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MODEL CORE CURRICULUM ON PAIN MANAGEMENT FOR MICHIGAN MEDICAL SCHOOLS

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Model Core Curriculum on Pain Management for Michigan Medical Schools

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Model Core Curriculum on Pain Management for Michigan Medical Schools

The following recommendations from the multidisciplinary Michigan Advisory Committee on Pain and Symptom Management (ACPSM) are based upon the core curriculum developed by the International Association for the Study of Pain (IASP) as well as significant input from the ACPSM itself. The purpose behind providing Michigan medical schools with this model curriculum on pain is to reduce the fragmentation that now exists in pain education, and to ensure comprehensive, essential content on pain education that is consistent across all of Michigan's medical schools. This effort also supports a recommendation of the Institute of Medicine's June 2011 *Relieving Pain in America* report to improve the curriculum and education on pain for health care professionals. The below content is directed primarily to the undergraduate medical student, and not to residents or graduates.

1. Introduction and overview

1.1. The burden of pain in Michigan and the United States

Students should be able to explain the public health and economic burden of pain.

Burden of pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> Incidence/prevalence Medical costs Lost wages Reduced productivity Disability	

Resources/Guidance Documents for Section 1.1.

 State of Michigan Bureau of Health Care Services physician and public surveys on pain. Available at: www.michigan.gov/pm.

- ✦ State of Michigan Cancer Prevention and Control Section/Michigan Cancer Consortium's Special Cancer Behavioral Risk Factor Surveys regarding care at the end of life. Available at: www.michigan.cancer.org.
- ✦ Advisory Committee on Pain and Symptom Management reports. Curriculum improvements around pain have been a standing recommendation. Information is available at: www.michigan.gov/pm.
- ✦ Michigan Commission on End of Life Care. *Report to the Governor*. Available at: http://www.michigan.gov/mdch/0,1607,7-132-2940_3183-14145--,00.html.
- ✦ National Institutes of Health Pain Consortium, in May 2012, selected 11 Centers of Excellence in Pain Education. These 11 health professional schools will “act as hubs for the development, evaluation, and distribution of pain management curriculum resources for medical, dental, nursing and pharmacy schools to enhance and improve how health care professionals are taught about pain and its treatment.” To track on progress: <http://painconsortium.nih.gov/>.
- ✦ Institute of Medicine. *Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research*. Washington, DC: National Academies Press; 2011.
- ✦ Centers for Disease Control & Prevention. Report *Health, United States, 2006* has a special feature on pain. Available at: [http://www.cdc.gov/nchs/data/06.pdf](http://www.cdc.gov/nchs/data/hus/06.pdf).
- ✦ The State of Michigan has a Pain Management website populated with resources for both health professionals and the public at: www.michigan.gov/pm.

1.2. Definitions

Students should be able to define each of the following.

Definitions	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none">  Pain  Acute pain  Acute recurring pain  Chronic pain (persistent pain) 	
<ul style="list-style-type: none">  Pain generators 	
<ul style="list-style-type: none">  Malignant pain (terminal pain, cancer pain)  Nonmalignant pain (non-terminal pain, non-cancer pain) 	
<ul style="list-style-type: none">  Addiction  Pseudoaddiction  Tolerance  Dependence 	
<ul style="list-style-type: none">  Hyperalgesia  Central pain/central sensitization  Nociceptive pain  Neuropathic pain 	

Resources/Guidance Documents for Section 1.2.

 International Association for the Study of Pain. *Core Curriculum for Professional Education in Pain*. 3rd ed. Seattle, WA; 2005.

- ✚ Bonica J author. Ballantyne JC, Fishman SM, Rathmell JP eds. *Management of Pain*. 4th ed. Philadelphia PA: Lippincott Williams & Wilkins; December 16, 2009. [Also available as an e-book.]
- ✚ Definitions are given in the Federation of State Medical Boards 2004 *Model Policy for the Use of Controlled Substances for the Treatment of Pain*. The Federation’s booklet, *Responsible Opioid Prescribing* by Scott Fishman, M.D. operationalizes the *Model Policy* and also includes definitions. This booklet, from 2009 onward, has been distributed to Michigan-based prescribers and dispensers of controlled substances.
- ✚ Definitions are given in the March 2009 University of Michigan’s guidelines for *Managing Chronic Non-Terminal Pain including Prescribing Controlled Substances*.
- ✚ Definitions are given in the American Pain Society and the American Academy of Pain Medicine’s *Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain*. These guidelines were published in the *Journal of Pain*, Vol. 10, No. 2, February 2009 on pages 113-130.
- ✚ Definitions are given in the Department of Veterans Affairs (VA) and the Department of Defense’s (DoD) *Clinical Practice Guideline for Management of Opioid Therapy for Chronic Pain*.

2. Ethics and health policy as related to pain

Students should be able to discuss and explain why undertreated and untreated pain is an ethical health issue as well as discuss and explain other ethical issues related to pain as described below. Students should also be familiar with and be able to reference Michigan legislation around pain management.

Ethics and health policy as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>According to the Institute of Medicine, in its June 29, 2011 report entitled <i>Relieving Pain in America: a Blueprint for Transforming Education, Care, Prevention, and Research</i>:</p> <p><i>“ . . . effective pain management is a moral imperative, a professional responsibility, and the duty of peoples in the healing professions.”</i></p>	
<p>Michigan law 333.20201(2)(o) recognizes the right of a patient/resident <i>“to adequate and appropriate pain and symptom management as a basic and essential element of his or her medical treatment.”</i></p>	
<p>Michigan law 333,16204b states that <i>“the legislature finds that the treatment of pain is an appropriate issue for the legislature to consider.”</i></p>	

Ethics and health policy as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Various factors influence a patient’s ability to access care for pain, including adequacy of medical insurance, transportation, availability of a primary care provider, etc.</p>	
<p>It is routinely difficult for patients to obtain adequate treatment for their pain. It is particularly difficult for the following patients:</p> <ul style="list-style-type: none"> ✚ Patients with chronic pain ✚ Patients with substance abuse problems ✚ Patients with psychiatric disorders ✚ Patients with cognitive impairment ✚ Elderly patients ✚ Infants and children ✚ Patients near the end of life ✚ Veterans/military ✚ Incarcerated ✚ Patients who require surrogate decision makers 	

Resources/Guidance Documents for Section 2.

- ✚ Institute of Medicine (IOM). *Relieving Pain in America: a Blueprint for Transforming Education, Care, Prevention, and Research*. Washington, DC: National Academies Press; June 29, 2011. In this report the IOM calls for a “cultural transformation in how the nation understands and approaches pain management and prevention.” Furthermore, the IOM states that “effective pain management is a moral imperative, a professional responsibility, and the duty of peoples in the healing professions.”
- ✚ The 2008 documentary **UNNATURAL CAUSES: Is Inequality Making Us Sick** was broadcast by PBS and examined the root causes of socio-economic and racial inequities in health. This documentary does an excellent job explaining why we have health disparities. Available at: <http://www.unnaturalcauses.org/>.
- ✚ Recommendations from the Michigan Advisory Committee on Pain and Symptom Management are available at: www.michigan.gov/pm.
- ✚ Recommendations from the Governor’s Commission on End-of-Life care area available at: https://www.michigan.gov/mdch/0,4612,7-132-2940_3183_4895-14145--,00.html.
- ✚ MCL 333.20201(2)(o) is known as the Patient Bill of Rights. The effective date for section “o” was January 8, 2002. This legislation can be accessed at: www.legislature.mi.gov/.
- ✚ MCL 333.16204b was effective on April 1, 1999. This legislation can be accessed at: www.legislature.mi.gov/.

3. Basic sciences as related to pain

3.1. General basic science as related to pain

Students should be able to explain the following topics as they apply to pain.

General basic science as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none">✚ Neuroanatomy<ul style="list-style-type: none">▪ Peripheral receptors▪ Afferent fibers▪ Spinal terminations✚ Neuroembryology✚ Evolutionary biology of pain (biological significance of pain/survival value of pain)✚ Neurophysiology	

General basic science as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ▪ Neuroplasticity ▪ Neurotransmitters ▪ Opioid receptors ▪ Pain modulation ▪ Pain transmission ▪ Spinal processing of nociceptive information <p>✚ Pathophysiology of pain</p> <ul style="list-style-type: none"> • Nociceptive <ul style="list-style-type: none"> ○ Somatic Pain ○ Visceral Pain • Neuropathic Pain and central pain <p>✚ Biochemistry</p>	

Resources/Guidance Documents for Section 3.1.

- ✚ According to the Advisory Committee on Pain and Symptom Management, most medical schools will have online resources that include the major textbooks in all of the above subject areas.
- ✚ International Association for the Study of Pain. *Core Curriculum for Professional Education in Pain*. 3rd ed. Seattle, WA; 2005.

3.2. Pharmacology as related to pain

Students should be able to list the following pharmacological approaches to managing pain and explain their advantages and disadvantages. For each of the medications classes, students should be able to summarize the following:

- ✚ Mechanism of action
- ✚ Indications
- ✚ Contraindications
- ✚ Side effects
- ✚ Drug interactions
- ✚ Required monitoring
- ✚ Relative potency (between classes and within)

In addition, students should be able to use common references to find detailed prescribing information for individual medications.

Pharmacology as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Analgesics <ul style="list-style-type: none"> ▪ Acetaminophen ▪ Nonsteroidal anti-inflammatory drugs ▪ Opioids ✚ Pre-emptive analgesics ✚ Other/adjuvant medications <ul style="list-style-type: none"> • Antidepressants • Anticonvulsants • Systemic local anesthetics • Topical analgesics • Muscle relaxants • Glucocorticoids • Bisphosphonates • Serotonin agonists (triptans) • Dihydroergotamine (DHE) 	
<ul style="list-style-type: none"> ✚ Medications for the management of side effects <ul style="list-style-type: none"> ▪ Gastric acid inhibitors ▪ Laxatives/bowel preparations ▪ Antiemetic agents ▪ Anticholinergic medications ▪ Antihistamines ▪ Stimulants 	

Resources/Guidance Documents for Section 3.2.

✚ Katzung BG. *Basic and Clinical Pharmacology*. 11th Ed. McGraw-Hill Companies; 2009.

✚ Herndon CM, Strassels SA, Strickland JM, et al. Consensus recommendations from the Strategic Planning Summit for Pain and Palliative Care Pharmacy Practice. *J Pain Symptom Manage.* 2012; 43:925-44.

3.3. Psychology as related to pain

Students should be able to describe the following psychological processes and factors that influence the individual’s expression and experience of pain.

Psychology as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Individual expressions of pain will be influenced by the following processes and factors:</p> <ul style="list-style-type: none"> ✚ Biopsychosocial model ✚ Emotions ✚ Cognition ✚ Behavioral factors ✚ Development ✚ Personality variables 	
<p>Other significant psychological factors that may influence the experience of pain:</p> <ul style="list-style-type: none"> ✚ Interpersonal issues ✚ Prior learning ✚ Previous trauma ✚ Self-esteem ✚ Self-efficacy ✚ Perceived locus of control ✚ Sick role ✚ Illness behavior (normal and abnormal) ✚ Secondary gain ✚ Denial of pain ✚ Amplification/catastrophizing of pain 	

Psychology as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> + Job dissatisfaction + Work stress 	

Resources/Guidance Documents for Section 3.3.

- + American Osteopathic Association. Chila A exec ed. *Foundations of Osteopathic Medicine*. 3rd ed. Baltimore, Maryland: Wolters Kluwer Health and Lippincott Williams & Wilkins; 2010. Refer to Chapters 15, 16, 18, and 56.
- + Flor H, Turk DC eds. *Chronic Pain: An Integrated Biobehavioral Approach*. Seattle, WA: IASP Press; 2011. Go to: www.iasp-pain.org.
- + Turk DC, Gatchel RJ eds. *Psychological Approaches to Pain Management: a Practitioner's Handbook*. 2nd ed. New York, NY: Guilford Press; 2002. Go to: www.guilford.com.

3.4. Sociology and anthropology as related to pain

Students should be able to describe the following socioeconomic, racial, ethnic, cultural, and family factors that influence the expression and experience of pain.

Sociology, anthropology as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Access to care (including access to pain medication) ✚ Health disparities ✚ Patients' response to pain ✚ Patients' reporting of pain ✚ Meaning of pain ✚ Meaning of suffering ✚ Acceptance of treatment approaches ✚ Role of the family caregiver 	

4. Clinical sciences as related to pain

4.1. Specific pain conditions

Students should be able to explain the three pain states (acute, acute recurring, and chronic). They should also be able to describe, on a basic level, each of the pain conditions - - characteristics, pathophysiological processes, methods of diagnosis, and any treatment, both curative and pain management. In-depth training in each of these conditions, however, would be more appropriate at the graduate level of medical training.

Specific pain conditions	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Pain states</p> <ul style="list-style-type: none"> ✚ Acute pain ✚ Acute recurring pain ✚ Chronic pain (persistent pain) 	

Specific pain conditions	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Nociceptive - somatic pain</p> <ul style="list-style-type: none"> + Acute pain <ul style="list-style-type: none"> ▪ Postoperative pain ▪ Pain due to acute injury + Cancer pain <ul style="list-style-type: none"> ▪ Primary ▪ Metastatic ▪ Cancer survivors + Cervical radicular pain + Intraoral pain <ul style="list-style-type: none"> ▪ Dental Pain ▪ Periodontal pain ▪ Mucosal pain ▪ Osseous pain + Neck pain + Thoracic pain + Lumbar radicular pain + Low back pain + Musculoskeletal pain <ul style="list-style-type: none"> ▪ Osteoarthritis ▪ Inflammatory arthritis + Muscle and myofascial pain <ul style="list-style-type: none"> ▪ Fibromyalgia 	
<p>Nociceptive - visceral pain</p> <ul style="list-style-type: none"> + Sickle cell crisis + Chronic urogenital pain + Pain in pregnancy and labor + Postoperative pain 	

Specific pain conditions	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Headache and facial pain</p> <ul style="list-style-type: none"> ✚ Headache <ul style="list-style-type: none"> ▪ Migraine ▪ Tension headache ▪ Cluster headache ✚ Orofacial Pain <ul style="list-style-type: none"> ▪ Temporomandibular joint pain 	
<p>Pain due to nerve damage</p> <ul style="list-style-type: none"> ✚ Neuropathic pain <ul style="list-style-type: none"> ▪ Postherpetic neuralgia ▪ Trigeminal neuralgia ▪ Phantom limb pain ▪ Diabetic neuropathy ✚ Central pain syndrome ✚ Complex Regional Pain Syndromes 	
<p>Other</p> <ul style="list-style-type: none"> ✚ HIV/AIDS ✚ Hepatitis C 	

Resources/Guidance Documents for Section 4.1.

- ✚ International Association for the Study of Pain. *Core Curriculum for Professional Education in Pain*. 3rd ed. Seattle, WA; 2005.
- ✚ National Institute of Neurological Disorders and Stroke. *Pain: Hope through Research*. NIH Publication No. 01-2406. Publication date December 2001. Last updated May 9, 2012.
- ✚ For more information on pain research, go to the National Institutes of Health at: <http://painconsortium.nih.gov/index.html>.

4.2. Pain in special contexts/settings

Medical students should be able to recognize that the assessment and treatment of pain in each of the following contexts and settings is distinctive; also, they should be able to describe on a basic level the distinctive aspects of pain assessment and treatment in each context and setting. In-depth understanding of the various contexts and settings, however, would be more appropriate at the graduate level or during specialized training.

Pain in special contexts/settings	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Addiction ✚ Adolescents ✚ Cancer survivors ✚ Children ✚ Chronic co-morbid disease ✚ Cognitive impairment ✚ Delirium that is caused by pain ✚ Elderly ✚ End of life ✚ Infants ✚ Obesity ✚ Occupational hazards (military/posttraumatic stress disorder/traumatic brain injury) ✚ Polypharmacy ✚ Postoperative ✚ Pregnancy and childbirth ✚ Psychiatric illnesses ✚ Repetitive action/overuse ✚ Stroke ✚ Substance abuse ✚ Surgical ✚ Trauma survivors 	
<ul style="list-style-type: none"> ✚ Emergency departments ✚ Hospitals ✚ Long term care facilities ✚ Outpatient care 	

Resources/Guidance Documents for Section 4.2.

- ✚ International Association for the Study of Pain. *Core Curriculum for Professional Education in Pain*. 3rd ed. Seattle, WA; 2005.
- ✚ There are many evidence-based guidelines for treating pain (often with guidance on treating the pain of a patient with a history of addiction) in various contexts and settings that are available through the National Guideline Clearinghouse at www.guideline.gov or through the Cochrane Reviews at <http://www.cochrane.org/cochrane-reviews>.
- ✚ Pergolizzi J, Boger RH, Budd K, et al. Opioids and the management of chronic severe pain in the elderly: consensus statement of an international expert panel with focus on the six clinically most often used World Health Organization step III opioids (Buprenorphine, Fentanyl, Hydromorphone, Methadone, Morphine, Oxycodone). *Pain Practice*. 2008; 8:287-313.
- ✚ Mary D. Naylor, PhD, FAAN, RN, from the University of Pennsylvania's School of Nursing, has developed a model for safely and effectively transitioning chronically ill high-risk older adults out of the hospital and into another setting. Information is available at: <http://www.transitionalcare.info/index.html>.
- ✚ In 2008 the Michigan Health and Hospital Association, backed by IHI, launched a pilot program called MISTAAR to explore best practices for reducing avoidable rehospitalizations. Information is available at: <http://www.mhakeystonecenter.org/mistaar.htm>.
- ✚ MPRO, Michigan's quality improvement organization, is leading a transitions of care program called Patient Pathways on behalf of the Centers for Medicare and Medicaid. Information is available at: <http://www.mpro.org/pathways.htm>. This program, similar to MISTAAR, also seeks to find best practices that will reduce avoidable rehospitalizations.

5. Physician-patient communication as related to pain

Students should be able to discuss and demonstrate effective physician-patient communication, including compassion and caring.

Physician-patient communication as related to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ The role of empathy in good communication ✚ Patient centered interviewing ✚ Basic motivational interviewing ✚ The role of physicians in health behavior change ✚ The role of the health care team (inter or multidisciplinary practitioners) 	
<ul style="list-style-type: none"> ✚ Informed medical decision making 	
<ul style="list-style-type: none"> ✚ Literacy barriers ✚ Health literacy (including medication dosing) barriers ✚ Sight-impaired patients ✚ Hearing-impaired patients ✚ NonEnglish-speaking patients ✚ Verbal/nonverbal communication barriers 	

Resources/Guidance Documents for Section 5.

- ✚ Fishman SM. *Listening to Pain: A Physician's Guide to Improving Pain Management through Better Communication*. New York City, NY: Oxford University Press; 2012. [Note that *Listening to Pain* is also available as an e-book.]
- ✚ Smith RC. *Patient Centered Interviewing: An Evidence-Based Method*. 2nd ed. Philadelphia, PA: Lippincott Williams & Wilkins; October 29, 2001.
- ✚ Coulehan JL, Block MR. *The Medical Interview: Mastering Skills for Clinical Practice*. 5th ed. Philadelphia, PA: F.A. Davis Co.; 2006. [Available formats: Kindle, Kno, VitalSource.]
- ✚ Doc.Com is a website dedicated to providing curriculum resources on teaching/learning healthcare communication skills. Go to: <http://webcampus.drexelmed.edu/doccom/user/>.

- ✚ The University of Washington in Seattle has developed Oncotalks, a website that provides online communication tools for delivering bad news. Although their focus is on cancer, the communication skills can be applied to delivering any bad medical news. Online tools are available for both teachers and learners, and include videos that demonstrate communication skills. Go to: <http://www.oncotalk.info/>.
- ✚ Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP. SPIKES-A six-step protocol for delivering bad news: application to the patient with cancer. *The Oncologist*. 2005; 5:302-311.
- ✚ Sharma RK, Dy SM. Cross-cultural communication and use of the family meeting in palliative care. *Am J Hosp Palliat Care*. 2011; 28(6):437-444.
- ✚ The Education in Palliative and End-of-Life Care Project (EPEC) offers adaptations for many types of settings, patients, and health care professionals. A significant portion of the curriculum focuses on communication skills. Go to: <http://epec.net>.

6. Management of pain

6.1. Evaluation of the patient in pain and documentation of findings

Students should be able to both evaluate a patient in pain using the following elements, and to document their findings.

Evaluation of the patient in pain and documentation of findings	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>An evaluation of the patient in pain should include the following:</p> <ul style="list-style-type: none"> ✚ Medical history, including past treatments, coexisting conditions, and history of substance abuse ✚ Physicians should use a patient-centered approach to gathering the history, which would include seeking to understand the patient’s experience of pain and the meaning that it holds ✚ Physical examination ✚ Diagnostic testing, as indicated, including laboratory and radiologic evaluations ✚ Functionality assessments (impact of the pain including the impact on emotions and mood; disability caused by the pain; emotional impact of the pain) ✚ Pain scale scores (measures of the intensity of the pain) ✚ Depression and/or other mental illness screens ✚ As indicated, consultation with specialists to obtain comprehensive diagnostic neuropsychological tests to quantify a 	

<p>patient's pain condition and assess contributing emotional and personality issues. This may be particularly important with chronic pain patients.</p>	
<p>Documentation from the medical history, physical exam, diagnostic testing, pain scale scores, etc. should be kept in the patient's medical record. The documentation should also clearly explain the rationale for the subsequent medical decisions/recommendations, including the prescribing (or not prescribing) of pain medications.</p>	

Resources/Guidance Documents for Section 6.1.

Fishman SM. *Responsible Opioid Prescribing: a Clinician's Guide*. 2nd ed. Washington, DC: Waterford Life Sciences; 2012. Dr. Fishman's book operationalizes the Federation of State Medical Boards' 2004 *Model Policy for the Use of Controlled Substances for the Treatment of Pain*. Chapter 1 covers how to conduct a patient evaluation, including transparent documentation.

6.2. Treating pain

Students should be able to explain that most patients with pain are treated by a primary care provider. They should also be able to, based on their assessment, develop a preliminary treatment plan for a patient in pain, including the evidence-based options listed below. Students should be able to work in conjunction with other team members in treating pain (e.g., physical and massage therapists, psychologists/counselors, etc.), and employ a patient-centered approach.

6.2.1. Treating pain using physical medicine and related approaches

Treating pain using physical medicine and related approaches	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Physical therapy: <ul style="list-style-type: none"> ▪ Muscle strengthening/stretching ▪ Heat/cold ▪ Hydrotherapy ▪ Ultrasound ▪ Transcutaneous electrical nerve stimulation (TENS) ✚ Massage ✚ Osteopathic manipulation ✚ Chiropractic 	

Resources/Guidance Documents for Section 6.2.1.

International Association for the Study of Pain. *Interprofessional Pain Curriculum*. Seattle, WA; August 14, 2012. Go to: <http://www.iasp-pain.org/>.

6.2.2. Treating pain using psychotherapeutic and behavioral approaches

Treating pain using psychotherapeutic and behavioral approaches	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Psychotherapy ✚ Cognitive behavioral therapy (CBT) ✚ Biofeedback ✚ Relaxation ✚ Stress management ✚ Psychiatric treatment of mental illness 	

Treating pain using psychotherapeutic and behavioral approaches	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Patient self-management may involve:</p> <ul style="list-style-type: none"> ✚ Health coaches/counselors/transitional care nurses ✚ Pain diaries ✚ Proper use of pain medications ✚ Proper nutrition ✚ Proper exercise ✚ Improving ability to sleep ✚ Managing emotions such as discouragement, frustration, etc. ✚ Learning how to pace oneself/learning how to not overdo things ✚ Resting 	

Resources/Guidance Documents for Section 6.2.2.

- ✚ International Association for the Study of Pain. *Interprofessional Pain Curriculum*. Seattle, WA; August 14, 2012. Go to: <http://www.iasp-pain.org/>.
- ✚ Stanford University has developed an evidence-based model for chronic disease self-management. In Michigan this program is run by the State of Michigan’s Arthritis Program and is called Personal Action Towards Health (P.A.T.H.). At Stanford: <http://patienteducation.stanford.edu/programs/>. In Michigan: <http://www.mihealthyprograms.org/programs-path.aspx>.
- ✚ Duke University’s Integrative Medicine Program is pioneering the field of health coaching. Health coaches work with patients in order to improve the patient’s ability to management his/her condition while reducing the negative impact of health conditions. Go to: <http://www.dukeintegrativemedicine.org/>.
- ✚ Schubiner H, Betzold M. *Unlearn Your Pain: A 28-Day Process to Reprogram Your Brain*. Pleasant Ridge, MI: Mind Body Publishing; 2010. An important book on how the brain can be reprogrammed to heal centralized pain conditions.

6.2.3. Treating pain using pharmacologic approaches

Treating pain using pharmacologic approaches	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Analgesic dosing strategies <ul style="list-style-type: none"> ▪ World Health Organization (WHO) analgesic ladder ▪ Dosing in opioid naïve and non-naïve patients ▪ Routes of administration ▪ Dosage escalation and de-escalation ▪ Pharmacogenetics ▪ Pharmacokinetics and pharmacodynamics ▪ Relative opioid potencies and conversion calculations ▪ Opioid rotation ▪ Scheduled versus “as needed” (PRN) dosing 	
<p>Ethical and legal issues:</p> <ul style="list-style-type: none"> ✚ Medication safety <ul style="list-style-type: none"> ▪ Criteria/evidence for using DEA schedule II’s, III’s, IV’s, V’s ▪ FDA required Risk Evaluation and Mitigation Strategy (REMS) training ▪ Acetaminophen toxicity ✚ Patient counseling on how to use medications ✚ Prescribing and dispensing laws ✚ Risk management approaches <ul style="list-style-type: none"> ▪ Medication agreements ▪ Michigan Automated Prescription System (MAPS) ▪ Urine and drug screening ✚ Drug diversion and reporting (including appropriate screening tools) ✚ Secure storage of prescription pads as well as medications ✚ Safe disposal or destruction of medications 	

Resources/Guidance Documents for Section 6.2.3.

- ✚ Katzung BG. *Basic and Clinical Pharmacology*. 11th Ed. McGraw-Hill Companies; 2009.
- ✚ International Association for the Study of Pain. *Core Curriculum for Professional Education in Pain*. 3rd ed. Seattle, WA; 2005.
- ✚ World Health Organization’s (WHO) pain ladder is available at: <http://www.who.int/cancer/palliative/painladder/en/>.

- ✚ Herndon CM, Strassels SA, Strickland JM, et al. Consensus recommendations from the Strategic Planning Summit for Pain and Palliative Care Pharmacy Practice. *J Pain Symptom Manage.* 2012; 43:925-44.
- ✚ The U.S. Food and Drug Administration (FDA) provides information on the risk evaluation and mitigation strategies (REMS) for numerous drugs. Go to: <http://www.fda.gov/>.
- ✚ Fishman SM. *Responsible Opioid Prescribing: a Clinician's Guide.* 2nd ed. Washington, DC: Waterford Life Sciences; 2012. Dr. Fishman's book operationalizes the Federation of State Medical Boards' 2004 *Model Policy for the Use of Controlled Substances for the Treatment of Pain.*
- ✚ Article 7 of the Michigan Public Health Code covers the laws concerning controlled substances. Go to: www.michigan.gov/healthlicense.
- ✚ The U.S. Food and Drug Administration (FDA) provides information on how to safely store and dispose of prescription drugs. Go to: <http://www.fda.gov/>.

6.2.4. Treating pain using interventional approaches

Treating pain using interventional approaches	For medical schools: note location of content, or proposed location of content, in the four year curriculum
Neurostimulation techniques: ✚ Transcutaneous nerve stimulation ✚ Epidural stimulation ✚ Brain and spinal cord stimulation ✚ Peripheral nerve stimulators ✚ Intrathecal analgesia ✚ Trigger point injections	
Nerve blocks: ✚ Local anesthetics ✚ Neurolytic solutions	
Surgical techniques: ✚ Nerve decompression ✚ Neurosurgical techniques ✚ Orthopedic techniques	

Resources/Guidance Documents for Section 6.2.4.

- ✚ International Association for the Study of Pain. Core Curriculum for Professional Education in Pain. 3rd ed. Seattle, WA; 2005.
- ✚ The American Society of Interventional Pain Physicians (ASIPP) has numerous evidence-based practice guidelines posted on their website at <http://www.asipp.org/index.html>. Most recently:
 - Manchikanti L, Salahadin A, Atluri S, et al.; American Society of Interventional Pain Physicians (ASIPP) guidelines for responsible opioid prescribing in chronic non-cancer pain: part I – evidence assessment and part II – guidance. *Pain Physician*. 2012;15:S1-S66 and 15:S67-S116.

6.2.5. Treating pain using complementary and alternative medicine (CAM)/integrative medicine

Students should be able to evaluate the evidence for complementary and alternative treatment methods and employ those which are evidence based.

Treating pain using CAM/integrative medicine	
<p>Examples of CAM/integrative medicine:</p> <ul style="list-style-type: none"> ✚ Acupuncture ✚ Diaphragmatic breathing ✚ Guided imagery ✚ Herbal products ✚ Meditation ✚ Rolfing ✚ Yoga 	

Resources/Guidance Documents for Section 6.2.5.

- ✚ The National Institutes of Health National Center for Complementary and Alternative Medicine conducts scientific research on the diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine. Go to: <http://nccam.nih.gov/about>.
- ✚ The mission of the University of Michigan Integrative Medicine Program is to provide responsible leadership in the integration of complementary and alternative medicine with conventional medicine. Go to: <http://www.med.umich.edu/umim/>.
- ✚ Mayo Clinic's Complementary and Integrative Medicine Program conducts dozens of clinical studies every year to learn which complementary and alternative medicine treatments work. Their findings are shared with their patients and colleagues. Go to: <http://www.mayoclinic.org/general-internal-medicine-rst/cimc.html>.
- ✚ The Consortium of Academic Health Centers for Integrative Medicine exists to advance the principles and practices of integrative healthcare within academic institutions. Its membership is comprised of over 51 highly esteemed academic medical centers and affiliate institutions. Go to: <http://www.imconsortium.org/home/>.

6.2.6. Treating pain at follow-up visits - - reassessment of the patient in pain

Students should be able to reassess a patient at a follow up visit using the methods listed below, and make treatment plan changes based on their findings.

Treating pain at follow-up visits - - reassessment of the patient in pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<ul style="list-style-type: none"> ✚ Level of pain ✚ Level of function ✚ Quality of life ✚ Mental status ✚ Adherence to treatment plan ✚ Medication adverse effects ✚ Aberrant medication taking behaviors ✚ Relevant physical examination ✚ Relevant laboratory testing ✚ Revision of treatment goals ✚ Revision of treatment plan 	

Resources/Guidance Documents for Section 6.2.6.

- ✚ Clark, MR, and Galati SA. Guide to chronic pain assessment tools. *Practical Pain Management*. January/February 2012;23-34.
- ✚ Fishman SM. *Responsible Opioid Prescribing: a Clinician’s Guide*. 2nd ed. Washington, DC: Waterford Life Sciences; 2012. Dr. Fishman’s book operationalizes the Federation of State Medical Boards’ 2004 Model Policy for the Use of Controlled Substances for the Treatment of Pain. Chapter 6 covers the elements of a follow up visit.
- ✚ Passik, SD. Issues in long-term opioid therapy: unmet needs, risks, and solutions. *Mayo Clin Proc*. 2009 July;84(7):593-601.

7. Ensuring quality pain care

Students should be able to locate information from organizations, such as those listed below, that promote health care quality and evidence-based clinical guidelines related to pain. Students should be able to interpret and apply this information to the care of an individual patient experiencing pain.

Ensuring quality care	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>Evidence-based clinical and consensus guidelines:</p> <ul style="list-style-type: none"> ✚ Agency for Healthcare Research and Quality (AHRQ) ✚ National Guideline Clearinghouse (NGC) ✚ Cochrane Reviews ✚ Michigan Quality Improvement Consortium (MQIC) 	
<p>Quality standards and measures/accreditation:</p> <ul style="list-style-type: none"> ✚ National Quality Measures Clearinghouse (NQMC) ✚ National Quality Forum (NQF) ✚ The Joint Commission (TJC) ✚ American College of Surgeons Commission on Cancer (ACS COC) ✚ American Society of Clinical Oncology Quality Oncology Practice Improvement Initiative (ASCO QOPI) 	
<p>Quality improvement organizations/initiatives:</p> <ul style="list-style-type: none"> ✚ Institute for Healthcare Improvement (IHI) ✚ Hospital Consumer Assessment of Healthcare Providers and Systems (HCAPS) Survey ✚ Michigan Health and Hospital Association’s (MHA) Keystone Center for Patient Safety ✚ Value Partnerships (initiated by Blue Cross Blue Shield of Michigan) ✚ Center for Healthcare Research and Transformation (CHRT) ✚ Advancing Excellence in America’s Nursing Homes [<i>There is a Michigan chapter of AE.</i>] ✚ MPRO [Michigan’s peer review/quality improvement organization] 	

Resources/Guidance Documents for Section 7.

- ✦ The United States Department of Health and Human Services' (US DHHS) Agency for Healthcare Research and Quality (AHRQ) provides information on clinical effectiveness and guidelines. Go to: <http://www.ahrq.gov/>.
- ✦ The National Guideline Clearinghouse (NGC) lists evidence-based clinical practice guidelines for treating pain. Go to: <http://www.guideline.gov/>.
- ✦ Cochrane Reviews are intended to help providers, practitioners and patients make informed decisions about evidence-based health care, including pain care. Go to: <http://www.cochrane.org/cochrane-reviews>.
- ✦ The Michigan Quality Improvement Consortium (MQIC) lists evidence-based/consensus guidelines for treating pain: <http://www.mqic.org/>.
- ✦ The National Quality Measures Clearinghouse (NQMC), an initiative of the Agency for Healthcare Research and Quality (AHRQ) of the U.S. Department of Health and Human Services (US DHHS), provides a database and website for information on specific evidence-based health care quality measures and measure sets. Go to: <http://www.qualitymeasures.ahrq.gov/index.aspx>.
- ✦ The National Quality Forum (NQF), a nonprofit organization, seeks to improve healthcare by building consensus on national priorities and goals for performance improvement and working in partnership to achieve them; endorsing national consensus standards for measuring and publicly reporting on performance; and promoting the attainment of national goals through education and outreach programs. Go to: <http://www.qualityforum.org/Home.aspx>.
- ✦ The Joint Commission, in 2001, identified pain as the fifth vital sign and added pain to its accreditation standards. In 2011 they offered advanced accreditation in palliative care. Go to: <http://www.jointcommission.org/>.
- ✦ The American College of Surgeons (ACS) Commission on Cancer (COC) issued in August 2011 the publication *Cancer Programs Standards 2012: Ensuring Patient-Centered Care*. These standards address key elements of quality cancer care including cancer pain care, palliative care, and hospice care. Go to: <http://www.facs.org/cancer/index.html>.
- ✦ The American Society of Clinical Oncology's Quality Oncology Practice Initiative (ASCO QOPI) is a national oncologist-led practice improvement initiative that addresses pain care, palliative care, and hospice care. Go to: <http://qopi.asco.org/index>.
- ✦ The Institute for Healthcare Improvement (IHI), an independent not-for profit-organization, focuses on system change that leads to safe and effective healthcare. Go to: <http://www.ihl.org/>.
- ✦ The HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey is the first national, standardized, publicly reported survey of patients' perspectives of hospital care. Pain management is one of the core topics of the survey which was launched in October 2006 by the Centers for Medicare and Medicaid Services (CMS). Go to: <http://www.hcahponline.org/home.aspx>.
- ✦ The Michigan Health and Hospital Association (MHA) launched, in 2003, the Keystone Center for Patient Safety to improve patient safety and reduce costs by enhancing the quality of care delivered. Go to: <http://www.mhakeystonecenter.org/mistaar.htm>.
- ✦ Value Partnerships was officially launched in 2006 and is a collection of clinically oriented initiatives among Michigan physicians, hospitals and Blue Cross Blue Shield of Michigan that are designed to significantly improving the quality of patient care across Michigan. Go to: <http://valuepartnerships.com/index.shtml>.
- ✦ The Center for Healthcare Research & Transformation (CHRT) illuminates best practices and opportunities for improving health policy and practice. Based at the University of Michigan, CHRT is a non-profit partnership between U-M and Blue Cross Blue Shield of Michigan designed to promote evidence-based care delivery, improve population health, and expand access to care. Go to: <http://www.chrt.org/>.
- ✦ The mission of the Advancing Excellence in America's Nursing Homes Campaign is to help nursing homes achieve excellence in the quality of care and quality of life for the more than 1.5 million residents of America's nursing homes. Improving pain management is the top goal nationally and in Michigan. Go to: <http://www.nhqualitycampaign.org/>.
- ✦ MPRO is Michigan's federally designated quality improvement organization for Medicare, and leads numerous initiatives to attain better care and health for Medicare beneficiaries. Go to: <http://www.mpro.org/index.php>.

8. Michigan programs and resources relevant to pain

Students should be able to identify and locate State of Michigan programs and resources relevant to pain management. In addition, students should be able to discuss the scientific evidence for the medical use of marihuana for pain and laws related to its use.

Michigan programs and resources relevant to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p><u>Bureau of Health Care Services:</u> The Michigan Department of Licensing and Regulatory Affairs’ Bureau of Health Care Services provides oversight of the Pain Management and Palliative Care Program, Michigan Automated Prescription System (MAPS), 25 health professional licensing boards, and the Michigan Medical Marihuana Program. The Bureau also supports the work of the Advisory Committee on Pain and Symptom Management, the Health Professional Recovery Program, and the Controlled Substances Advisory Commission.</p>	
<p><u>Pain Committees and Pain Laws:</u> Prior to the promulgation of Michigan’s pain laws, the Legislature and Governor established two committees: the Advisory Committee on Pain and Symptom Management (ACPSM) and the Governor’s Commission on End of Life Care. These two committees proposed and advocated for much of the pain legislation that is now law in Michigan.</p> <p>Michigan pain laws are nationally recognized by the Alliance of State Pain Initiatives, and are considered a national model for balancing the need to prescribe controlled substances with the need to control diversion and/or improper administration of controlled substances.</p>	
<p><u>The Michigan Advisory Committee on Pain and Symptom Management</u> was established by MCL 333.16204 through 333.16204d. The committee is staffed by the Bureau of Health Care Services’ Pain Management and Palliative Care Program. The law:</p> <p>1) Required the completion of continuing education hours in pain and symptom management as a condition of license renewal for boards requiring continuing education;</p>	

Michigan programs and resources relevant to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
<p>2) Established the treatment of pain as an appropriate issue for the legislature to consider; 3) Supported the use of controlled substances for the medical treatment of certain forms of pain, and stated that efforts to control diversion or improper administration of controlled substances should not interfere with legitimate prescribing; and 4) Supported ongoing public and professional education efforts on pain.</p>	
<p><u>The Michigan Dignified Death Act</u>, MCL 333.5651 through 333.5658. This law recognizes the integrity of patients and their desire for a humane and dignified death. The law supports being able to choose adequate and appropriate pain and symptom management as a basic and essential element of medical treatment. It also supports the prescribing of controlled substances if the prescription is given in good faith and with the intention to treat the patient and/or alleviate the patient’s pain.</p>	
<p><u>The Patient Bill of Rights</u>, MCL 333.20201(1)(o). This section states that a patient or resident [of facilities covered by the public health code] is entitled to adequate and appropriate pain and symptom management as a basic and essential element of his or her medical treatment.</p>	
<p><u>The Michigan Automated Prescription System (MAPS)</u>, MCL 333.7333a. MAPS is an electronic risk management tool to be used when prescribing Schedules II-V. Within minutes, it can issue a report on a patient’s history of controlled substances. MAPS was launched in January 2003.</p>	
<p><u>Michigan’s Controlled Substances laws</u>. MCL 333.7101 through 333.7545 covers Article 7 of the Michigan Public Health Code on controlled substances.</p> <p><u>The Controlled Substances Advisory Commission</u> was created by MCL 333.7111 through 333.7113 and is charged with monitoring indicators of controlled substance abuse and diversion. It is staffed by the Bureau of Health Care Services’ Pharmacy Program.</p>	
<p><u>Michigan’s Medical Marihuana Program</u>. MCL 333.26421-30 created the Medical Marihuana</p>	

Michigan programs and resources relevant to pain	For medical schools: note location of content, or proposed location of content, in the four year curriculum
Program, a registration program that is administered by the Bureau of Health Care Services. The Bureau does not provide the public with any information regarding the efficacy or lack of efficacy of medical marihuana for the treatment of pain.	

Resources/Guidance Documents for Section 8.

- ✚ Information about the Michigan Bureau of Health Care Services’ Pharmacy Program, licensing boards, and Controlled Substances Advisory Commission can be located at: www.michigan.gov/healthlicense.
- ✚ Information about the Bureau of Health Care Professions’ Pain Management and Palliative Care Program and the Advisory Committee on Pain and Symptom Management can be located at: www.michigan.gov/pm.
- ✚ For information about the Michigan Automated Prescription System (MAPS), go to: www.michigan.gov/mimapsinfo.
- ✚ For information about the Bureau of Health Care Professions’ Health Professional Recovery Program, go to: www.hprp.org.
- ✚ For information about the Bureau of Health Care Professions’ Michigan Medical Marihuana Program, go to: www.michigan.gov/mmp.
- ✚ For information about the Governor’s [John Engler] Commission on End-of-Life Care, go to: https://www.michigan.gov/mdch/0,4612,7-132-2940_3183_4895-14145--,00.html.
- ✚ For information about state pain laws, go to the website of the Alliance of State Pain Initiatives/University of Wisconsin Pain and Policy Studies Group at: <http://www.painpolicy.wisc.edu/>.
- ✚ Laws passed by the Michigan Legislature can be accessed at: www.legislature.mi.gov/.
- ✚ Not restricted to Michigan law, but a good resource on pain-related laws, is the website the Legal Side of Pain®. Go to: <http://legalsideofpain.com/index.cfm>.

9. Evaluation of the medical school curriculum on pain

Medical schools in Michigan should evaluate their curricula related to pain using the best methods of curriculum evaluation.

Evaluation of the medical school curriculum on pain	For medical schools: space for your notes, comments.
<p>Evaluation methods should include:</p> <ul style="list-style-type: none"><li data-bbox="130 321 1008 422">✚ Assessment of students' knowledge, skills, and attitudes through objective structured clinical examinations (OSCEs) as well as direct observation.<li data-bbox="130 428 903 496">✚ Including questions on pain management, including pain management at the end of life, in surveys of graduates.<li data-bbox="130 503 911 535">✚ Tracking student performance on licensure examinations.	