abuse-deterrent formulation **Monitor total acetaminophen or ibuprofen dose.**

HALF LIFE (hours)	DURATION (hours)
1.5-2	3-7
3-4	4-6
2-3	4-5
15-90 (N.B. Huge Variation)	6-12
13-22 (patch)	48-72 (patch)
3.3-4.5	4-6

B-4196 / 11332-17G

GUIDELINES

These guidelines do not apply to infants in the NICU.

Codeine and Tramadol are CONTRAINDICATED in children under 12 years of age.

1. Evaluate pain on all patients using a developmentally appropriate scale.

   N.B. Opioids are not first line for chronic pain, even moderate to severe pain, which should be managed with an active approach and non-opioid pain relievers whenever possible. When opioids are indicated, based on a careful risk assessment, combine with an active approach and other measures. Be wary of dose escalation over time due to tolerance.

2. How to dose opioids:
   A. Give baseline medication around the clock.
   B. For breakthrough pain order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV.
   C. For continuous infusion, PRN can be either the hourly rate q 15 min or 10% of total daily dose q 30-60 min.
   D. Adjust baseline upward daily in amount roughly equivalent to total amount of PRN.
   E. Negotiate with patient/family to target level of relief, balancing function vs. complete absence of pain.
3. In general, oral route is preferable, then transcutaneous > subcutaneous > intravenous. Determine route as appropriate for situation/acuity and type of pain.
4. If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.
5. Short-acting preparations should be used acutely & post-op. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.
6. Avoid multiple agents of similar duration.
7. When converting from one opioid to another, some experts recommend reducing the equianalgesic dose by 1/3 to 1/2, then titrate as in #2 above.
8. Infants < 6 months or those with severe renal or liver disease should start on 1/4 to 1/2 the usual starting dose.
9. Administering opioids to children <24 months:
   A. Infants < 6 months: place on apnea/bradycardia monitor and pulse oximeter
   B. Infants/children 6 months - 24 months: place pulse oximeter (consider for children with developmental disabilities, h/o prematurity and known respiratory difficulties)
10. Naloxone (Narcan) should only be used in emergencies: Dilute naloxone (0.4 mg/ml) 0.1 mg (0.25 ml) with 9.75 ml NS (final strength 10 mcg/ml). Give 2 mcg/kg IV, repeat q2minutes for total of 10mcg/kg. Monitor patient q15 minutes for at least 90 minutes. May need to repeat naloxone again in 30-60 minutes.

Equianalgesic Table for Pediatrics

Half-life, Duration, Dosing and Guidelines

(Tailor care to individual needs.)

Community Principles of Pain Management for Children

Adapted for pediatrics by University of Rochester Medical Center and Golisano Children's Hospital, 2012
Reviewed and approved every other year

Approved in June 2019.
Next scheduled update in 2021.

Additional pain management resources are available at CompassionAndSupport.org

Compassion and Support at the End of Life
CompassionAndSupport.org

OPIOID GUIDELINES

1. Assess and manage pain in adult patients using the CPPM Adult Guide.

N.B. Opioids are not first line for chronic pain, even moderate to severe pain, which should be managed with an active approach and non-opioid pain relievers whenever possible. When opioids are indicated, based on a careful risk assessment, combine with an active and passive approach to nonpharmacologic therapy. **Be wary of dose escalation over time due to tolerance**.

2. How to dose opioids:

A. Give baseline medication around the clock

B. For breakthrough pain order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV

C. For continuous infusion, PRN can be either the hourly rate q 15 minutes or 10% of total daily dose q 30-60 minutes.

D. Adjust baseline upward daily in amount roughly equivalent to total amount of PRN

E. Determine acceptable level of pain control that supports patient's goals.

3. In general, oral route is preferable, then trans-cutaneous > subcutaneous > intravenous.

4. If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.

5. Use a short-acting medication for acute pain exacerbation. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.

6. Avoid multiple agents of similar duration.

7. When converting from one opioid to another, some experts recommend reducing the equianalgesic dose by 1/3 to 1/2, then titrate as in #2 above.

8. Older adults, or those with severe renal or liver disease, should start on half the usual starting dose. Watch carefully for toxicity from accumulation.

9. Use care with combinations. Ensure total consumption of APAP from ALL sources & ALL purposes does not exceed 3 grams/day (2-3 grams for frail elders.)

10. Patients with substance abuse history may need a higher starting dose due to tolerance. Monitor urine drug screenings. Consider abuse-deterrent opioids and/or co-prescribing naloxone.

11. Refer to product information fentanyl use. Review CPPM methadone and buprenorphine guidelines.

12. Refer to protocol for Naloxone use.

13. Avoid Codeine and tramadol if breastfeeding.

Opioid Guidelines for Pediatric Patients

These guidelines do not apply to infants in the NICU.

Codeine and Tramadol are CONTRAINDICATED in children under 12 years of age.

1. Evaluate pain on all patients using a developmentally appropriate scale.

N.B. Opioids are not first line for chronic pain, even moderate to severe pain, which should be managed with an active approach and non-opioid pain relievers whenever possible. When opioids are indicated, based on a careful risk assessment, combine with an active approach and other measures. Be wary of dose escalation over time due to tolerance.

2. How to dose opioids:

A. Give baseline medication around the clock

B. For breakthrough pain order 10% total daily dose as a PRN given q 1-2h for oral and q 30-60 min for SC/IV.

C. For continuous infusion, PRN can be either the hourly rate q 15 minutes or 10% of total daily dose q 30-60 minutes.

D. Adjust baseline upward daily in amount roughly equivalent to total amount of previous day's PRNs

E. Negotiate with patient/family to target level of relief, balancing function vs. complete absence of pain.

3. In general, oral route is simplest/preferable, then transcutaneous > subcutaneous > intravenous. Determine route as appropriate for situation/acuity and type of pain

4. If parenteral medication is needed for mild to moderate pain, use half the usual starting dose of morphine or equivalent.

5. Short-acting preparations should be used acutely & post-op. Switch to long-acting preparations when pain is chronic and the total daily dose is determined.

6. Avoid multiple agents of similar duration

7. When converting from one opioid to another, some experts recommend reducing the equianalgesic doses by 1/3 to 1/2, then titrate as in #2 above.

8. Infants < 6 months or those with severe renal or liver disease should start on 1/4 to 1/2 the usual starting dose.

9. Administering opioids to children <24 months:

A. **Infants < 6 months:** place on apnea/bradycardia monitor and pulse oximeter

B. **Infants/children 6 months - 24 months:** place pulse oximeter (consider for children with developmental disabilities, h/o prematurity & known respiratory difficulties)

10. Naloxone (Narcan) should only be used in emergencies:

Dilute naloxone (0.4 mg/ml) 0.1 mg (0.25 ml) with 9.75 ml NS (final strength 10 mcg/ml)

Give 2 mcg/kg IV, repeat q2minutes for total of 10mcg/kg

Monitor patient q15 minutes for at least 90 minutes

May need to repeat naloxone again in 30-60 minutes

Community Principles of Pain Management

Pain Management Agreement and Informed Consent

Approved in June 2019; Next Scheduled Update in 2021

Patient Name: _____ Medical Record#: _____

Medicines called opioids (o-pee-oyds) have been prescribed for my chronic pain. Opioids are sometimes called narcotics. I understand they may be helpful. I also recognize that these medicines are dangerous if not taken correctly. They may be misused. Because of possible danger and misuse, they are closely controlled by my medical providers and by law. The following conditions will help give me the best pain relief and avoid misuse. I agree to follow them:

_____ **1. I will take my pain medicines correctly.** I agree to take the medicine only as prescribed. I will contact my provider before making any changes.

- I understand that taking more of my medicine than prescribed could lead to a **drug overdose.** An overdose may cause my heart or breathing to become very slow or stop. This could lead to death.
- I understand that physical dependence is normal and expected when using these medicines for a long time. I understand that physical dependence is not the same as addiction. I understand that decreasing or stopping my medicine suddenly could lead to **withdrawal symptoms**. These include sweating, chills, and joint pain. I may also have trouble sleeping or be sick to my stomach. If I need to stop taking my medicine, I will follow my provider's direction to do so slowly.
- I understand that my pain medicine may cause **addiction or opioid use disorder**. Addiction means a lack of control over the use of the medicine. Lack of control includes using the medicine in spite of harm to me or craving the medicine. Harm could be physical, mental or social.
- I understand that **tolerance** means that I may require more medicine to obtain the same amount of pain relief. Taking more medicine may not lessen my pain. Instead, it may cause distressing side effects. Tolerance or failure to respond well to my medicine may lead my provider to choose another form of treatment.
- I understand that my provider will review the effect of my medicine with me on a regular basis. If my quality of life does not get better, the medicine may be stopped. In that case, I will follow my provider's direction to slowly stop my opioid medicine.

_____ **2. I will report side effects.** I understand that there are side effects from my opioid medicine. I will tell my provider at my next appointment about any side effects that are new, don't go away, or affect my thinking. These may include:

- Drowsiness
- Confusion
- Constipation
- Nausea
- Hallucinations (seeing things that aren't there)
- Vomiting
- Itching
- Dizziness
- Slowed breathing
- Slowed reaction times

For most people, these side effects decrease with continued use of the medicine.

- I will not involve myself in any activity that may be dangerous to me or someone else if I feel drowsy or am not thinking clearly. Such activities include but are not limited to:
  - Driving a motor vehicle or using heavy equipment
  - Being responsible for another individual who is unable to care for himself

_____ **3. I will tell all of my medical providers that I am taking opioid medicine. I understand that other medicines and substances can affect the way opioid medicines work in my body.**

- I understand that taking opioid medicines with alcohol may cause:
  - very slow breathing
  - very low blood pressure
  - extreme drowsiness
  - and even death.
- I understand that I should not drink alcohol or take medicines containing alcohol while taking my opioid medicine.
- I understand that I must talk with my provider before taking other medicines.
  Some common medicines that may interact with my opioid include:

- Anxiety medicines (example: lorazepam (Ativan), diazepam (Valium), alprazolam (Xanax))
- Muscle relaxers (example: cyclobenzaprine (Flexeril))
- Sleeping medicine (example: zolpidem (Ambien), over-the-counter sleep medicine)
- Allergy/cold medicine (example: diphenhydramine (Benadryl)
- Medical Marijuana

- I will tell my provider as soon as possible if I need to visit another provider or the Emergency Room due to pain. If I go to the Emergency Room, I will tell the Emergency Room provider that I have signed this pain agreement. Failure to do so may result in my discharge from care.

_____ **4. I will not use street drugs while on opioid medicine.** If I have misused substances or alcohol in the past, I have discussed this with my provider. I agree to provide urine and blood for drug screening at any time my provider asks me. These tests will show the use of prescription and street drugs.
- I will not use any drugs that were not prescribed for me.

_____ **5. I will tell my provider right away if I become pregnant or am planning to become pregnant.**

_____ **6. I will keep my appointments.**

_____ **7. I will keep track of my medicine and prescription refills.** I understand that prescription refills:
- Will be written for a time period that my prescriber believes is safe.
- Will **not** be given if I:
  - Run out early
  - Lose the prescription
  - Spill or misplace the medicine
  - Have the medicine stolen.
- Will be refilled at the same pharmacy unless I have made other plans with my provider.

_____ **8. I will keep my opioid medicine safe in a LOCKED place.**
- I understand that the opioid medicine is **only for my use**. The medicine should never be given or sold to others.
- If I have children in the house, I will ask the pharmacy for a childproof top.
- If my medicine is stolen, I will report this to my local police department. I will also get a stolen item report.
- I will safely dispose of unused opioid medicine.

_____ **9. I have received education about my opioid medicine. I have had the chance to ask my provider questions about my opioid medicine.**

_____ **10. I understand that I need to follow all of the above conditions. If I do not follow these conditions, my provider may no longer prescribe opioid medicines for me.** I also understand that if I have a problem or question with any of the above information, I will discuss this with my provider.

_____ **11. I understand the importance of obtaining my opioid prescription from one prescriber and one pharmacy.**

My <u>Prescriber</u> I agree to obtain my opioid prescription from: _____

My <u>PHARMACY</u> I agree to obtain my opioid prescription from: _____

I will report side effects to: _____

The <u>OPIOID</u> medicine that I have been prescribed is: _____

I understand that the effect of my medicine will be reviewed with my provider on a regular basis. If my daily function or quality of life does not get better from the opioid medicine, it may be stopped. In that case, I will follow my provider's direction to slowly stop my opioid medicine.

I have read the above information (or it has been read to me) and have received a copy of the agreement. I understand my responsibilities and agree to these conditions while receiving opioid medicines.

_____ _____
Patient Signature Witness Signature

_____ _____
Prescriber Signature Date

Opioid Use Disorder

Community Principles of Pain Management

Prescription drug abuse continues as a health care problem in our nation and state. Despite the fact that the NYS PDMP(Prescription Drug Monitoring Program, has yielded a 75% improvement in "doctor shopping" for opioid prescriptions, since 2013, death by overdose on prescription opioids remains significant in NYS (4.9/100,000 in 2012,2013,2014)[1]

In 2005-2014 unintentional injury (where overdoses are classified) was the Number one cause of death for ages 15-44. (Suicide was number 4. Homicide number 5 for this age group) [2] According to the 2009 Partnership Attitude Tracking Study, over half of teens agree prescription drugs are easier to get than illegal drugs. Most teens surveyed believe that the prescription drugs are being taken from the family medicine cabinet. 1 in 7 teens in grades 9-12 have reported taking a prescription pain reliever for non-medicinal purposes in the past year.

Though the most recent data in NYS shows a significant increase in heroin and fentanyl in overdose deaths (4.2/100,000)[1], prescription opioids remain a major source of addiction, and overdose deaths.

When treating a patient with chronic pain, there must be a balance of controlling the individual's pain with minimizing the risks of treatment. Risk assessment should be conducted prior to initiating opioid therapy. Patients should be assessed for known risk factors. Here is a list of items that elevate a patient's risk for medication misuse and addiction:

- Personal or family history of substance or ETOH abuse
- History of pre-adolescent sexual abuse
- Psychiatric illnesses
- Poor reliability/compliance with medical care
- Poor social support or unstable living circumstances
- Youth (age <45)
- Smoking

These risk factors do not exclude an individual from receiving proper pain treatment, but would suggest that this patient may require strict or frequent monitoring. Some aberrant drug taking behaviors are more obvious (such as doctor shopping, prescription forgery, inappropriate route of administration), while others are less suggestive (such as requesting specific drugs, multiple occasions of non-adherence with therapy, resistance to a change in therapy.[6]

Numerous screening tests are available to assist with risk assessment, including the Opioid Risk Tool (ORT)[5], the DIRE (diagnosis, intractability, risk, efficacy) [6,7], and the SOAPP (screener and opioid assessment for patients with pain)[8]. The Opioid Risk Tool ORT[8] is a simple five question survey that can predict an individual's risk. The ORT and DIRE are probably the two most widely used screening tools. Other helpful tools include prescription monitoring programs (available in most states, including New York State), random urine drug screening, pill counts and patient education.

Terms associated with drug therapy are often used interchangeably; however, they have drastic differences in definition. Below is some of the terminology associated with opioid therapy.[9,10]

- **Opioid Use Disorder** is a medical condition characterized by the compulsive **use** of **opioids** despite adverse consequences from continued **use** and the development of a withdrawal syndrome when **opioid use** stops.
- **Physical dependence** is a state of adaptation that is manifested by a drug class-specific withdrawal syndrome that can be produced by abrupt cessation or rapid dose reduction of a drug, or by administration of an antagonist. This will occur in 100% of patients on chronic opioids.
- **Psychological dependence** is a subjective sense of a need for a specific psychoactive substance, either for its positive effects or to avoid negative effects associated with its abstinence.
- **Tolerance** is increasing amounts of drug are required to produce an equivalent level of efficacy. This too will occur in 100% of patients on chronic opioids.
- **Addiction** is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors. Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. Addictive behavior is much more common in those at risk as identified in a risk assessment tool which should be utilized before prescribing opioids.

The New York State Department of Health maintains a secure website which provides information as to whether a patient has received controlled substance prescriptions from two or more physicians and filled them at two or more pharmacies during the previous calendar month. To access this information, a current Health Commerce Account (formerly HPN) is needed. If you do not have an account, visit this website to establish one: https://hcsteamwork1.health.state.ny.us/pub/top.html. If you currently have a HCS account but are having difficulty logging in, please contact the Commerce Accounts Management Unit (CAMU) at 1-866-529-1890.

If you have identified an individual who has a problem with opioid use disorder and you are not qualified to treat the patient, assistance is available. Qualified physicians are able to dispense or prescribe medications for the treatment of opioid addiction in treatment settings other than the traditional Opioid Treatment Program (i.e. methadone clinic.) Visit http://www.buprenorphine.samhsa.gov/ for more information.

References:

1. PDMP Center of Excellence at Brandeis University. Mandating PDMP participation by medical providers: current status and experience in selected states [PDF File], 2014. Available from: http://www.pdmpexcellence.org/sites/all/pdfs/COE%20briefing%20on%20mandates%20revised_a.pdf Accessed: 9 March 2017.

2. Leading Causes of Death in New York State: *https://www.health.ny.gov/statistics/leadingcauses_death/*

3. National Institutes of Health, National Institute on Drug Abuse. 2014. DrugAbuse.gov *National Institutes of Health.* http://www.drugabuse.gov Accessed: 9 March 2017.

4. Passik SD. 2009. Issues in Long-term Opioid Therapy: Unmet Needs, Risks, and Solutions. *Mayo Clinic Proceedings 84*(7):593-601. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2704131/ Accessed: 9 March 2017.

5. Webster L and Webster R. 2005. Predicting Aberrant Behaviors in Opioid-Treated Patients: Preliminary Validation of the Opioid Risk Tool Pain Medicine 6(6): 432–442. http://www.compassionandsupport.org/pdfs/professionals/pain/Opioid_Risk_Tool_reference_051810.pdf Accessed: 9 March 2017.

6. Miles Belgrade, Fairview Pain & Palliative Care Center © 2005. http://integratedcare-nw.org/DIRE_score.pdf Accessed: 9 March 2017.

7. Belgrade MJ, Schamber CD, Lindgren BR. 2006. *J Pain.* The DIRE score: predicting outcomes of opioid prescribing for chronic pain. 7(9):671-81.https://www.ncbi.nlm.nih.gov/pubmed/16942953 Accessed: 9 March 2017.

8. PainEdu.org. 2014. Opioid Risk Management: Screener and Opioid Assessment for Patients in Pain (SOAPP). *Inflexxion.* http://www.painedu.org/soap.asp Accessed: 9 March 2017.

9. American Society of Addiction Medicine. 2009. ASAM Addiction Terminology. In: Ries, RK, Fiellin, DA, Miller, SC and Saitz, R (eds), Principles of Addiction Medicine, 4th Edition. Philadelphia: Lippincott Williams & Wilkins.

10. Heit HA. 2001. The Truth about Pain Management: The Difference Between a Pain Patient and an Addicted Patient. *European Journal of Pain 5*(Supp A):27-9. http://www.ncbi.nlm.nih.gov/pubmed/11798214 Accessed: 25 August 2014.

11. Substance Use Disorders | SAMHSA: https://www.samhsa.gov/disorders/substance-use

Methadone Dose Conversion Guidelines
Adapted from AAHPM Palliative Care Primer, 2019 edition with permission from Timothy Quill M.D.

Methadone is not a first line pain medication and should be used primarily by those with pain and palliative expertise. Despite representing only 2% of opioid prescriptions, methadone has been involved in 30% of opioid related deaths in recent years. Inexperienced prescribers should seek consultation.

Background
Methadone is a potent opioid with several favorable characteristics, including oral bioavailability of 80%, no active metabolites requiring dose adjustments in renal impairment, low cost, steady analgesic effect, and (possibly) more efficacy when used for neuropathic pain than other opioids. However, methadone has a long, variable half-life (ranging from 6 to 190 hours depending on the dosage). The rapid titration guidelines used for other opioids do not apply to methadone. The dose should not be increased more frequently than every 4 days in lower doses and 1 to 2 weeks in higher doses. Small changes in total daily dosage may progressively have a larger effect on blood levels when patients are on dosages greater than 30 mg per day. Dose-conversion ratios are complex, non-linear, and vary based on current opioid dosage and individual factors (see table below).

Conversion table from morphine to methadone (most commonly used in the USA)

24 hour total dose of oral morphine	Conversion ratio (oral morphine: oral methadone)
<30mg	2:1 (2mg morphine to 1mg methadone)
31-99mg	4:1
100-299mg	8:1
300-499mg	12:1
500-999mg	15:1
1000-1200mg	20:1
>1200mg	Consult with palliative care or pain specialist prior to prescribing

Because of the potential for drug accumulation from the long half-life, always write “hold for sedation” when initially prescribing or changing dosages of methadone.

Converting from methadone back to morphine or other opioids is especially complex, because methadone affects more opioid receptors than other opioid analgesics. Assistance from palliative care or pain management experts is highly recommended for such a transition if patients have been more than 30 mg for more than a few weeks.

Because of its long half-life, methadone is better used as a baseline, scheduled analgesic, with shorter-acting opioids such as morphine or hydromorphone used prn. There is some literature suggesting methadone can be used as a prn, however the risks if overused are much greater with methadone. Under most circumstances, unless the prescriber is very familiar with methadone pharmacokinetics and the patient is very reliable, it is safer to use an immediate release opioid as a prn when using methadone as the baseline opioid. The usual calculation ratios and intervals used for determining breakthrough doses of other opioids do not apply to methadone (and fentanyl).

Although the ratio of oral methadone to intravenous methadone may vary from 1:1 to 2:1, when converting from oral to intravenous methadone it is prudent to reduce the total daily dose of methadone by 50%. On the other hand, when converting from intravenous methadone to oral methadone, it is recommended to use the most conservative 1:1 conversion to avoid over-medicating the patient. Closely monitor for under- and over-dosing in all transitions. (See Table 1 Patient Selection for Methadone Therapy in McPherson et al)

Cautions about Methadone
- The long half-life causes drug accumulation, and can lead to possible sedation, confusion, and respiratory depression, especially in the elderly or with rapid dose adjustments. Respiratory depression must be treated with naloxone infusion due to methadone’s long half-life.
- Methadone in moderate to high dosages can prolong the QTc interval and increase the risk of the potentially lethal *torsades de pointes* arrhythmia. (See below for greater detail)
- Medications that can decrease methadone levels include rifampin, phenytoin, dexamethasone, carbamazepine, bosentan, phenobarbital, St. John’s Wort, modafinil, and a number of antiretroviral agents.
- Medications that can increase methadone levels include tricyclic antidepressants, azole antifungals (especially voriconazole), isavuconazonium, bupropion, chlorpromazine, duloxetine, haloperidol, omeprazole clarithromycin, erythromycin, and fluoroquinolones, amiodarone, selective serotonin reuptake inhibitors (SSRIs), and diazepam. Grapefruit juice and acute ETOH use also can increase methadone levels.
- Methadone has some serotonin activity and can contribute to serotonin syndrome.

- Careful patient selection and counseling should be undertaken to outline risks and benefits when using methadone.

Sample Calculation – Complete Conversion to Methadone
A 50-year-old woman with metastatic breast cancer has good pain control with sustained-release oral morphine 200 mg, two tablets twice a day. However, she develops persistent myoclonus. A decision is made to rotate opioids to methadone. (Our conversion table [Table 2.1] always requires that the equianalgesic amount of oral morphine be determined to calculate a daily dosage of methadone.)

Step 1. Calculate the total daily oral morphine dosage.
• Two tablets of 200 mg each, taken twice daily = 800 mg total oral morphine per day

Step 2. Convert to methadone.
- For a dosage of 800 mg per day, the conversion ratio of morphine to methadone is 15:1 (see "Conversion table from morphine to methadone" on previous page).
- 800 mg per day oral morphine × 1 mg methadone/15 mg oral morphine = 53 mg methadone per day

Step 3. Reduce the dosage because of incomplete cross-tolerance.
- Reduce the equianalgesic dose by 1/2 when switching opioids because of incomplete cross-tolerance.
- 53 mg × 1/2 equals about 26 mg methadone
- Total daily dosage should be about 26 mg methadone per day (general consensus that starting doses should not exceed 30-40 mg per day – see McPherson et al and Chou et al.).

Step 4. Determine dosing schedule.
- Methadone is initially dosed in divided doses three times per day (the analgesic effect is shorter than the half-life, so methadone should be generally given three times per day for pain, even though for methadone maintenance it can be given daily or even less frequently).
- A dosage of about 26 mg per day of methadone can be given as 7.5 mg to 10 mg of methadone three times per day (total daily dose of methadone being either 22.5mg or 30mg respectively).
- When ordering methadone, because of its long and variable half-life, always write "hold for sedation."

Step 5. Choose a prn medication.
- Because of its potentially long half-life, prn doses of methadone are difficult to manage correctly and are subject to completely different rules than other prn opioids. Therefore, *unless you are a very experienced methadone prescriber*, an opioid with a short half-life is highly preferable for prn dosing.

Step 6. Determine the prn dose (morphine).
- The prn dose should be 10% of the total daily opioid dosage.
- Because the patient was already on 800 mg per day of oral morphine, the prn dose based on the prior total daily dosage of morphine would be: 800 mg oral morphine × 10% = 80 mg oral morphine every 1 to 2 hours as needed.
- This could be given as 4 cc of 20 mg/cc morphine concentrate or equivalent every 1 to 2 hours as needed.

Step 7. Adjustments to regimen
- Due to the variable and often long half life, changes in dosing should be made no more frequently than 5-7 days. In cases like this where higher doses of methadone are being used, 7-14 days is advised.
- Due to multiple drug interactions, close monitoring of the complete medication list of methadone patients is critical

Practical facts
- Tablets 5, 10mg; Liquid 1mg/mL, 2mg/mL; 10mg/ml. The 40mg tablets are approved for detox and addiction tx only.
- Tablets can be crushed and are reasonably well absorbed sublingually, buccally or rectally if necessary.
- Cost of methadone: 1/10 morphine sulfate ER, 1/75 oxycodone ER, 1/15 of transdermal fentanyl.
- Any physician with a Schedule II DEA license can prescribe methadone for pain. A special license is only required when using for the treatment of addiction. **(N.B. Must write "for pain" on the prescription when used for pain.)**
- Seek consultation if converting from large doses of other opioids, converting to IV, or if inexperienced.

QTc Prolongation

- Depending on the goals of treatment, the presence of associated heart disease, the patient's prognosis, and the presence of other medications that prolong QTc, ECG monitoring may be indicated.

- If risk factors present, get baseline QTc.
    - Previous QTc > 450ms or known congenital long QTc syndrome
    - Underlying cardiac abnormalities, especially hx of ventricular arrhythmias, congestive heart failure
    - Use of other medications that prolong QTc and have a known risk of TdP (see https://www.crediblemeds.org/ for additional information))
    - Electrolyte abnormalities (especially low K, Ca, and Mg)
    - Hypothyroidism
- Begin monitoring after each dosage change if their baseline QTc exceeds 450ms and for all patients if and when their daily dose exceeds 30mg mg of methadone per day.
- For high-risk patients, monitor after initiation and each increase.
- Once a new steady state has been achieved, repeat ECG; generally about 4-7 days.
- There is no need for repeated checking unless dose is changed or another drug is added that would raise the blood level or affect the QTc.
- If QTc becomes significantly prolonged (QTc 450-499 milliseconds = moderate risk; QTc > 500 milliseconds = high risk), consider lowering the methadone dosage or rotating to an alternate opioid. Formal or informal consultation with palliative care, acute pain service, cardiology, and pharmacy should be considered. (see McPherson et al. and Chou R et al. for additional monitoring details)

References

McPherson ML, Walker KA, Davis MP, Bruera E, Reddy A, Paice J, et al. Safe and Appropriate Use of Methadone in Hospice and Palliative Care: Expert Consensus White Paper. J Pain Symptom Mange 2019;57(3): 635-645.

Chou R, Cruciani RA, Fiellin DA, et al. Methadone safety: a clinical practice guideline from the American Pain Society and College on Problems of Drug Dependence, in collaboration with the Heart Rhythm Society. J Pain 2014;15:e321-337.

Morley JS, Bridson J, Nash TP, Miles JB, White S, Makin MK. 2003. Low-dose Methadone Has An Analgesic Effect In Neuropathic Pain: A Double-blind Randomized Controlled Crossover Trial. *Palliative Medicine 17*(7): 576-87.

Krantz MJ, Martin J, Stimmel B, Mehta D, Haigney MC. 2009. QTc Interval Screening In Methadone Treatment. *Annals of Internal Medicine 150*(6): 387-95.

UptoDate 5/19. Methadone: Drug Information and Cancer Pain Management with Opioids

Woosley RL, Heise CW , Gallo T, Tate J, Woosley D and Romero KA, www.CredibleMeds.org, QTdrugs List, [Accession Date], AZCERT, Inc. 1822 Innovation Park Dr., Oro Valley, AZ 85755

Buprenorphine for the Treatment of Pain

Background

Buprenorphine is a semi-synthetic thebaine derivative, categorized as a mixed partial agonist opioid receptor modulator (opioid agonist-antagonist). It binds to various opioid receptors, and acts as a partial agonist at mu-opioid receptors and as an antagonist at kappa receptors. This opioid is used to treat opioid addiction in higher doses and chronic pain in lower doses. There are two properties that distinguish buprenorphine from other opioids. First, a ceiling effect occurs as the dose is increased. This contributes greatly to its safety profile but may limit its usefulness for treatment of severe, escalating pain. In other words, at high doses, the respiratory depressive and analgesic effects level off. In overdose situations, however, respiratory depression can still occur and will be more difficult to treat with naloxone compared to overdoses with other opioids due to buprenorphine's very tight binding to opioid receptors (very high naloxone doses of 10-35mg may be required).

Secondly, it has a bell-shaped dose-response curve. At moderate to high doses, the euphoric effects also level off, thus lowering its potential for misuse and overdose. The abuse potential of buprenorphine, although low, is further reduced in a transdermal preparation because the plasma levels slowly rise to a therapeutic level, unlike the rapid peak level that occurs with other formulations.

Buprenorphine has poor oral bioavailability due to significant first pass metabolism and therefore is not offered as an oral formulation. Buprenorphine is highly lipophilic and well absorbed by the oral mucosa. As such, transdermal, sublingual, and buccal formulations are available in addition to an injectable (intravenous/intramuscular) formulation. Buprenorphine is currently available in four types of single agent products:

1. Butrans transdermal patch
2. Belbucca buccal film
3. Subutex sublingual tablet
4. Buprenex injectable solution

Butrans and Belbuca are FDA indicated for the treatment of chronic pain in patients requiring a continuous, around-the-clock opioid analgesic for an extended period of time. Subutex is **not** FDA indicated for treatment of acute or chronic pain and carries a manufacturer warning against use as an analgesic due to reported deaths of opioid naïve patients receiving a buprenorphine 2 mg sublingual dose. Sublingual buprenorphine has been successfully studied for postoperative pain control, although caution is warranted if using off label for this indication given the manufacturer warning of fatal overdose at 2 mg in opioid naïve patients (Johnson, Fudala, Payne, 2005). Buprenex is indicated for acute moderate to severe pain. Buprenex has a slow onset of analgesic effect (15 minutes to onset, 1-3 hours to peak effect) and therefore may not be considered an ideal analgesic choice for acute pain management in comparison to other injectable opioids. Parenteral buprenorphine is approximately 30 times more potent than parenteral morphine (buprenorphine 0.3 mg ~ morphine 10 mg). Please note that all buprenorphine formulations do still carry a black box warning due to the risk of severe, life-threatening respiratory depression

Buprenorphine is also available in combination with naloxone for the treatment of substance abuse disorder in products such as Bunavail, Suboxone, and Zubsolv. These medications when used for opioid dependence are limited for use by qualified prescribers.

Initial dosing of Butrans patch:

For Opioid naïve patients: initiate treatment with a 5mcg/hr patch, replaced weekly.

Conversion from Other Opioids to Butrans: Discontinue all other around-the-clock opioids when Butrans therapy is initiated to reduce potential of precipitated withdrawal. Initial Butrans dose:

Previous Opioid Analgesic Daily Dose (Oral Morphine Equivalent)	<30 mg	30-80 mg
Recommended BUTRANS Starting Dose	5 mcg/hour patch	10 mcg/hour patch

BUTRANS 20 mcg/hour may not provide adequate analgesia for patients requiring greater than 80 mg/day oral morphine equivalent. Consider the use of an alternate analgesic. Limitations of Use: Do not exceed a dose of one 20 mcg/hour Butrans system due to the risk of QTc interval prolongation. Use with caution when prescribing with other medications which increase the QTc interval.

Initial dosing of Belbuca buccal strips:
For Opioid naïve patients: initiate treatment with a 75 mcg film once daily or, if tolerated, every 12 hrs.

Conversion from Other Opioids to Belbuca: To reduce the risk of opioid withdrawal, taper patients to no more than 30mg oral morphine equivalent daily before beginning Belbuca. Initial Belbuca dose:

Previous Opioid Analgesic Daily Dose (Oral Morphine Equivalent) before taper	<30 mg	30-89 mg	90-160 mg
Recommended BELBUCA Starting Dose	75mcg QD-BID	150mcg q12h	300mcg q12h

BELBUCA may not provide adequate analgesia for patients requiring greater than 160 mg oral morphine equivalent per day. Consider the use of an alternate analgesic. The maximum daily dose of Belbuca is 900mcg.

Initial dosing of Buprenex injectable (IV/IM) formulation:
The usual dosage for persons 13 years of age and over is 1 mL buprenorphine hydrochloride injection (0.3 mg buprenorphine) given by deep intramuscular or slow (over at least 2 minutes) intravenous injection at up to 6-hour intervals, as needed. Repeat once (up to 0.3 mg) if required, 30 to 60 minutes after initial dosage, giving consideration to previous dose pharmacokinetics, and thereafter only as needed.

In high-risk patients (e.g., elderly, debilitated, presence of respiratory disease, etc.) and/or in patients where other CNS depressants are present, such as in the immediate postoperative period, the dose should be reduced by approximately one-half. Extra caution should be exercised with the intravenous route of administration, particularly with the initial dose.

References

Buprenorphine Is a Weak Partial Agonist That Inhibits Opioid Receptor Desensitization
Virk M, Arttamanghul S, Birdsong W T , Williams J T. The Journal of Neuroscience, 3 June 2009, 29(22): 7341-7348.

Transdermal buprenorphine in the management of persistent pain – safety aspects
Likar R. Ther Clin Risk Manag. 2006 Mar; 2(1): 115–125.

Butrans – buprenorphine patch, extended release [package insert]. Stamford, CT: Purdue Pharma L.P.; Revised 6/2014.

Belbuca – buprenorphine hydrochloride film [package insert]. Malvern, PA: Endo Pharmaceuticals Inc.; Revised 12/2015.

Pasero C, McCaffery M. Pain Assessment and Pharmacologic Management.
St. Louis: Mosby Elsevier; c2011. Section IV, Opioid Analgesics, Characteristics of Selected Agonist-Antagonist Opioids; p. 356-358.

Buprenex- Buprenorphine hydrochloride injection [package insert]. Lake Forest, IL:Hospira.; Revised 2/2016.

Johnson RE[1], Fudala PJ, Payne R. Buprenorphine: considerations for pain management**.** J Pain Symptom Manage. 2005 Mar;29(3):297-326.

Subutex- Buprenorphine hydrochloride sublingual film [package insert]. Hull, UT:Reckitt Benckiser; Revised 6/2016.

Naloxone Protocol:
A guideline for increasing community access to naloxone.

On March 15, 2016, the Centers for Disease Control and Prevention (CDC) published *Prescribing Opioids for Chronic Pain.* These guidelines indicate clinicians should offer naloxone when factors that increase risk for opioid overdose are present, such as history of overdose, history of substance use disorder, higher opioid dosages (≥50 mg oral morphine equivalents/day), or concurrent benzodiazepine use.[^]

Nationally, many key stakeholders endorse increasing community access to naloxone, including the **CDC, Attorney General, Surgeon General, Food and Drug Administration, World Health Organization, American Medical Association, American Society of Addiction Medicine, American Public Health Association, National Association of Drug Diversion Investigators, and the Office for National Drug Control Policy**.

Naloxone may be offered to anyone who feels they are at risk for witnessing a drug overdose.
Naloxone may be prescribed to patients at increased risk for opioid overdose including:

- History of addiction, drug abuse, or drug overdose
- Moderate or high risk of opioid addiction (score of 4 or greater on the Opioid Risk Tool)
- Long-acting opioid use (sustained or extended-release oral formulation, fentanyl patch, or methadone)
- Oral morphine equivalents of 50 mg or more per day *(50 mg oral hydrocodone/day, 30 mg oral oxycodone/day, 12.5 mg oral hydromorphone/day, ~12 mg oral methadone/day, any strength fentanyl patch)*
- Concurrent opioid and benzodiazepine use

There are two ways to offer naloxone:

NON-PRESCRIPTION

Any patient or non-patient community member may pick up a Naloxone Kit.

Kits contain two prefilled naloxone syringes that require a nasal atomizer be affixed prior to administration. Free Kits are available at NYS Dept of Health registered programs found at: http://www.health.ny.gov/diseases/aids/general/resources/oop_directory/index.htm.

Some community pharmacies also carry kits for purchase (approximately $60).

PRESCRIPTION

Patients may pick up a prescription for naloxone at their usual pharmacy.

Insurance coverage of prescription naloxone is required by the Centers for Medicare and Medicaid Services.

Naloxone may be prescribed via any of the following regimens:

	INTRA-NASAL	INTRA-NASAL RELEASED IN 2016	IM	AUTO-IM
STRENGTH	Naloxone 1mg/1mL	Naloxone 4mg/0.1mL	Naloxone 0.4mg/1mL	Naloxone 0.4mg/1mL
QUANTITY	Two 2 mL prefilled Luer-Jet™ Luer-Lock needleless syringe PLUS 2 mucosal atomizer devices (MAD-300)	#1 two pack	Two single-use 1 mL vials	#1 two pack
SIG *for suspected opioid overdose*	Spray 1 mL (half of the syringe) into each nostril. Repeat after 2-3 minutes if no or minimal response.	Spray full dose into one nostril. Repeat into other nostril after 2-3 minutes if no or minimal response.	Inject 1 mL in shoulder or thigh. Repeat after 2-3 minutes if no or minimal response.	Use as directed by voice-prompt. Press black side firmly on outer thigh. Repeat after 2-3 minutes if no or minimal response.
REFILLS	Two	Two	Two	Two

Graphic reprinted with permission from *Preventing Fatal Opioid Overdose Among Your Patients* www.prescribetoprevent.org

^Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR Recomm Rep 2016;65(No. RR-1):1–49. DOI: http://dx.doi.org/10.15585/mmwr.rr6501e1.

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Opioid & Sedative Guidelines for Emergency Department and Urgent Care Providers

ED or Urgent Care providers **should not**

- dispense prescriptions for controlled substances that were lost, destroyed, stolen, or finished prematurely.
- prescribe or provide doses of methadone, buprenorphine (Suboxone), or long acting pain medications.

ED or Urgent Care providers **should** prescribe opiates for acute, short term pain for the shortest duration appropriate with national guidelines, generally no more than 3 days.

ED providers are **strongly encouraged** to access iStop when they have a reasonable suspicion that the patient has recently been prescribed a controlled substance by another provider, or if they suspect inappropriate use of opiates.

A dedicated primary care provider or relevant long-term care specialist (rather than ED or Urgent Care) should provide all opiates and sedatives to treat chronic ongoing condition.

An acute need for an opioid prescription **is not indicated** for any of the following signs/symptoms/conditions[1]:

- Abrasions
- Cellulitis
- Chest pain
- Chronic pain, such as back pain, abdominal pain, extremity pain, and headaches
- Contusions
- Cough
- Dental pain without acute trauma
- Dysuria
- Ear pain
- Hemorrhoids
- Lacerations
- Neck pain
- Sexually transmitted disease
- Sprains/strains from trauma
- Throat pain
- Urinary tract infection

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Many patients who present to the ED showing signs of addiction are often at their most vulnerable. These patients may be open to active discussion regarding their addictions and receptive to suggestions for treatment of their addiction. ED providers are **encouraged to** 1) counsel patients on appropriate use of opiates when prescribed for acute pain and 2) provide guidance on resources available for addiction treatment when inappropriate use of opiates or addiction is suspected.

Resources and provider listings can be found on this website:

https://ncadd-ra.org/news-resources/resources-advocacy-research

[1] Guidelines do not exclude the use of clinical judgment in the management of patients, but detailed documentation is indicated to support treatment outside of the recommended guidelines.

Opiate medications include, but are not limited to: codeine; hydrocodone (Norco, Vicodin, Lortab); oxycodone IR (Percocet) and SR (OxyContin); morphine IR and SR (MS Contin); hydromorphone IR (Dilaudid) and ER (Exalgo ER); methadone; fentanyl; oxymorphone ER (Opana ER).

Sedative medications include, but are not limited to: alprazolam (Xanax); clonazepam (Klonopin); diazepam (Valium); lorazepam (Ativan).

Guidelines reviewed by Rochester Regional Healthcare Association Medical Director Committee subgroup and Chiefs of Emergency Medicine from member hospitals.

Safe Medication Storage & Disposal

Prescription drug abuse is a significant problem nationwide. Unwanted medicines left in the home can endanger others, particularly children, seniors, and pets, and can be subject to drug abuse or accidental ingestion/overdose. Proper disposal of unwanted or expired medications makes a difference for our community and our environment. Safe medication disposal programs have been shown to be the most convenient, cost-effective, and secure method of disposal.

As of 2019, all drug disposal costs for hospitals and pharmacies in New York will be covered by drug manufacturers, as a result of the Senate's "Drug Take Back Act," which was passed July 10, 2018 (for more information: https://www.nysenate.gov/newsroom/press-releases/senates-drug-take-back-act-becomes-law.)

Most abused prescription drugs come from family and friends. Pharmaceutical drugs can be just as dangerous as street drugs when taken without a prescription or a doctor's supervision. Most teenagers abusing prescription drugs get them from family and friends – and the home medicine cabinet.

Unused prescriptions thrown in the trash can be retrieved and abused or illegally sold. Unused drugs that are flushed contaminate the water supply. Proper disposal of unused drugs save lives and protect the environment.

How to dispose of unused/expired medicine

Medicine take-back options

Consumers and caregivers should remove expired or unused medicines from their home as quickly as possible to help reduce the chance that others may accidentally take or intentionally misuse the unneeded medicine. Medicine take-back options are the preferred way to safely dispose of most types of unneeded medicines. There are generally two kinds of take-back options: periodic events and permanent collection sites

Periodic events

The U.S. Drug Enforcement Administration (DEA) periodically hosts National Prescription Drug Take-Back events where temporary collection sites are set up in communities nationwide for safe disposal of prescription drugs. A small number of medicines have specific directions to immediately flush them down the toilet when they are no longer needed, and a take-back option is not readily available. Local law enforcement agencies may also sponsor medicine take-back events in your community. Consumers can contact their local waste management authorities to learn about events in their area.

Permanent collection sites

Another option for consumers and long-term care facilities to dispose of unneeded medicines is to transfer these medicines to DEA-registered collectors, which safely and securely collect and dispose of

pharmaceuticals containing controlled substances and other medicines. Authorized permanent collection sites may be in retail pharmacies, hospital or clinic pharmacies, and law enforcement facilities. Some authorized collection sites may also offer mail-back programs or collection receptacles, sometimes called "drop-boxes," to assist consumers in safely disposing of their unused medicines.

Visit the DEA's website for more information about drug disposal, National Prescription Drug Take-Back Day events and to locate a DEA-registered collector in their area. To find an authorized collector, call the DEA Office of Diversion Control's Registration Call Center at 1-800-882-9539 in their community.

Disposal in the household trash

If no take-back programs or DEA-registered collectors are available in your area, and there are no specific disposal instructions in the product package insert, you can also follow these simple steps to dispose of most medicines in the household trash*:

- Mix medicines (do not crush tablets or capsules) with an unpalatable substance such as dirt, cat litter, or used coffee grounds;
- Place the mixture in a container such as a sealed plastic bag;
- Throw the container in your household trash; and
- Delete all personal information on the prescription label of empty pill bottles or medicine packaging, then dispose of the container.

*Other technologies to provide additional options for patients to use to dispose of medicines in the household trash have been developed.

Flushing certain potentially dangerous medicines in the toilet

A small number of medicines have specific instructions to immediately flush down the toilet when no longer needed and a take-back option is not readily available. These medicines may be especially harmful and, in some cases, fatal with just one dose if they are used by someone other than the person for whom they were prescribed. But as drug take-back programs and sites increase across the country, these could be options too, if one is readily available.

Resource: https://www.fda.gov/drugs/safe-disposal-medicines/disposal-unused-medicines-what-you-should-know

For more information on prescription drug abuse, go to:

www.DEA.gov or call 1-800-822-9539

www.GetSmartAboutDrugs.com

www.JustThinkTwice.com

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Visit CompassionAndSupport.org for additional resources.

Practice Guidelines and Pharmacological Therapies

Abdulla, A., Adams, N., Bone, M., Elliott, A, et al. (2013). Guidance on the management of pain in older people. *Age and Ageing, 42*, i1-i57. https://academic.oup.com/ageing/article-lookup/doi/10.1093/ageing/afs200. Accessed: June 10, 2019.

Alford, D., Compton, P, & Samet, J. (2006). Acute Pain Management for Patients Receiving Maintenance Methadone or Buprenorphine Therapy. *Annals of Internal Medicine, 144*(2), 127-134

American Geriatrics Society 2019 Beers Criteria Update Expert Panel. (2019). American Geriatrics Society 2019 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *Journal of the American Geriatrics Society,* 00,1-21 DOI: 10.1111/jgs.15767.

Attal, N., de Andrade, D., Adam, F., Ranoux, D., *et al*. (2016). Safety and Efficacy of Repeated Injections of Botulinum Toxin A in Peripheral Neuropathic Pain (BOTNEP): A Randomised, Double-blind, Placebo-controlled Trial, *Lancet, 15,* 555-565.

Atkinson, T., Fudin, J., Wegrzyn, E., & Bettinger, J. (2014). Dialysis, Opioids, and Pain Management: Where's the Evidence? *Practical Pain Management, 14*(8), 1-14. https://www.practicalpainmanagement.com/treatments/pharmacological/opioids/dialysis-opioids-pain-management-where-evidence. Accessed: June 10, 2019.

Barr, J., Fraser, G., Puntillo, K., Ely, E., Gelinas, C., *et al.* (2013). Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit. *Critical Care Medicine, 41*(1), 263-306. https://www.ncbi.nlm.nih.gov/pubmed/23269131 Accessed: June 10, 2019.

Belendiuk, K., Baldini, L., & Bonn-Miller, M. (2015). Narrative review of the safety and efficacy of marijuana for the treatment of commonly state-approved medical and psychiatric disorders. *Addiction Science & Clinical Practice*, *10.* https://ascpjournal.biomedcentral.com/articles/10.1186/s13722-015-0032-7. Accessed: June 10, 2019.

Brutcher, R, Kurihara, C, Bicket, M, et al. (2019). Compounded Topical Creams to Treat Localized Chronic Pain: A Randomized Controlled Study *Ann Int Med* 170, 309-318.

Centers for Disease Control and Prevention. (2018). 2018 Annual Surveillance Report of Drug-Related Risks and Outcomes — United States. Surveillance Special Report. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Published August 31, 2018. https://www.cdc.gov/drugoverdose/pdf/pubs/2018-cdc-drug-surveillance-report.pdf Accessed June 10, 2019.

Centers for Disease Control and Prevention. (2011). Vital Signs: Overdoses of Prescription Opiod Pain Relievers --- United States, 1999-2008. *Morbidity and Mortality Weekly Report, 60*(43), 1487-1492. https://www.cdc.gov/mmwr/pdf/wk/mm6043.pdf. Accessed: June 10, 2019.

Cheung, C., Qiu, Q., Choi, S.-W., Moore, B., Goucke, R., & Irwin, M. (2014). Chronic Opioid Therapy for Chronic Non-Cancer Pain: A Review and Comparison of Treatment Guidelines. *Pain Physician, 17*(5), 401-414. https://espace.library.uq.edu.au/view/UQ:341298. Accessed: June 10, 2019.

Chou, R., Deyo, R., Friedly, J., *et. al*. (2017). Systemic Pharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline. *Annals of Internal Medicine*, *166*(7), 480-492. http://annals.org/aim/article/2603229/systemic-pharmacologic-therapies-low-back-pain-systematic-review-american-college. Accessed: June 11, 2019.

Chou, R., Gordon, D., de Leon-Casasola, O. *et.al*. (2016). Guidelines on the Management of Postoperative Pain. *The Journal of Pain, 17*(2), 131-157. http://www.jpain.org/article/S1526-5900(15)00995-5/fulltext. Accessed: June 11, 2019.

Chou, R., Turner, J., Devine, E., *et.al.* (2015). The Effectiveness and Risks of Long-Term Opioid Therapy for Chronic Pain: A Systematic Review for a National Institutes of Health Pathways to Prevention Workshop. *Annals of Internal Medicine, 162*(4), 276-286.

Dowell, D, Haegerich, T, and Chou, R. (2019) No Shortcuts to Safer Opioid Prescribing *NEJM* Perspective, 1-3 DOI: 10.1056/NEJMp1904190

Dowell, D, Haegerich, T, & Chou, R. (2016). CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. *JAMA, 315*(15), 1624-1645. https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm. Accessed: June 11, 2019.

Franklin, G. (2014). Opioids for chronic noncancer pain. *American Academy of Neurology, 83*, 1277-1284. http://www.neurology.org/content/83/14/1277.full. Accessed: June 11, 2019.

Goesling, J., Henry, M., Moser, S., *et.al*. (2015). Symptoms of Depression Are Associated With Opioid Use Regardless of Pain Severity and Physical Functioning Among Treatment-Seeking Patients With Chronic Pain. *The Journal of Pain, 16*(9), 844-851. http://www.jpain.org/article/S1526-5900(15)00702-6/fulltext. Accessed: June 11, 2019.

Hochberg, M., Altman, R., April, K., *et.al*. (2012, April). American College of Rheumatology 2012 recommendations for the use of nonpharmacologic and pharmacologic therapies in osteoarthritis of the hand, hip, and knee. *Arthritis Care & Research, 64*(4), 465-474.

McPherson, ML, et al. (2019) Safe and Appropriate Use of Methadone in Hospice and Palliative Care: Expert Consensus White Paper *Journal of Pain and Symptom Management* 57(3), 635-645.

National Academy of Medicine (NAM). (2017). First do no harm: Marshaling clinician leadership to counter the opioid epidemic. Washington, DC: National Academy of Medicine. https://nam.edu/first-no-harm-nam-special-publication/. Accessed June 10, 2019.

National Academy of Medicine. (2017). President's Forum: The U.S. Opioid Epidemic https://youtu.be/8cVhP00lziU. Accessed June 10, 2019.

National Academies of Sciences, Engineering, and Medicine (2019). Pain Management for People with Serious Illness in the Context of the Opioid Use Disorder Epidemic: Proceedings of a Workshop. Washington, DC: The National Academies Press. https://doi.org/10.17226/25435. Accessed June 10, 2019.

National Academies of Sciences, Engineering, and Medicine. (2017). Pain management and the opioid epidemic: Balancing societal and individual benefits and risks of prescription opioid use. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/24781. Accessed June 10, 2019.

Nisar, R., Griffin, B., Vest, K., Tran, T., Nikolaides, J. (2019) Opioid Misuse in Older Women. *Journal of the American Geriatrics Society,* https://doi.org/10.1111/jgs.15965. Accessed June 10, 2019.

Nuckols, T., Anderson, L., Popescu, I., *et.al.* (2014). Opioid Prescribing: A Systematic Review and Critical Appraisal of Guidelines for Chronic Pain. *Annals of Internal Medicine, 160*(1), 38-47.

Paulozzi, L., Mack, K., & Hockenberry, J. (2014). Vital Signs: Variation Among States in Prescribing of Opioid Pain Relievers and Benzodiazepines — United States, 2012. *Morbidity and Mortality Weekly Report, 63*(26), 563-568. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6326a2.htm. Accessed: June 11, 2019.

Reuben, D, Alvanzo, A., Ashikaga, T., *et.al*. (2015). National Institutes of Health Pathways to Prevention Workshop: The Role of Opioids in the Treatment of Chronic Pain. *Annals of Internal Medicine, 162*(4), 295-300. http://annals.org/aim/article/2089371/national-institutes-health-pathways-prevention-workshop-role-opioids-treatment-chronic. Accessed: June 11, 2019.

Rudd, R., Aleshire, N., Zibbell, J., & Gladden, R. (2016). Increases in Drug and Opioid Overdose Deaths — United States, 2000–2014. *Morbidity and Mortality Weekly Repoty, 64*(50), 1378-1382. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6450a3.htm. Accessed: June 11, 2019.

Taylor, R., Lemtouni, S., Weiss, K., & Pergolizzi, J. (2012). Pain Management in the Elderly: An FDA Safe Use Initiative Expert Panel's View on Preventable Harm Associated with NSAID Therapy. *Current Gerontology and Geriatrics Research*, 1-9. https://www.hindawi.com/journals/cggr/2012/196159. Accessed: June 10, 2019.

U.S. Department of Health and Human Services (2019, May). Pain Management Best Practices Inter-Agency Task Force Report: Updates, Gaps, Inconsistencies, and Recommendations. Retrieved from U. S. Department of Health and Human Services website: https://www.hhs.gov/ash/advisory-committees/pain/reports/index.html Accessed June 10, 2019.

Assessment Tools

Cheatle, M, Compton, P, Dhingra, L, Wasser, T, O'Brien, C. (2019) Development of the Revised Opioid Risk Tool to Predict Opioid Use Disorder in Patients with Chronic Nonmalignant Pain *The Journal of Pain* 0 (0) 1-10. Available online: https://www.jpain.org/article/S1526-5900(18)30622-9/fulltext. Accessed June 10, 2019.

Clark, M, Hurley, R, Adams, M. (2018) Re-assessing the Validity of the Opioid Risk Tool in a Tertiary Academic Pain Management Center Population *Pain Medicine,* 19: 1382–1395.

Ersek, M, Herr, K, Hilgeman, M, et al. (2018) Developing a Pain Intensity Measure for Persons with Dementia: Initial Construction and Testing *Pain Medicine,* 0(0), 1-15. doi: 10.1093/pm/pny180.

Ersek, M, Neradilek, M, Herr, K, et al. (2018) Psychometric Evaluation of a Pain Intensity Measure for Persons with Dementia. *Pain Medicine* 0(0), 1-12 doi: 10.1093/pm/pny166

Herr, K., Coyne, P. J., McCaffery, M., Manworren, R., & Merkel, S. (2011). Pain assessment in the patient unable to self-report: position statement with clinical practice recommendations. *Pain Management Nursing, 12*(4), 230-250.

Jamison, R., Serraillier, J., & Michna, E. (2011). Assessment and Treatment of Abuse Risk in Opioid Prescribing for Chronic Pain. *Pain and Research Treatment,* 1-12. https://www.hindawi.com/journals/prt/2011/941808. Accessed: June 11, 2019.

Lichtner, V., Dowding, D., Esterhuizen, P., *et.al.* (2014). Pain assessment for people with dementia: a systematic review of systematic reviews of pain assessment tools. *BMC Geriatrics, 14*(138). https://bmcgeriatr.biomedcentral.com/articles/10.1186/1471-2318-14-138. Accessed: June 11, 2019.

Lints-Martindale, A., Hadjistavropoulos, T., Lix, L. M., & Thorpe, L. (2012). A Comparative Investigation of Observational Pain Assessment Tools for Older Adults With Dementia. *Clinical Journal of Pain, 28*(3), 226-237.

Solanski, D., Koyyalagunta, D., Shah, R., Silverman, S., & Manchikanti, L. (2011). Monitoring Opioid Adherence in Chronic Pain Patients: Assessment of Risk of Substance Misuse. *Pain Physician, 14*, E119-E131. http://www.painphysicianjournal.com/current/pdf?article=MTQ0NQ%3D%3D&journal=60. Accessed: June 11, 2019.

Webster, L, Webster, R. (2005) Predicting Aberrant Behaviors in Opioid-Treated Patients: Preliminary Validation of the Opioid Risk Tool *Pain Medicine* 6(6): 432–442.

Witkin, L., Diskina, D., Fernandes, S., Farrar, J., & Ashburn, M. (2013). Usefulness of the opioid risk tool to predict aberrant drug-related behavior in patients receiving opioids for the treatment of chronic pain. *Journal of Opiod Management, 9*(3), 177-187.

Neuromodulation and Invasive Procedures:

Deer, T., Levy, R., Kramer, J., *et.al*. (2017). Dorsal Root Ganglion Stimulation Yielded Higher Treatment Success Rate for Complex Regional Pain Syndrome and Causalgia at 3 and 12 months: A Randomized Comparative Trial. *Pain, 158*(4), 669-681.

Kapural, L., Yu, C., Doust, M., Gliner, B., *et.al.* (2015). Novel 10-kHz High-Frequency Therapy (HF10 Therapy) Is Superior to Traditional Low-Frequency Spinal Cord Stimulation for the Treatment of Chronic Back and Leg Pain; The SENZA-RCT Randomizd Controlled Trial. *Anesthesiology, 123,* 851-60.

Turner, J., Loeser, J., Deyo, R., & Sanders, S. (2004). Spinal Cord Stimulation for Patients with Failed Back Surgery Syndrome or Complex Regional Pain Syndrome: A Systematic Review of Effectiveness and Complications. *Pain, 108,* 137-147.

Jonas, W, Crawford, C, Colloca, L, Kriston, L, et al (2018) Are Invasive Procedures Effective for Chronic Pain? A Systematic Review, Pain Medicine pny154, https://doi.org/10.1093/pm/pny154 Accessed: June 7, 2019

Non-Pharmacological / Alternative / Complementary Therapies

Consortium for Integrative Medicine and Health Tick, S, Arya Nielsen, A, et al. (2017) Evidence-Based Nonpharmacologic Strategies for Comprehensive Pain Care: The Consortium Pain Task Force White Paper www.nonpharmpaincare.org Accessed June 7, 2019.

Chou, R., Deyo, R., Friedly, J., *et.al*. (2017). Nonpharmacologic Therapies for Low Back Pain: A Systematic Review for an American College of Physicians Clinical Practice Guideline. *Annals of Internal Medicine, 166*(7), 493-505. http://annals.org/aim/article/2603230/nonpharmacologic-therapies-low-back-pain-systematic-review-american-college-physicians. Accessed: June 11, 2019.

Hempel, S., Taylor, S., Solloway, M., *et.al.* (2014) Evidence Map of Tai Chi. VA-ESP Project #ESP 05-226.

Kong, L. et al. (2016) Tai Chi for Chronic Pain Conditions: A Systematic Review and Meta- analysis of Randomized Controlled Trials. Sci. Rep. 6, 25325; doi: 10.1038/srep25325

Morone, N., Greco, C., Moore, C., *et.al.* (2016). A Mind-Body Program for Older Adults With Chronic Low Back Pain: A Randomized Clinical Trial. *JAMA Internal Medicine, 176*(3), 329-337. http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2495275. Accessed: June 11, 2019.

Nahin, R., Khalsa, P., Weber, W., Boineau, R., & Stussman, B. (2016). Evidence-Based Evaluation of Complementary Health Approaches for Pain Management in the United States. *Mayo Clinic Proceedings, 91*(9), 1292-1306. http://dx.doi.org/10.1016/j.mayocp.2016.06.007. Accessed: June 11, 2019.

National Academies of Sciences, Engineering, and Medicine. (2019). The role of nonpharmacological approaches to pain management: Proceedings of a workshop. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25406. Accessed June 10, 2019.

Park, J., & Hughes, A. (2012). Nonpharmacological Approaches to the Management of Chronic Pain in Community-Dwelling Older Adults: A Review of Empirical Evidence. *Journal of the American Geriatrics Society, 60*(3), 555-568.

Qaseem, A., Wilt, T., McLean, R., & Forciea, M. (2017). Noninvasive Treatments for Acute, Subacute, and Chronic Low Back Pain: A Clinical Practice Guideline From the American College of Physicians. *Annals of Internal Medicine*, *166*(7), 514-530. http://annals.org/aim/article/2603228/noninvasive-treatments-acute-subacute-chronic-low-back-pain-clinical-practice. Accessed: June 11, 20179

Shengelia, R., Parker, S., Ballin, M., George, T., & Reid, M. (2013). Complementary Therapies for Osteoarthritis: Are They Effective? *Pain Management Nursing, 14*(4), e274-e288. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3857560/pdf/nihms365928.pdf. Accessed: June 11, 2019.

Opioid Use Disorder

Agarin, T., Trescot, A., Agarin, A., Lesanics, D., & Decastro, C. (2015). Reducing Opioid Analgesic Deaths in America: What Health Providers Can Do. *Comprehensive Review, 18*(3), E307-E322. http://www.painphysicianjournal.com/linkout?issn=1533-3159&vol=18&page=E307. Accessed: June 11, 2019.

Ballantyne, J. (2015). Assessing the prevalence of opioid misuse, abuse, and addiction in chronic pain. *PAIN, 156*(4), 567-568.

Bohnert, A., Valenstein, M., Bair, M., et.al. (2011). Association Between Opioid Prescribing Patterns and Opioid Overdose-Related Deaths. *JAMA, 305*(13), 1315-1321. http://jamanetwork.com/journals/jama/fullarticle/896182. Accessed: June 11, 2019.

Boscarino, J., Rukstalis, M., Hoffman, S., *et.al*. (2011). Prevalence of Prescription Opioid-Use Disorder Among Chronic Pain Patients: Comparison of the DSM-5 vs. DSM-4 Diagnostic Criteria. *Journal of Addictive Diseases, 30*(3), 185-194. http://dx.doi.org/10.1080/10550887.2011.581961. Accessed: June 11, 2019.

Brady, K., McCauley, J, & Back, S. (2016). Prescription Opioid Misuse, Abuse, and Treatment in the United States: An Update. *American Journal of Psychiatry, 173*(1), 18-26. http://ajp.psychiatryonline.org/doi/full/10.1176/appi.ajp.2015.15020262. Accessed: June 11, 2019.

Butler, S., Budman, S. H., Fanciullo, G., & Jamison, R. (2010). Cross Validation of the Current Opioid Misuse Measure (COMM) to Monitor Chronic Pain Patients on Opioid Therapy. *Clinical Journal of Pain, 26*(9), 770-776. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2955853. Accessed: June 11, 2019.

Gomes, T., Mamdani, M., Dhalla, I., Paterson, M., & Juurlink, D. (2011). Opioid Dose and Drug-Related Mortality in Patients With Nonmalignant Pain. *JAMA Internal Medicine, 171*(7), 686-691. http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/227064. Accessed: June 11, 2019.

Grattan, A., Sullivan, M., Saunders, K., Campbell, C., & Von Korff, M. (2012). Depression and Prescription Opioid Misuse Among Chronic Opioid Therapy Recipients With No History of Substance Abuse. *Annals of Family Medicine, 10*(4), 304-311. http://www.annfammed.org/content/10/4/304.full. Accessed: June 11, 2019.

Gwira Baumblatt, J., Wiedeman, C., Dunn, J., Schaffner, W., Paulozzi, L., & Jones, T. (2014). High-Risk Use by Patients Prescribed Opioids for Pain and Its Role in Overdose Deaths. *JAMA Internal Medicine, 174*(5), 796-801. http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/1840033. Accessed: June 11, 2019.

Howe, C., & Sullivan, M. (2014). The missing 'P' in pain management: how the current opioid epidemic highlights the need for psychiatric services in chronic pain care. *General Hospital Psychiatry, 36*, 99-104.

Juurlink, D., & Dhalla, I. (2012). Dependence and Addiction During Chronic Opioid Therapy. *Journal of Medical Toxicology, 8*, 393-399. https://link.springer.com/article/10.1007/s13181-012-0269-4. Accessed: June 11, 2019.

Kolondy, A., Courtwright, D., Hwang, C., *et.al*. (2015). The Prescription Opioid and Heroin Crisis: A Public Health Approach to an Epidemic of Addiction. *Annual Review of Public Health, 36*(1), 559-574. http://annualreviews.org/doi/full/10.1146/annurev-publhealth-031914-122957. Accessed: June 11, 2019.

Miller, M., Barber, C., Leatherman, S.,et.al. (2015). Prescription Opioid Duration of Action and the Risk of Unintentional Overdose Among Patients Receiving Opioid Therapy. *JAMA Internal Medicine, 175*(4), 608-615. http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2110997. Accessed: June 11, 2019.

National Academies of Sciences, Engineering, and Medicine. (2019). Medications for opioid use disorder save lives. Washington, DC: The National Academies Press. doi: https://doi.org/10.17226/25310. Accessed June 10, 2019.

Sehgal, N., Manchikanti, L., & Smith, H. S. (2012). Prescription Opioid Abuse in Chronic Pain: A Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse. *Pain Physician, 15*, ES67-ES92. http://www.painphysicianjournal.com/linkout?issn=1533-3159&vol=15&page=ES67. Accessed: June 11, 2019.

Thomas, D., Frascella, J., Hall, T., *et.al*. (2015). Reflections on the role of opioids in the treatment of chronic pain: a shared solution for prescription opioid abuse and pain. *Journal of Internal Medicine, 278*, 92-94.

Volkow, N. D., & McLellan, T. (2016). Opioid Abuse in Chronic Pain — Misconceptions and Mitigation Strategies. *The New England Journal of Medicine, 374*(13), 1253-63. http://www.nejm.org/doi/full/10.1056/NEJMra1507771#t=article. Accessed: June 11, 2019.

Vowles, K. E., McEntee, M. L., Siyahhan Julnes, P., Frohe, T., Ney, J. P., & van der Goes, D. N. (2015, April). Rates of opioid misuse, abuse, and addiction in chronic pain: a systematic review and data synthesis. *PAIN, 156*(4), 569-576.

Wasan, A., Michna, E., Edwards, R., *et.al*. (2015). Psychiatric Comorbidity Is Associated Prospectively with Diminished Opioid Analgesia and Increased Opioid Misuse in Patients with Chronic Low Back Pain. *Anesthesiology, 123*(4), 861-872. http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2396642. Accessed: June 11, 2019.

Webster, L. R., Cochella, S., Dasgupta, N., Fakata, K. L., Fine, P. G., Fishman, S. M., . . . Wakeland, W. (2011). An Analysis of the Root Causes for Opioid-Related Overdose Deaths in the United States. *Pain Medicine, 12*, S26-S35.

Pediatrics

Groenewald, C., Rabbitts, J., Gebert, J., & Palermo, T. (2016). Trends in opioid prescriptions among children and adolescents in the United States: a nationally representative study from 1996 to 2012. *PAIN, 157*(5), 1021-1027.

Sharma, B., Bruner, A., Barnett, G., & Fishman, M. (2016). Opioid Use Disorders. *Child & Adolescent Psychiatric Clinics, 25*(3), 473-487.

World Health Organization. (2012). *WHO guidelines on the pharmacological treatment of persisting pain in children with medical illnesses.* World Health Organization. http://apps.who.int/iris/bitstream/10665/44540/1/9789241548120_Guidelines.pdf. Accessed: June 11, 2019.