Course Introduction:
The pain management rotation is an opportunity for students to be exposed to the interdisciplinary evaluation and management of acute, chronic, and cancer-related pain, and to procedures related to the treatment of these patients. The student will display the skills of patient evaluation, communication, teamwork, and participate in clinical decision making.

Course Grading:
This course is graded on a 5-tiered grade system: A (Honors), B (Near Honors), C (Satisfactory), D (Marginal), F (Fail). The student’s grade is based entirely on clinical performance evaluations. The student is responsible for completing a weekly prompt to identify who they have worked with, which generates evaluations to faculty, fellows, and residents. If no evaluations are submitted, the student will receive an incomplete. If fewer than three evaluations are submitted, the highest grade possible will be Satisfactory.

Student Expectations:

**Attendance:**
1. Arrive daily at the Comprehensive Pain Center or the APS office (as scheduled) by 7:15am.
2. Participate daily in activities as directed by the faculty, fellow, or resident.

**Professionalism:**
1. Have pager on and functioning each day.
2. Complete your MedHub “Student Identified Supervisor” prompt each week, in order to generate evaluations to the faculty members/residents with whom you work.
3. If planned absences during the rotation are necessary, email Dr. Ani and Emi Garcia as soon as possible with your Request for Time Off From Clinical Experience form.

Pain Management

**Faculty:**
- Chidi Ani
- Grace Chen
- Ashley Valentine
- Sandy Christiansen
- David Sibell
- Kim Mauer
- Andrei Sdrulla
- Ryan Ivie
- Nathalie Lunden

**Nurse Practitioners:**
- Long Ong
- Lisa Whitmore
- Amanda St John
- David Vitelo

*Each month there are also 2-3 anesthesia residents on the pain service*
Schedule, Locations and Attire:
Students will spend about half of their time in the clinic and half on the Inpatient Adult Pain Service. 1-2 days per week, pain didactic activities take place at CHH. Students are expected to attend with the pain team. Pertinent articles for these didactics may be found at the following link: https://ohsu.box.com/s/3ik1j6hql0ai0ttjeko8dyl20kh97axh

Comprehensive Pain Center (Clinic):
Center for Health & Healing, 15th floor
Wear business professional attire, with white coat and ID coat badge and ID badge
Ask the front desk to contact the clinic manager, who will Introduce you to the attending

Inpatient Adult Pain Service (APS):
Sam Jackson Hall 4125
Wear business professional attire or scrubs, with lab
Contact the resident or fellow on the service

Evaluation Instructions:
Student must identify faculty & residents with whom they work during the rotation
Each week during the rotation, you will receive a prompt in MedHub to identify which faculty and residents you have worked with. It is crucial that you complete these “SIS” requests in a timely fashion, in order to generate your clinical performance evaluations to the correct individuals. This will show up on your MedHub home page “Urgent Tasks”:

Follow the circled link to Supervisor Identification Requests (also known as Student-Identified Supervisors or SIS). This will bring up your queue, showing any completed or outstanding SIS requests. Once a SIS request is opened from the queue page, you will see a list of possible supervisors to select:

Click the checkboxes next to the names of those you have worked with, or scroll to the bottom of the supervisor list to get to the search box. When you are finished, click “Submit” and you will be returned to your Evaluations queue.
If you have any questions or cannot find the name of someone you have worked with/would like to generate an evaluation to, please contact Emi Garcia (garciaem@ohsu.edu).

Please note that the evaluation process for visiting students is handled differently. Visiting students will be sent supplementary instructions at the start of the rotation.

**Mistreatment Reporting:**
Students are encourage to report incidences of mistreatment by Faculty, Residents, Interns, Fellows, Nurses, other healthcare and non-healthcare personnel, students, patients, or others. All reports will remain confidential and separate from your course evaluations. Link to form for mistreatment reporting: [http://bit.ly/Mistreatment](http://bit.ly/Mistreatment)

To report a complaint of prohibited discrimination and/or harassment (age, disability, Family Medical Leave Act and/or Oregon family Leave Act, gender, marital status, military/reserve status, national origin, pregnancy, race/color, religion, retaliation, sexual harassment, sexual orientation, veteran's status, whistle blower, worker's compensation system, and other), please contact the AAEO (http://www.ohsu.edu/xd/about/services/title-ix/index.cfm). To file a report with AAEO, go to http://www.ohsu.edu/xd/about/services/title-ix/reporting/submit-report.cfm.
Curriculum: GOALS

Medical Knowledge
- Understand the basic anatomical and pathophysiological mechanisms involved in common acute, chronic malignant and non-malignant pain problems.

Patient Care
- Understand the procedures and medical data for inpatient consultations involving parenteral/oral opioid conversion, moderate complexity malignant and non-malignant pain problems
- Understand the management of acute, postoperative pain including postoperative epidural analgesia management, as well as other forms of regional infusion therapies.
- Understand common pain management procedures, e.g., lumbar, thoracic, and cervical epidural access and injection techniques, selective nerve root blocks, trigger point injections, etc.
- Understand advanced pain management techniques and observe these techniques where practical (e.g., neurolytic techniques, including radio frequency ablation techniques; neuroaugmentation techniques, including spinal cord stimulation; chronic neuraxial drug delivery techniques, including implanted intrathecal drug administration systems).

Interpersonal & Communications Skills
- Practice oral communication with other services and clinics regarding patient assessment and care.

Professionalism
- Demonstrates responsibility and physical/mental attentiveness in a positive and constructive manner.
- Demonstrates willingness to show consideration and appreciation for patients and co-workers.
- Exhibits compassion, empathy and support in patient care and professional interactions.
- Demonstrates truthful and ethical standards in professional interactions and conduct.

Practice Based Learning and Improvement
- Gain experience in evaluating patients for and observe more advanced pain management techniques and observe these techniques where practical (e.g., neurolytic techniques, including radio frequency ablation techniques; neuroaugmentation techniques, including spinal cord stimulation; chronic neuraxial drug delivery techniques, including implanted intrathecal drug administration systems).

System Based Learning
- Gain experience in the principles of multimodal acute pain management, including psychological and physiotherapy evaluations and treatment options for inpatients.
- Gain experience in the principles of interdisciplinary pain management, including psychological and physiotherapy evaluations and treatment options.

OBJECTIVES Medical Knowledge
- Discuss the basic anatomical and pathophysiological mechanisms involved in common acute, chronic malignant and non-malignant pain problems.
Patient Care

- Evaluate and manage inpatient consultations for parenteral/oral opioid conversion, and with chronic malignant and non-malignant pain problems
- Create a management plan for acute, postoperative pain including postoperative epidural analgesia management, as well as other forms of regional infusion therapies.
- Evaluate patients for pain management procedures (e.g., lumbar, thoracic, and cervical epidural access and injection techniques, selective nerve root blocks, trigger point injections, etc.)
- Evaluate patients for advanced pain management techniques (e.g., neurolytic techniques, including radio frequency ablation techniques; neuroaugmentation techniques, including spinal cord stimulation; chronic neuraxial drug delivery techniques, including implanted intrathecal drug administration systems).
- Monitor the performance of advanced techniques (e.g., neurolytic techniques, including radio frequency ablation techniques; neuroaugmentation techniques, including spinal cord stimulation; chronic neuraxial drug delivery techniques, including implanted intrathecal drug administration systems).

Interpersonal and Communication Skills

- Engage in communication to ensure other services and clinics are equipped to provide excellent patient assessment and care.

Professionalism

- Engage in communication to ensure collegiality for all members of the Pain Management team and other service providers
- Express plans, issues and concerns in language and using non verbal cues to demonstrate respect for the diversity of our patient and work communities
- Maintain privacy of records and communication
- Discloses conflicts of interest to appropriate personnel
- Maintain a neat, clean, professional appearance at all times.
- Perform clinical duties, including reading, in a timely manner.
- Attend all departmental conferences.
- Acknowledge limits of competence and act accordingly

Practice Based Learning and Improvement

- Evaluate patients for and observe more basic pain management techniques
- Observe techniques where practical (e.g., neurolytic techniques, including radio frequency ablation techniques; neuroaugmentation techniques, including spinal cord stimulation; chronic neuraxial drug delivery techniques, including implanted intrathecal drug administration systems).

System Based Learning

- Describe the options multimodal acute pain management, including psychological and physiotherapy evaluations and treatment for inpatients.
- Describe principles of interdisciplinary pain management, including psychological and physiotherapy evaluations and treatment options
While on the Adult Acute Pain service you will have a pain service you will be assigned patients by the rotating resident or fellow. During the month you will be expected to have seen patients in these categories: Cancer pain/palliative care, Epidural catheter management, Peripheral nerve block management, high dose opioids in opioid tolerant patients, Ketamine infusion, and Lidocaine Infusion.

At the chronic pain clinic (CPC) you will be expected to see patients in clinic and procedures. We also plan to expose you to our multi-disciplinary treatment approach (physical therapy, pain psychology, acupuncture, addiction medicine, massage therapy, and chiropractic adjustments).

**Recommended reading**

- Epidural common side effects and urgent complications
- Neuraxial: PDPH and Treatments
- Epidural - Commonly used infusions, rates and administration techniques (bolus/vs intermittent bolus)
- Peripheral N. catheter insertion techniques, securing
- Management of peripheral nerve catheters
- Anticoagulation and Neuraxial blocks
- LAST: Local Anesthetic Systemic Toxicity
- Acute Pain Physical Exam
- Cancer-Related Pain
- Acute and Chronic Neck and Low Back Pain
- Neuropathic Pain States
- Complex Regional Pain Syndrome, Types I and II
- Post herpetic Neuralgia
- Phantom Limb, Post-Stroke
- Acute Postoperative and Posttraumatic Pain
- Peripheral Nerve Blockade and Catheters
- Patient-Controlled Analgesia
- Multimodal Analgesia

- **Cancer-Related Pain**
  - Systemic Medications, Tolerance and Addiction
  - Continuous Spinal and Epidural Analgesia
  - Neurolytic and Non-Neurolytic Blocks
  - World Health Organization Analgesic Ladder

- **Opioids**
  - Mechanism of Action
  - Pharmacokinetics and Pharmacodynamics

- **Drugs**: Opioids, Agonist-Antagonists, Local Anesthetics, Alpha-2 Agonists, Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), N-Methyl-D-Aspartate (NMDA) Receptor Blockers, tricyclic antidepressants (TCA), selective serotonin reuptake inhibitor (SSRI)

- IV to po opioids – Equivalency
- Ketamine analgesic mechanism
- Post herpetic neuralgia: risk factors
- Trigeminal neuralgia
- Trigeminal neuralgia: Rx
- Ultrasound anatomy – Supraclav block
- Theory of preemptive analgesia, evidence Advanced

Good reading resource include: [https://selfstudyplus.openanesthesia.org/kw/categories/Pain](https://selfstudyplus.openanesthesia.org/kw/categories/Pain)