Integrating Pain Management Competencies into the Osteopathic Medical School Curriculum
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Abstract
In 2017, the Virginia Secretary of Health and Human Resources convened a workgroup composed of educators and clinicians representing a wide range of professional schools. The purpose of the workgroup was to develop core competencies for education in addiction and pain management. These competencies provided the consensus and building blocks for establishing the Virginia Core Competencies in Pain Management and Addiction. In response to those guidelines, Liberty University College of Osteopathic Medicine developed an innovative biopsychosocial approach to primary patient care encompassing the integration of structure and function, psychological aspects of health and healing, and a more investigative approach to pain assessment and management. The course was offered as a required OMS-4 Clerkship Pain Course. Students were taught an integrated approach to pain management that incorporated medical management with behavioral and neuromusculoskeletal interventions. Furthermore, the course reasserts the unique role of osteopathic physicians in the United States as providers of comprehensive pain care.

Objectives
- Apply not only traditional approaches to pain management, but also incorporate osteopathic principles and treatment methods, including manipulative approaches and behavioral approaches.
- Understand the presence of somatic dysfunction as a key contributor to pain generation and modulator of the sensation of pain.
- Understand the importance of medical management with behavioral and neuromusculoskeletal interventions to pain patients and cases.
- Describe the unique role of osteopathic physicians as providers of comprehensive pain care.

Methods
The first semester of the course consisted of 12-weeks of directed independent study evaluating evidenced-based approaches to pain management based on core competencies. The second semester integrated that knowledge into a two-week intensive course utilizing additional readings, lectures, OMM and injection labs, and osteopathically-based simulated patient experiences. Course evaluation included pre- and post-course surveys.

Results ***(Pending)***
- Student perception of medical knowledge for treating patients with pain and/or addiction
- Student attitudes towards managing patients with pain and/or addiction
- Student confidence in treating patients with pain and/or addiction
- Student perception for increased treatment options to offer patients with pain and/or addiction.

Pain Competencies for the Course
History and current situation of the opioid crisis
Science of addiction
Prevention and early intervention
Recognition of addiction
Treatment of addiction
Prevention of fatal overdose
Science of pain
Assessment (diagnosis and treatment planning)
Treatment of pain
Opioids and pain
Communicating with patients and caregivers

Fall Semester
Week 1 Osteopathic Approach to Pain Management
Week 2 Pain and the Primary Care Physician
Week 3 Acute vs. Chronic Pain
Week 4 A Call for an Interdisciplinary Approach to Pain Management
Week 5 Psychology of Pain
Week 6 Conceptualizing Addiction from an Osteopathic Perspective
Week 7 Headaches and the Primary Care Physician
Week 8 Osteopathic Approach to Migraine Headaches*
Week 9 PM and the Post Surgical Patient
Week 10 Osteopathic Approach to Post Thoracotomy Pain*
Week 11 Radiculopathies/Neuropathies and the Primary Care Physician
Week 12 Osteopathic Approach to Thoracic Outlet Syndrome*

Spring Semester
Week 1 - Self-Study Modules*
Osteopathic Approach to: Neck Pain, Tension Headaches, TMI Dysfunction, Shoulder Enthesopathies, Epicondylitis, de Quervain’s, Carpal Tunnel, Cervical and Lumbar Radiculopathies, Low Back Pain, Trochanteric Bursitis, Osteoarthritic of the Knee, Ankle Sprains, and Plantar Fasciitis
Week 2 - On Campus Instruction

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td>8:00-8:50</td>
<td>Introduction: Osteopathic Pain Management: The science, assessment and treatment of pain</td>
<td>The Psychology of Pain</td>
<td>Pain Pharmacology II: Analgesics and Anti-Inflammatory</td>
<td>Myofascial Pain and Fibromyalgia</td>
<td>OMM STD PT Group 1/2</td>
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<tr>
<td>9:00-9:50</td>
<td>Neurophysiology of Pain (Well's)</td>
<td>Chronic Pain and Lifestyle Changes</td>
<td>Pain Pharmacology II: Adjuncts, Epoxides, and the Opioid Crisis</td>
<td>Psychological Interventions in pain</td>
<td>OMM STD PT Group 3/4</td>
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<tr>
<td>11:00-11:50</td>
<td>Interventional Pain Management: Communication with Patients and Caregivers</td>
<td>Common Clinical Presentation and Evaluation of Upr. extremities</td>
<td>Common Clinical Presentation and Evaluation of Lower extremities</td>
<td>Common Clinical Presentation and Evaluation of lumbar, sacrum and pelvis</td>
<td>OMM STD PT Group 5/6</td>
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<tr>
<td>1:00-2:50</td>
<td>Injection lab (8/9 Spine, 182,90g class)</td>
<td>Injection lab (8/9 Spine, 36.6/6g class)</td>
<td>Injection lab (8/9 Spine, 56/6g class)</td>
<td>Injection lab (8/9 Spine, 76.6/6g class)</td>
<td>OMM STD PT Group 9/10</td>
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<td>3:00-5:00</td>
<td>Injection lab (8/9 Spine, 182,90g class)</td>
<td>Injection lab (8/9 Spine, 36.6/6g class)</td>
<td>Injection lab (8/9 Spine, 56/6g class)</td>
<td>Injection lab (8/9 Spine, 76.6/6g class)</td>
<td>OMM STD PT Group 9/10</td>
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References

*See Note, Osteopathic Principles and Practice Curriculum for Third and Fourth Year, AT Still University Kansas College of Osteopathic Medicine, May 2017.