

## **Curriculum for Pain Management Education from the Oregon Pain Commission (1/2012)**

### Introduction to curriculum

- The Pain Management Commission of Oregon has developed this sample curriculum outline with the goal of seeking the highest quality of care for all patients (including adults, children and the elderly) with cancer related and non-cancer related pain.
- This is a sample of topics that may be of interest to medical professionals treating pain in Oregon.

### **Topics**

- I. Pain diagnosis/Nature of Pain
- II. Pain assessment
- III. Documentation
- IV. Opioids
- V. Non-opioid analgesics
- VI. Non-drug therapy
- VII. Psychological aspects of disease
- VIII. Prescribing regulations
- IX. Ethical Standards
- X. Communication with clients and other providers
- XI. Pediatrics
- XII. Special populations

### **I. Pain Diagnosis/Nature of Pain**

#### 1. Neuro-physiological basis of pain

- Neuroanatomy
- Neurophysiology

#### 2. Peripheral and central mechanisms

- Nociceptive events
  - Biochemical and biomechanical nociception
  - Effects of inflammation and tissue damage on nociceptors
- Ascending and descending pathways
- Sympathetic nervous system mechanisms in pain
  - Central and peripheral sensitization
- Referred pain (visceral and somatic pain)
- Physiological and pathological effect of unrelieved pain-neuroplasticity
- Trigger point mechanisms (e.g. myofascial pain)
- Postural components (home and work)

3. Distinction among acute, recurrent, and chronic pains

- Defining and classifying acute and chronic pains
- Impact of physiology on pain
- Impact on psychological response to pain
- Defining pain threshold, pain tolerance, and pain endurance
- Descartes' theory of pain
- Gate Control Theory of pain
- Historical theories of pain

4. Psychological and behavioral aspects of pain experience and relationship to acute or chronic nature of pain

- Anxiety, fear, crisis reaction, stress
- Impact on spirituality and meaningfulness; hope and hopelessness
- Psychological effect of unrelieved pain on perceptions of control and self-efficacy
- Depression, wish to die, suicidal risks, grief
- Impact of persistent pain on habits, roles, occupational performance, and future quality of life
- Personality and gender influences on pain experience

5. Influences of pain from environment, family, social, ethnic, cultural and spiritual experiences

6. Psychosocial changes that result from chronic pain

- Loss of activity: vocational, recreational, related to family
- Loss of identity: reassessing self image, grieving lost abilities, reassessing relationships and roles

7. Interaction of physiological basis of pain with psychological and environmental components

- Impact on pain perception
- Impact on pain response

8. Assessing the presence of a condition that explains persistent pain

- The patient seeks reasonable interdisciplinary medical therapy to treat the pain
- The patient receives appropriate consultation if a treatment failure occurs

## II. Pain Assessment

### 1. General History and Physical for assessment of pain

- Assessment should focus on *the person in pain*, not just the pain
- Physical exam to evaluate pain
  - Individual's general condition
  - Musculoskeletal system
  - Neurologic system
  - Site of pain
- Evaluate individual's self-report of pain
- Evaluate individual's behaviors or gestures suggestive of pain
- Evaluate aspects of reported pain:
  - Location of pain
  - Onset/duration of pain
  - Quality of pain with patient use of word descriptors (e.g. dull, sharp, aching, shooting)
  - Intensity of pain (Pain Rating using 0-10 scale)
  - Variations/rhythms of pain
  - Aggravating factors (Bring on or make pain worse)
  - Alleviating factors (Diminish or make pain better)
  - Associated symptoms (e.g. Nausea, anorexia, sleep disturbance)
  - Potential pathology causation of pain
    - Past or current medication history
    - Past or current disease history
    - Disease progression
    - Gastritis or GI bleed
    - Liver or renal or other organ system dysfunction
    - Systemic
    - Central nervous system
    - Psychosomatic
- Evaluate current therapeutic pain relief measures in use, including:
  - Medications, supplements, and over-the-counter remedies
  - Exercise, massage
  - PT, OT, Acupuncture, or other treatment modalities

### 2. Functional assessment

- Individual's prior level of function
- Individual's expression of pain/behaviors while performing functional tasks
- Pain-related changes or effect upon level of function
  - Impact upon activities of daily living

- Impact upon self care, work, routines, leisure and exercise
- Individual's goal for pain management and desired level of function

### 3. Psychosocial assessment

- Impact on quality of life
- Meaning of pain in relation to individual's age, roles, and skills
- Meaning of pain in relation to individual's cultural context or ethnicity
- Evaluate impact on pain, the current or history of any of the following: depression; psychopathology; sexual, physical or emotional abuse; chemical or alcohol dependency

### 4. Cognitive assessment

- Individual's report of pain impact on cognition
- Individual unable to report pain impact due to moderate or severe dementia or due to language deficit or language barrier
  - Use caregivers for pain history
  - Use algorithm for assessing pain
  - Use Interpreter Services or communication devices as required for assessment of pain

### 5. Multidimensional assessment tools in evaluating pain

- Narrative format
- Brief Pain Inventory
- McGill Pain Questionnaire
- Chronic Pain Grade
- Neuropathic Pain Scale
- Body Outline Marking
- Pain Assessment of Discomfort in Dementia (ADD)

### 6. Single-dimensional assessment tools in evaluating pain

- Visual Analog Scale
- Numeric Rating Scales
- Verbal Descriptive Scales
- Faces Pain Scales

### 7. Additional diagnostic tools for comprehensive assessment of pain

- Laboratory testing if indicated
  - Baseline or repeat diagnostic (e.g. CBC, Basic Metabolic Panel, etc.)

- Medication levels, if suspect
- Imaging studies if indicated
- Electrical or neurological studies if indicated
- Refer for physical therapy, occupational therapy, or other specialty assessment if indicated
- Refer for psychological or mental health evaluation if indicated
- Refer for medical/surgical consultation if indicated
- Refer to pain specialist for consultation if indicated

#### 8. Determination: Specific Classification of type of pain identified (Biologic Mechanisms of Pain)

- Neuropathic pain
- Musculoskeletal pain
- Inflammatory pain
  - Rheumatologic conditions
  - Fibromyalgia
- Mechanical/compression pain
- Central Pain Syndrome (thalamic)
- Cancer pain
- Psychosomatic

### **III. Documentation**

#### 1. Capture all information identified in assessment

- History and Physical
- Self-reported narrative
- Functional assessment
- Psychosocial assessment
- Cognitive assessment
- Assessment tool findings
- Assessment findings from referral evaluations (e.g. PT, OT,)
- Assessment findings from referral consults (e.g. mental health, medical/surgical, pain specialist)
- Studies and test results

#### 2. Treatment Plan documentation

- Treatment options reviewed and chosen in collaboration with individual
  - Goals and obstacles identified
    - Function
    - Comfort
    - Barriers

- Pharmacologic considerations
  - Analgesic trials
    - Date, type, dosage, and quantity of medication prescribed
    - Non-steroidal anti-inflammatory drugs (NSAIDS)
    - Opioids
      - Opioid Therapy Plan and Informed Consent
      - Risk assessment screening tools
      - Pain contracts
  - Sleep medications
  - Neuroleptics
  - Psychotropics
    - Selective serotonin reuptake inhibitors (SSRIs)
    - Serotonin and norepinephrine reuptake inhibitors (SNRIs)
  - Other medication trials
- Interprofessional team interventions
  - Physical Therapy
  - Occupational Therapy
  - Psychological or mental health treatment
  - Acupuncture
  - Massage
  - Chiropractic Care
  - Nutritionist
  - Other complimentary or alternative treatments
- Diagnostic and therapeutic procedures and follow-up
- Surgical or medical interventions and follow-up
- Supportive and self-directed care
  - Education of individual/family
  - Referral of individual/family to social support system(s)
  - Enrollment of individual/family in support group(s)
  - Fitness/exercise program
  - Self-guided imagery

### 3. Outcome Assessment

- Goals met
  - Functional status improved or not
  - Comfort level improved or not
  - Barriers removed or identified as remaining
- Ongoing Reassessment
  - Modifications, changes or additions to treatment plan
  - Individual discharged with self-management plan of care

## IV. Opioids

### 1. Opioid Metabolism

- Pharmacokinetics and Pharmacodynamics
- Unique qualities and safety issues with methadone
- Understanding Urine Drug Screens
- Long acting opioids
- Short acting opioids

### 2. Opioid Considerations

- Review of Clinical Guidelines
  - Joint Commission on Accreditation of Healthcare Organizations (JCAHO)
  - American Pain Society
- Identify pain states where an opioid trial is appropriate
- Address management of acute pain conditions in a patient using chronic opioid therapy
- Address continuation of persistent pain management in a hospitalized patient for continuation of effective therapy and upon discharge
- Defining addiction, tolerance, physical dependence, and pseudo-addiction
- Evaluation of risk factors, side effects and abuse factors prior to prescribing
- Pain contracts and screening tools
- Utilizing an Opioid Therapy Plan and Informed Consent
- Review of clinical improvement
- Assessment of functional improvement
- Ongoing evaluation of risk factors, side effects and abuse factors
- Evaluation of aberrant drug behavior
- Use of Opioid Therapy Plan and Informed Consent
- Risk Evaluation and Mitigation Strategies (REMS)
- Ethical issues
  - Balanced Use of Opioids
  - Discharge from practice and management of withdrawal of therapy

### 3. Coanalgesics

- Alpha-2 antagonists
- Drugs for co-morbid psychological conditions: Psychotropics:
  - Anticonvulsants
  - Tricyclic antidepressants
  - Selective serotonin reuptake inhibitors (SSRIs)
  - Serotonin and norepinephrine reuptake inhibitors (SNRIs)

- Anxiolytics
- Muscle relaxants
- Topical agents
- Insomnia drugs
- Cannabis
- Herbals/Neutraceuticals
- Biologics

## **V. Non-Opioids Analgesics**

1. Non-steroidal anti-inflammatory drugs (NSAIDS) and Cox 2 inhibitors
  - Safety versus efficacy
  - Black Box warning
2. Acetaminophen
3. Tramadol/Savella

## **VI. Non-drug Therapies**

1. Other Techniques
  - Nerve blocks
  - Surgical techniques
2. Behavioral Interventions
  - Psychotherapy
  - Cognitive-behavioral therapy
  - Relaxation techniques – biofeedback
  - Hypnotherapy
  - Others
3. Physical Therapy
  - Manual therapy-manipulation/soft tissue mobilization
  - Hydrotherapy/heat/cold
  - Electrotherapy: TENS/MENS
  - LASER
  - Mirror Therapy
  - Other
4. Occupational Therapy
  - Life Skills Management

- Routines/Habits
- Role development
- Transition planning
- Environmental modification

## 5. Complementary and Alternative Therapies (CAM) Defined

- Not necessarily mutually exclusive
- Complementary Therapies are those used alongside conventional medicine
- Alternative Therapies are those used instead of conventional medicine
- Awareness of potential for interactions between CAM and other medications

## 6. Foundation of Complementary and Alternative Therapies

- Based on complete systems of theory and practice
  - Traditional Chinese Medicine
  - Homeopathic Medicine
- Based on mind-body interventions and innate healing aspect
  - Biofeedback
- Based on biological interventions
  - Herbs
  - Dietary Therapy
  - Vitamins/Neutraceuticals
- Body Based and based on manipulation
  - Osteopathic care
  - Chiropractic care
  - Massage
- Based on energy manipulation
  - Biofields
    - Reiki
    - Therapeutic touch
  - Bio-electromagnetic based
    - Magnetic field manipulation

## 7. Complementary and Alternative Therapies (CAM) Examples

- Chiropractic care
- Acupuncture
- Naturopathy
- Massage therapy
- Music/Art therapy
- Craniosacral therapy

- Herbal therapy/Neutraceuticals

## 8. Holistic/Integrative Medicine

- Goal is to move the client towards a state of wholeness and unity
  - Incorporates spiritual (connection to the part of ourselves that knows who we are and how we shall live)
  - Incorporates Mind (the intellectual aspect of self)
  - Incorporates Body (the physical aspect of self)
  - Supports and enhances the ability of self-healing
- Interdisciplinary approaches required for chronic and complex pain

## **VII. The psychological consequences of chronic pain and its treatment**

### 1. Clinician responsibility in assessment of pain and psychosocial components

- Importance of integrating physical and psychological care in pain treatment
- Importance of detailed history taking
  - Developmental history
  - Family mental health history
  - Client psychosocial history

### 2. Psychological treatments

- Cognitive behavioral interventions/therapies
  - Assist client in developing strategies to cope with persistent pain
  - Recognize relationship between anxiety, depression and pain
    - Diagnose and treat anxiety and depression co-morbidities
    - Acknowledge grief component of persistent pain
  - Goals should include alleviation of emotional distress (suffering)
  - Goals should include improvement of function and quality of life
- Relaxation training and biofeedback
  - Emphasize stress reduction in reducing overall experience of pain
- Educational approaches
  - Recognize and reduce stigma attached with chronic pain
  - Recognize and reduce stigma attached with use of pain medications
  - Assist client to explore personality traits and impact upon pain, including "catastrophizing"
  - Recognize awareness of victimization perspective
    - Emphasize acceptance of consequences of conscious and unconscious choices

- Recognize and reduce client isolation
- Encourage and foster interpersonal support systems
- Emphasize importance of physical conditioning and general good health habits

### 3. Complicating factors in psychological treatment of chronic pain

- Pre-existing psychiatric conditions
- Somatoform disorders
- Conversion Disorders
- Post traumatic stress disorder
- Personality disorders

## **VIII. Prescribing Regulations**

### 1. State Regulations

### 2. Federal Regulations

- Understand DEA opioid schedule placement

### 3. Understand Safe Prescribing Guidelines for treatment of pain/chronic pain

- Opioid therapy plan
- One prescriber or one practice writing opioid prescriptions
- Risk assessment tools
- Importance of including "Exit Strategy"
- Urine drug screens and pill counts
- Referrals to Addiction Medicine and Mental Health when warranted
- Utilizing the Prescription Drug Monitoring Program

## **IX. Ethical Standards**

### 1. Ethical Obligations

- Understand importance of individual cultures, basic human rights, constant review of current practices
- Duty to prevent harm (nonmalficence)
- Be aware of pain risk for injury to dignity, self efficacy
- Understand principles of "justice for all" in pain prevention, assessment and treatment
- Have knowledge of "Pain Patient Bill of Rights"

### 2. Ethical professional power and responsibility

- Be aware of physical, bureaucratic, psychological, informational, political and economic power of professionals over clients and families
- Determine if behaviors, concepts and treatment recommendations are favorable to needs of clients, families, or clinicians.
- Understand difference and moral importance of informed consent in clinical treatment and research
- Be aware of techniques to involve clients and family in pain assessment and treatment process

## **X. Communication with clients and other providers**

1. Multi-disciplinary pain management centers provide integrated evaluation and treatment services for complex pain conditions

- Active communication is required with all professionals caring for the client, including exchange of past and current medical records
- Emphasize development of a partnership where decreased pain and improved function are valued by the client and the physician
- Physicians should not be coerced into providing analgesics they do not believe are helping the client
- Physicians should not fear repercussions to their professional licenses for developing individualized treatment plans, including the use of medications

2. Clinician responsibility in therapeutic relationship development

- Develop trust by validating client's expression of pain
- Validate "mind-body-spirit connection" and that pain is "real"
- Validate client frustration with diagnostic process

3. Importance of clinician and staff education

- Emphasize written protocols and procedures for clear understanding and continuity of care
- Emphasize pain agreements or "pain contracts" for clear understanding and continuity of care
- Emphasize appropriate and professional boundaries between clinicians, staff and the client
- Emphasize importance of direct and truthful communication
- Emphasize good listening and interviewing skills

4. Importance of pain client education about communication

- Educate the pain client with a vocabulary to discuss pain

- Emphasize what the clinician needs the client to communicate in order to assess the client's pain
- Emphasize the importance of communicating about effectiveness of pain treatment
- Inform client about what to expect from clinical visits and from treatment
- Empower client to interact with all healthcare providers for self-advocacy
- Discuss the meaning of opioid agreements for clear understanding of controlled substance use

## **XI. Pediatrics**

### 1. Introduction and Overview

- Historical aspects of the study of pain in children
- Incidence of chronic pain in children
- Epidemiology: Societal consequences
- Medico-legal and JCAHO issues
- Relationship between acute and chronic pain
- Philosophical issues

### 2. Pain Physiology - Relevant to the developing child

- Neuroanatomy
- Neurophysiology
- Biological significance of pain

### 3. Clinical presentation of pain in children

- Peripheral and central mechanisms (including nociceptive events, ascending and descending pathways, effects of inflammation and tissue damage on nociceptors, nerve trauma and entrapment, central and peripheral sensitization)
- Physical response to pain
- Psychological and behavioral components of pain experience and relationship to acute or chronic nature of pain
- Behavioral Issues: Pain and developmental stages, psychological response to pain
  - Anxiety, fear, crisis reactions, stress
  - Impact on spirituality and meaningfulness, hope and hopelessness
  - Psychological effect of unrelieved pain on perceptions of control and self-efficacy
  - Depression, wish to die, suicidal risks, grief

- Impact of persistent pain on habits, roles, play, school participation, and future quality of life
- Impact of history or presence of abuse or trauma

#### 4. Acute pain

- Definition of acute pain in children
- Postoperative pain
- Related to medical illness
- Procedural pain

#### 5. Management of Procedural Pain

- Anxiety vs. pain
- Pharmacologic vs. behavioral interventions
- Pharmacologic agents:
  - Sedatives
  - Analgesics
- Topical anesthetics (e.g., EMLA cream)
- Local anesthetics
- Distraction techniques
- Effectiveness of pharmaco-behavioral intervention

#### 6. Policies/Guidelines for procedural pain treatment in children

- JCAHO
- American Academy of Pediatrics
- American Pain Society
- Ethical issues
  - Pain research in children
  - Under treatment of pain
  - Pain and opiate dependence

#### 7. Chronic pain- definition

- Definition of chronic pain in children
- Related to medical illness
- Headache
- Abdominal pain
- Myofascial pain
- Posttraumatic pain – neuropathic pain
- Psychogenic pain

## 8. Illness behaviors associated with pain

- School absence
- De-conditioning cycle

## 9. Management in pediatrics

- Pain Assessment
  - Clinical research on behavior and assessment
  - Age appropriate assessment tools
  - Parent report
  - Nurse report
  - Documentation
    - Narrative description
  - Importance of follow-up assessment after initiation of treatment
  - Laboratory testing
  - Imaging
- Clinical pharmacology
  - NSAIDs
  - Opioids
  - Muscle relaxants
  - Adjunctive agents
    - Antidepressants
    - Anticonvulsants
    - Alpha 2 agonists
    - Topicals
- Other techniques
- Behavioral Interventions
- Physical Therapy
- Occupational Therapy
- Complementary Interventions
- Importance of interdisciplinary approach for chronic and complex pain problems

## **XII. Special populations**

### 1. Geriatric pain management

- Prevalence of pain
- Common causes
  - Arthritis
  - Compression fractures

- Diabetes
- Heart disease
- Cancer
- Injuries
- Emotional, spiritual, psychological pain
- Specific Geriatric pain syndromes
  - Headache
  - Abdominal pain
  - Myofascial pain
  - Neuropathic pain
  - Spinal pain
- Behavioral signs of pain in the demented:
  - Visual Grimacing, moaning, rubbing or guarding a body part
  - Agitation and combativeness
  - Resisting care
  - Withdrawal/Social Isolation
  - Decreased activity
  - Changes in appetite
  - Sleeping more
  - Negative vocalizations
  - Wandering
- Medication guidelines
  - Start low, go slow
  - Beers criteria for potentially inappropriate medication use in adults 65-years and older in the U.S.
  - American Geriatrics Society Guideline: Pharmacologic Management of Persistent Pain in Older Persons:  
[http://www.americangeriatrics.org/health\\_care\\_professionals/clinical\\_practice/clinical\\_guidelines\\_recommendations/persistent\\_pain\\_executive\\_summary](http://www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/persistent_pain_executive_summary)
  - Avoid the use of NSAIDs; Acetaminophen is drug of choice
  - World Health Organization (WHO) step ladder for pain relief
- Risk factors to consider
  - Sensitivity to drugs
  - Number of concomitant diseases
  - Polypharmacy
  - Inadequate testing of drugs in older adults prior to approval

## 2. Pain management for the cognitively impaired (IDD)

- Common causes of pain
  - Immobility, contractures
  - Musculoskeletal
  - Oral or dental pathology

- Infections (ear, kidney, etc.)
- Gastrointestinal conditions
- Renal conditions
- Headache; allergy-related symptoms
- Barriers to effective pain management
  - Myth that people with Intellectual and Developmental Disabilities (IDD) are less sensitive to pain
  - Population unable to communicate needs verbally or reliably
  - Population may have challenging behaviors that may confuse clinicians
    - Self-injurious behaviors (SIB)
    - People with SIB thought to be indifferent to pain or to have qualitatively different pain experience
    - SIB may be an expression of pain, as pain relief has been shown to decrease the incidence of SIB and aggression
  - Population has limited autonomy/is dependent on others for care and decision-making
- Medication Guidelines
  - Opioids may have a synergistic effect with other centrally acting medications such as anti-epileptics and antispasmodics, which are commonly used in persons with IDD
  - Medications may need to be compounded for administration via gastrostomy or jejunostomy tube
  - Some medications should not be crushed or given via tube feeding

### 3. Assessment Tools for use with Special populations

- Client self-report of pain is preferred
- Geriatric clients prefer word scales to numeric scales
- For Geriatric, use Pain Assessment in Advanced Dementia (PAINAID) Scale
- For list of Geriatric assessment tools, see: <http://www.healthcare.uiowa.edu/igec/tools/categoryMenu.asp?categoryID=7>
- Wong-Baker Faces scale
  - May be problematic in men due to 'crying face' for severe pain
  - Sometimes misinterpreted to mean 'mood' rather than 'pain'
- Thermometer scales
- Visual analog scales
- Additional Tools for Pediatric and IDD population
  - Verbal, visual or numeric
  - Observational/behavioral tools
  - Pain management in children: FLACC category scale (Face, Legs, Activity, Cry, Consolability)

- Non-communicating Children's Checklist
- Pediatric Pain Profile
- Pain and Discomfort Scale
- Faces: The Faces Pain Scale, revised

#### 4. Nonpharmacologic interventions for Special populations

- Interdisciplinary team approach
- Distractive therapies
- Heat/Cold
- Positioning
- Acupuncture/Acupressure
- Massage
- Music Therapy
- Art Therapy
- Nerve blocks

#### 5. Pain management at end-of-life:

- Common causes of pain
  - Malignant pain
  - Non-malignant pain
  - Emotional/spiritual/psychological issues (suffering)
- Additional Barriers to effective pain management
  - Fear of addiction
  - Fear of sacrificing alertness for pain control
  - Fear that giving pain medication will result in death
  - Assumption that morphine is the "last ditch drug" reserved for the very end of life
- Assessment tools
  - Patient self-report, when possible (or caregiver report if needed)
  - Verbal, visual and numeric scales
  - Observational, behavioral tools (e.g. PAINADD, FLACC)
- Medication Guidelines
  - Be aware of "Double effect" of medications i.e. benefit of opioids, but also potential of opioids to decrease respirations
  - Adjuvant medications
    - Methylphenidate to increase alertness, while maintaining pain control or as treatment for depression in people with short-term prognosis
    - Opioids may be used for shortness of breath and for air hunger
  - For pain that is unrelieved by standard palliative approaches, consider palliative sedation

## 6. Pain issues of women's health

- Neuro-physiological basis of pain
  - Anatomy and Neuroanatomy of pelvic organs
  - Neurophysiology and hormonal influences
  - Peripheral and central mechanisms pelvic pain
  - Physical signs and symptoms
  - Referred pain (visceral and somatic pain)
  - Physiological and pathological effect of unrelieved pain-neuroplasticity
- Psychological effects
- Specific pain conditions:
  - Pudendal and other neuralgias
  - Dysparunia
  - Vulvadynia
  - Cancer pain: breast and uterine
  - Pseudovisceral pain
  - Post-operative pain from female surgery
- Non-Surgical Treatments
  - Medications that can be taken when not pregnant or when pregnant
  - Physical Therapy
  - Occupational Therapy
  - Exercise options
  - Acupuncture
  - Behavioral health treatment
  - Neutraceutical and Herbal
- Surgical Intervention

## 7. Pain management for patients with substance abuse

8. Awareness of Oregon medical marijuana legislation and certification of conditions allowed for medical marijuana treatment

## 9. Sources of prototype educational materials

- Education of Physicians on End-of-life Care (EPEC)
- American Medical Association (AMA) Pain Education Module