Version02032023

Suggested Guidelines for an Osteopathic Neuromusculoskeletal Medicine (ONMM) Residency Curriculum

Elizabeth Balyakina, DO, MS, MPH
Malinda Hansen, DO, MS, CAQSM
David Mason, DO, MBA, FACOFP

This document has been reviewed and approved by the Resident American Academy of Osteopathy (RAAO) Executive Committee and the American Academy of Osteopathy (AAO) Post-Graduate Training Committee. It is intended as a guide that Osteopathic Neuromusculoskeletal Medicine (ONMM) programs may at their discretion choose to apply to their individual needs and resources to help achieve Accreditation Council for Graduate Medical Education (ACGME) milestones to residency training.

TABLE OF CONTENTS

Page

1. Background

Since 2014, the Accreditation Council for Graduate Medical Education (ACGME), the American Osteopathic Association (AOA), and the American Association of Colleges of Osteopathic Medicine (AACOM) have moved towards a unified accreditation system for Graduate Medical Education (GME) with merging of programs completed on July 1, 2020.[1,2] Care has been taken in this transition to preserve unique osteopathic residency programs and the tradition and practice of osteopathic medicine. The Osteopathic Neuromusculoskeletal Medicine (ONMM) Residency is defined as follows by the American Association of Colleges of Osteopathic Medicine:

"A primary residency disciplined in the neuromusculoskeletal system, its comprehensive relationship to other organ systems, and its dynamic function of locomotion. The principle focus of the discipline is osteopathic and patient-centered; specifically, it embodies structural and functional interrelation, body unity, self-healing, and self-maintenance."[3]

ACGME milestones specific to ONMM residencies have been developed and implemented to help review resident performance through the course of residency based on a developmental framework of progressively advanced knowledge, attitudes, and skills.[4] Initial guidelines were published in 2015, with Milestones 2.0 implemented in July 2022. There are eighteen milestones that encompass six core competencies (Table 1). Specifically, these include patient care, medical knowledge, system-based practice, practice-based learning and improvement, professionalism, and interpersonal and communication skills.

The proposed guidelines outlined in this document are developed to guide the achievement of these milestones and that programs may choose to apply to individual needs and resources. The development and periodic review of proposed guidelines also provides the opportunity to define the unique scope of practice of the evolving field of ONMM within the context of other ACGME medical specialties under a single accreditation system.

2. Needs Assessment

Suggested curriculum guidelines were developed on the basis of a needs assessment of an ONMM residency program in Texas. Proposed goals and objectives are based on qualitative analysis of the topics covered during ONMM didactics from the academic year July 2018 to September 2020, qualitative analysis of curriculum topics coded according to ACGME milestones, and an open and closed-question survey of perceived resident and faculty needs for an ONMM residency curriculum.

Further details of this needs assessment are available in the study protocol submitted under CARRIE (Centralized Algorithms for Research Rules on IRB Exemption) through Medical City Fort Worth in Fort Worth, Texas; the project was determined to be exempt from Institutional Review Board oversight (reference # 2020-753) on October 1, 2020, as well as published in the Journal of Osteopathic Medicine.[5]

Present suggested guidelines were further revised based on Milestones 2.0.[4] Proposed

guidelines have been reviewed for applicability across ACGME approved residency programs by the Resident American Academy of Osteopathy (RAAO) Executive Committee and the AAO Post-Graduate Training Committee.

3. Goals and Objectives

The overall goal of the proposed ONMM Residency Curriculum is to support residents in achieving the six core competencies for ONMM practicing physicians as outlined in the ACGME ONMM Milestone Project (Table 1).[4] Milestones range from level 1 to level 5 with level 4 designated as a graduation goal, but not a requirement. Levels are not intended to represent level by post-graduate year, but rather as a progression from novice to expert and as a tool to provide formative evaluation during residency.

Table 1. ACGME ONMM Milestones
Patient Care 1: Patient Management: Osteopathic Approach to Patient Care
Patient Care 2: Osteopathic Manipulative Treatment (OMT) (Direct)
Patient Care 3: Osteopathic Manipulative Treatment (OMT) (Indirect)
Patient Care 4: Diagnostic Screening, Testing, and Interpretation
Patient Care 5: Management of Procedural Care (e.g. Trigger Point Injections, Joint Aspirations, Joint Injections
Medical Knowledge 1: Applied Foundational Sciences
Medical Knowledge 2: Manifestation of Systemic Disease Through Neuromusculoskeletal System
Systems-Based Practice 1: Patient Safety and Quality Improvement
Systems-Based Practice 2: System Navigation for Patient-Centered Care
System-Based Practice 3: Physician Role in Health Care Systems
Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice
Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth
Professionalism 1: Professional Behavior and Ethical Principles
Professionalism 2: Accountability/Conscientiousness
Professionalism 3: Self-Awareness and Help-Seeking Behaviors
Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication
Interpersonal and Communication Skills 2: Interprofessional and Team Communication
Interpersonal and Communication skills 3: Communication within Healthcare Systems

Objectives described below are intended to be met by the *end of residency (Level 4)*. Each objective is labeled as cognitive, affective, or psychomotor.[6] Language in level 5 has been modified in most cases to indicate a teaching, mentoring, role modeling or

leadership role for each milestone.

3.1 Competency: Patient Care

3.1.1 Patient Care 1: Patient Management: Osteopathic Approach to Patient Care

Objective 1 (*psychomotor*): By the end of residency, learners will be able to perform an accurate and complete physical examination including diagnosis of somatic dysfunction in complex patients. The parts of the physical examination should include:

- An osteopathic structural examination
- Upper and lower extremity orthopedic examination
- Upper and lower extremity neurological examination
- Identification of normal and abnormal gait patterns

Objective 2 (*cognitive*): By the end of residency, learners should be able to incorporate physical examination findings to determine appropriate next steps in narrowing their differential diagnosis including, but not limited to appropriate labs, imaging, and other testing.

Objective 3 (*cognitive*): By the end of residency, learners should be able to develop an accurate assessment and comprehensive plan that incorporates osteopathic principles in patient care.

Objective 4 (*psychomotor and cognitive*): By the end of residency, learners will have a broad knowledge of how to treat special populations using an osteopathic approach to patient care which may include, but not limited to:

- Athletes (Sports Medicine)
- Performers (Performing Arts Medicine)
- Maternal and Child Health (Pediatric OMT and OMT in Pregnancy)
- Geriatrics
- Hospitalized patients

Objective 5 *(cognitive)*: By the end of residency, learners will gain a better understanding of the history and philosophy of osteopathic medicine by reading texts by Andrew Taylor Still and/or other figures significant to the development of osteopathy.

3.1.2 Patient Care 2: Osteopathic Manipulative Treatment (OMT) (Direct)

Objective 1 (*psychomotor*): By the end of residency, learners will independently be able to apply direct OMT techniques in complex patient presentations such as (Table 2):[7,8]

- Muscle Energy
- High-Velocity/Low Amplitude
- Articulatory technique and springing

Objective 2 (*psychomotor*): By the end of residency, learners will independently be able to apply how to utilize a variety of OMT techniques that may include techniques recognized by the American Board of Osteopathic Neuromusculoskeletal Medicine (AOBNMM), Educational Council on Osteopathic Principles (ECOP), AACOM, and other treatment modalities that may not yet be recognized (Table 2).[3,8-12]

Objective 3 (*psychomotor*): By the end of residency, learners will be able to employ appropriate biomechanics in the application of OMT to ensure their own physical safety and prevent injury.

Table 2: OMM Techniques

OMM Technique	Main OMM techniques tested on AOBNMM practical exam	Additional OMM techniques that may be tested on AOBNMM practical exam[a]	Main OMM techniques included in osteopathic medical school curriculum established by ECOP	OMM techniques recognized in AACOM's Glossary of Osteopathic Terminology[a]	OMM techniques not yet recognized[a,b]
Muscle Energy					
High-Velocity/Low Amplitude					
Counterstrain					
Osteopathic Cranial Manipulative Medicine					
Myofascial Release					
Facilitated Positional Release					
Soft Tissue					
Articulatory Technique					
Balanced Ligamentous Tension					
Ligamentous Articular Strain					

Lymphatic Treatment					
Visceral Techniques					
Exaggeration Technique					
Facilitated Oscillatory Release Technique					
Fascial Unwinding					
Functional Method					
Inhibitory Pressure Technique					
Integrated Inhibition of Neuromuscular Structures					
Still Technique					
Biodynamics					
Fascial Distortion Model					

[a]OMM techniques including, but not limited to the modalities listed.
[b]OMM techniques not yet recognized by AACOM.

3.1.3 Patient Care 3: Osteopathic Manipulative Treatment (OMT) (Indirect)

Objective 1 (*psychomotor*): By the end of residency, learners will independently be able to apply indirect OMT techniques in complex patient presentations such as (Table 2):

- Counterstrain techniques
- Facilitated Positional Release
- Exaggeration technique
- Functional method

Objective 2 (*psychomotor and cognitive*): By the end of residency, learners will successfully complete a 40-hour basic course in Osteopathic Cranial Manipulative Medicine.

Objective 3 (*psychomotor*): By the end of residency, learners will independently be able to apply and teach others how to utilize a variety of OMT techniques that may include techniques recognized by the American Board of Osteopathic

Neuromusculoskeletal Medicine (AOBNMM), Educational Council on Osteopathic Principles (ECOP), AACOM, and other treatment modalities that may not yet be recognized (Table 2).[3,8-12]

Objective 4 (*psychomotor*): By the end of residency, learners will be able to employ appropriate biomechanics in the application of OMT to ensure their own physical safety and prevent injury.

3.1.4 Patient Care 4: Diagnostic Screening, Testing, and Interpretation

Objective 1 (*cognitive*): By the end of residency, learners will know the indications and contra-indications for imaging modalities including, but not limited to x-ray imaging, musculoskeletal ultrasound, computerized tomography (CT) with and without contrast, magnetic resonance imaging (MRI) with and without contrast, and electromyography (EMG).

Objective 2 (*cognitive*): By the end of residency, learners will understand indications for screening and testing for widespread or uncontrolled pain based on clinical presentation in complex patient presentations including, but not limited to:

- Autoimmune and rheumatological conditions such as rheumatoid arthritis and systemic lupus erythematosus
- Vitamin deficiencies, obstructive sleep apnea, restless leg syndrome, autoimmune disease, HIV, and hepatitis C
- Fibromyalgia and myalgic encephalomyelitis
- Complex Regional Pain Syndrome, peripheral neuropathy, cauda equina syndrome, and vertebral fractures
- Peripheral Arterial Disease, Deep Vein Thrombosis, and subarachnoid hemorrhage

Objective 3 (*cognitive*): By the end of residency, learners will be able to provide interpretation for x-ray imaging and provide initial management for fractures and dislocations in complex patient presentations.

Objective 4 (*cognitive and psychomotor*): By the end of residency, learners will be able to order or, if available, apply musculoskeletal ultrasound at bedside to complex patient presentations.

Objective 5 (*cognitive*): By the end of residency, learners will be able to provide initial interpretation for CT imaging in complex patient presentations and provide initial management including, but not limited to:

- Acute conditions such as suspected stroke or skeletal trauma
- In conditions where MRI imaging may be contraindicated such as the presence of a metal implantable device

Objective 6 (*cognitive*): By the end of residency, learners will be able to provide preliminary interpretation for MRI imaging including with and without contrast, or MR arthrogram for complex patient presentations and initiate appropriate management including, but not limited to:

- Cervical radiculopathy and myelopathy
- Lumbar radiculopathy and myelopathy
- Intra-articular pathologies of the shoulder joint including rotator cuff or labral tear
- Intra-articular pathologies of the knee joint including meniscal or ligamentous tears.

Objective 7 (*cognitive*): By the end of residency, learners will be able to understand when it is appropriate to order EMG and how to incorporate results into their clinical decision making including, but not limited to:

- Peripheral neuropathies
- Cervical and lumbar radiculopathy
- Myopathies

3.1.5 Patient Care 5: Management of Procedural Care (e.g., Trigger Point Injections, Joint Aspirations, Joint Injections)

Objective 1 (*psychomotor*): By the end of residency, learners will safely and successfully be able to perform trigger point injections.

Objective 2 (*psychomotor and cognitive*): By the end of residency, learners will safely, successfully, and appropriately be able to perform a joint aspiration (such as for the knee or elbow), including ordering and interpreting labs.

Objective 3 (*psychomotor*): By the end of residency, learners will safely and successfully be able to perform musculoskeletal injection of the major joints which may include, but is not limited to:

- Knee injection
- Shoulder injection
- Hip injection
- Carpal tunnel injection
- Elbow injection
- Sacroiliac joint injection
- If able, it is encouraged that these will also be able to be done under ultrasound guidance

Objective 4 (*psychomotor and cognitive*): By the end of residency, learners are encouraged to gain a foundational knowledge of the benefits, side effects, and indications for a variety of regenerative injection (orthobiologic) techniques (prolotherapy, platelet rich plasma injections, etc). They are also encouraged to gain knowledge and learn to perform these and other specialized injection

techniques such as the following, including indications for when to refer to another healthcare provider if unable to perform by oneself:

- Prolotherapy
- Platelet Rich Plasma
- Neural therapy
- Botox injections
- Hydrodissection
- Acupuncture and dry needling
- Advanced orthobiologic procedures

3.2 Competency: Medical Knowledge

3.2.1 Medical Knowledge 1: Applied Foundational Sciences

Objective 1 (*cognitive*): By the end of residency, learners will have a comprehensive understanding of gross anatomy and embryological development, including, but not limited to:

- Head and neck
- Back and upper limb
- Lower (deep) back and lower limb
- Thorax and abdomen
- Pelvis

Objective 2 (*cognitive*): By the end of residency, learners will be able to integrate their knowledge of anatomy and physiology to understand the mechanisms of common injuries and problems, including overuse injuries, such as:

- Head and neck injuries, including concussion
- Common upper and lower extremity injuries
- Low back pain
- Biomechanical effects of orthopedic and general surgery

Objective 3 (*cognitive*): By the end of residency, learners will understand the appropriate indications, contraindications, and mechanism of action for opioid medications, including recognition and management of side effects, tolerance, withdrawal, and signs of addiction. Learners are also encouraged to understand the appropriate indications, contraindications, and mechanism of action for: [13,14]

- Non-opioid pain medications, including non-opioid analgesics (nonsteroidal anti-inflammatory medications, acetaminophen), anti-depressants (SNRIs, tricyclic anti-depressants), anti-epileptic drugs (gabapentin and pregabalin), topical agents, botulinum toxin, and muscle relaxants.[15]
- Disease modifying anti-rheumatic drugs and glucocorticoids
- Vitamins and supplements

Objective 4 (*cognitive*): By the end of residency, learners will be able to integrate their knowledge of anatomy, physiology, and pharmacology using the five

Osteopathic models to create a comprehensive assessment and treatment plan in complex patient presentations:[16]

- Biomechanical
- Respiratory-Circulatory
- Metabolic-Energetic
- Neurological
- Behavioral

3.2.2 Medical Knowledge 2: Manifestation of Systemic Disease through Neuromusculoskeletal System

Objective 1 (*psychomotor and cognitive*): By the end of residency, the learner will be able to identify and treat viscero-somatic and Chapman's reflexes.

Objective 2 (*cognitive and affective*): By the end of residency, the learner will be able to apply the Tenets of Osteopathic Medicine in the development of a long-term patient treatment plan in complex patient presentations that emphasizes:

"1. The body is a unit; the person is a unit of body, mind, and spirit.
2. The body is capable of self-regulation, self-healing, and health maintenance.
3. Structure and function are reciprocally interrelated.
4. Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function."[16,17]

3.3 Competency: Systems-Based Practice

3.3.1 Systems-Based Practice 1: Patient Safety and Quality Improvement

Objective 1 (*cognitive*): By the end of residency, the learner will complete at least one quality improvement project. This may consist of one PDSA (Plan-Do-Study-Act) cycle of a larger quality improvement project.[18]

Objective 2 (*cognitive*): During residency, the learner will participate in opportunities to review standards of patient care such as through morbidity and mortality case review, chart review, quality improvement, and/or grand rounds.

3.3.2 Systems-Based Practice 2: System Navigation for Patient-Centered Care

Objective 1 (*cognitive*): By the end of residency, the learner will be able to oversee "sign-outs among other residents and reinforce use of I-PASS" to safely transfer patient care.[19,20]

3.3.3 Systems-Based Practice 3: Physician Role in Health Care Systems

Objective 1 (*cognitive*): By the end of residency, the learner will be able to manage personal finances and business-related finances in a cost-effective manner.

Objective 2 (*cognitive*): By the end of residency, the learner will be able to document appropriate billing and coding to their patient encounters according to level of complexity and modifiers for procedures such as OMT and injections.

Objective 3 (*cognitive*): By the end of residency, the learner will be able to coordinate cost effective care within the health care system.

Objective 4 (*cognitive*): By the end of residency, the learner will be able to evaluate and select an ONMM practice option that meets their long-term career goals.

3.4 Competency: Practice-Based Learning and Improvement

3.4.1 Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice

Objective 1 (*cognitive*): Throughout residency, the learner will advance their knowledge of evidence-based care through participation in journal club.[21,22]

Objective 2 (*cognitive*): By the end of residency, the learner will be able to apply skills such as the following to a research project in the field of osteopathic neuromusculoskeletal medicine:

- Formulate a research question
- Conduct a literature review
- Design a research study
- Apply to an Institutional Review Board
- Conduct informed consent
- Conduct data collection and entry
- Conduct statistical analysis
- Synthesize findings and explain their relevance to the field of osteopathic neuromusculoskeletal medicine

Objective 3 (*cognitive*): By the end of residency, the learner will know how to write scientific literature through experiences such as, but not limited to writing a grant application, research manuscript, research poster, and/or oral presentation for a research project in the field of osteopathic neuromusculoskeletal medicine.

3.4.2 Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth

Objective 1 (*cognitive and affective*): By the end of residency, the learner will effectively set goals and gain feedback from faculty, rotation preceptors, and colleagues to monitor and improve their progress as a medical professional.

Objective 2 (*cognitive*): By the end of residency, the learner is encouraged to be able to effectively provide feedback using methods such as the one-minute preceptor model.[23]

Objective 3 (*cognitive and affective*): By the end of residency, the learner will incorporate formative feedback from faculty, co-residents, patients, and colleagues throughout residency into their learning plan to identify areas of strength and target areas of improvement.

Objective 4 (*cognitive and affective*): By the end of residency, the learner will incorporate formative and summative feedback from end-of-rotation evaluations, in-training exam scores, and ONMM Residency Milestone Evaluation into their learning plan to identify areas of strength and target areas of improvement.[14,24]

3.5 Competency: Professionalism

3.5.1 Professionalism 1: Professional Behavior and Ethical Principles

Objective 1 (*cognitive*): During residency, the learner will participate in opportunities to review standards of patient care such as through morbidity and mortality case review, chart review, quality improvement, and/or grand rounds.

Objective 2 (*cognitive*): During residency, the learner is encouraged to apply models of health behavior to their clinical practice such as the Transtheoretical Model (stages of change and motivational interviewing) to promote health and manage difficult patient encounters.[25]

Objective 3 (*affective*): During residency, the learner will participate in longitudinal professionalism experiences which may include, but are not limited to:

- Structured didactics curriculum[26]
- Faculty mentorship
- Leadership roles at the local, state and/or national level

3.5.2 Professionalism 2: Accountability/Conscientiousness

Objective 1 (*cognitive*): During residency, the learner is encouraged to gain a better understanding of personal leadership and communication styles through assessments such as, but not limited to StrengthsFinder and the Myers-Briggs Type Indicator.[27,28]

Objective 2 (*cognitive and affective*): During residency, the learner will participate in opportunities to further their understanding of diversity, “including but not limited to diversity in gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation.”[14]

Objective 3 (*psychomotor*): During residency, the learner is encouraged to participate in community volunteer and/or moonlighting opportunities to apply OMM skills such as soft tissue clinic and sideline sports game coverage as determined and approved by their individual residency program.

3.5.3 Professionalism 3: Self-Awareness and Help-Seeking Behaviors

Objective 1 (*affective*): During residency, the learner will participate in educational opportunities to learn how to manage stress and burnout.

Objective 2 (*affective*): During residency, the learner will exhibit self-awareness and self-management of their emotional, physical, and emotional health.

Objective 3 (*affective*): During residency, the learner is encouraged to have opportunities to engage in wellness activities both within and outside of residency.

Objective 4 (*affective*): During residency, the learner is encouraged to pursue areas of continual personal and professional growth both within and outside of residency to promote their wellbeing.

3.6 Competency: Interpersonal and Communication Skills

3.6.1 Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication

Objective 1 (*cognitive and affective*): During residency, the learner is encouraged to participate in educational opportunities on conflict management.[29]

Objective 2 (*cognitive*): During residency, the learner will participate in journal club to develop skills in evidence-based practice that integrate the triad of best clinical knowledge, individual clinical expertise, and patient values and expectations.[21,22]

Objective 3 (*psychomotor and affective*): During residency, the learner will participate in OMM continuity clinic to foster continuity of care and the development of meaningful patient relationships.

3.6.2 Interpersonal and Communication Skills 2: Interprofessional and Team Communication

Objective 1 (*cognitive*): By the end of residency, learners will be able to refer patients to appropriate consultation and integrate consultant recommendations into their assessment and plan which may include, but are not limited to:[14]

- Neurosurgery
- Neurology
- Physical Medicine and Rehabilitation
- Occupational Medicine
- Orthopedic Surgery
- Sports Medicine
- Rheumatology

- Radiology
- Pain Management
- Podiatry
- Dentistry
- Functional medicine
- Regenerative medicine

Objective 2 (*psychomotor and cognitive*): By the end of residency, learners are encouraged to be able to write prescription for and request appropriate consultation for:

- Physical Therapy
- Occupational Therapy
- Orthotics

Objective 3 (*psychomotor and cognitive*): By the end of residency, learners are encouraged to apply additional tools in their own practice or appropriately refer to consultation for a variety of services which may include, but are not limited to:

- Diagnostic musculoskeletal ultrasound
- Ultrasound-guided interventions
- Splinting and casting
- Leg length inequality, including radiologic workup and lift therapy
- Acupuncture and dry needling
- Diet and exercise programming
- Yoga

Objective 4 (*cognitive and affective*): During residency, the learner is encouraged to participate in personality type and emotional intelligence inventories to develop better understanding of personal strengths and application to interactions with others on healthcare interprofessional teams.[27,30]

Objective 5 (*psychomotor and cognitive*): During residency, learners is encouraged to participate in local and regional conferences and trainings related to the field of Osteopathic Neuromusculoskeletal Medicine on a yearly basis.

Objective 6 (*psychomotor and cognitive*): During residency, the learner is encouraged to participate in national conferences and trainings related to the field of Osteopathic Neuromusculoskeletal Medicine such as the American Academy of Osteopathy Convocation on a yearly basis and will complete a forty-hour introductory cranial course at least once while in residency.

3.6.3 Interpersonal and Communication Skills 3: Communication within Health Care Systems

Objective 1 (*cognitive*): During residency, the learner will develop efficiency in documenting patient encounters to meet current billing and legal requirements.

Objective 2 (psychomotor and cognitive): During residency, the learner will develop efficiency in documenting patient encounters including for OMT and injections.

Objective 3 (psychomotor and cognitive): During residency, the learner will develop the skills necessary to manage written and verbal communications including documentation of patient encounters, review of lab and imaging results, prior authorization requests, and medication refills.

4. Educational Strategies Based on Goals and Objectives

Table 3 outlines educational methods and evaluation strategies that may be applied to meet curriculum objectives. Programs may choose to apply which methods and strategies based on the items listed or choose other strategies that best suit program needs.

Table 3. ONMM Competency Based Objectives, Educational Methods, and Learner Evaluation		
ONMM Competency Based Objective	**Educational Method(s)**	**Evaluation of Learner**
Patient Care 1: Patient Management: Osteopathic Approach to Patient Care		
Objective 1: By the end of residency, learners will be able to perform an accurate and complete physical examination including diagnosis of somatic dysfunction in complex patients. The parts of the physical examination should include: • An osteopathic structural examination • Upper and lower extremity orthopedic examination • Upper and lower extremity neurological examination • Identification of normal and abnormal gait patterns	• Lecture • Case presentation • Standardized patient • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 2: By the end of residency, learners should be able to incorporate physical examination findings to determine appropriate next steps in narrowing their differential diagnosis including, but not limited to appropriate labs, imaging, and other testing	• Faculty and resident led lectures on radiology and ordering of appropriate diagnostic testing • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Didactics attendance • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, learners should be able to develop an accurate assessment and comprehensive plan that incorporates osteopathic principles in patient care	• Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Didactics attendance • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 4: By the end of residency, learners will have a broad knowledge of how to treat special populations using an osteopathic approach to patient care which may include, but not limited to: • Athletes (Sports Medicine) • Performers (Performing Arts Medicine) • Maternal and Child Health (Pediatric OMT and OMT in Pregnancy) • Geriatrics • Hospitalized patients	• Lecture • Case Presentation • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 5 (cognitive): By the end of residency, learners will gain a better understanding of the history and philosophy of osteopathic medicine by reading texts by Andrew Taylor Still and/or other figures significant to the development of osteopathy.	• Lecture • Discussion of reading material in small groups	• Attendance at didactics • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Patient Care 2: Osteopathic Manipulative Treatment (OMT) (Direct)		
Objective 1: By the end of residency, learners will independently be able to apply direct OMT techniques in complex patient presentations such as (Table 2):[7,8] • Muscle Energy • High-Velocity/Low Amplitude • Articulatory technique and springing	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 2: By the end of residency, learners will independently be able to apply and teach others how to utilize a variety of OMT techniques that may include techniques recognized by the American Board of Osteopathic Neuromusculoskeletal Medicine (AOBNMM), Educational Council on Osteopathic Principles (ECOP), AACOM, and other treatment modalities that may not yet be recognized (Table 2).[3,8-12]	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 3: By the end of residency, learners will be able to employ appropriate biomechanics in the application of OMT to ensure their own physical safety and prevent injury.	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Direct observation and feedback by faculty in OMM clinic and on rotation • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Patient Care 3: Osteopathic Manipulative Treatment (OMT) (Indirect)		
Objective 1: By the end of residency, learners will independently be able to apply indirect OMT techniques in complex patient presentations such as (Table 2): • Counterstrain Techniques • Facilitated Positional Release • Exaggeration technique Functional method	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 2: By the end of residency, learners will successfully complete a 40-hour basic course in Osteopathic Cranial Manipulative Medicine.	• Completion of a 40-hour basic course in Osteopathic Cranial Manipulative Medicine from the Osteopathic Cranial Academy, Sutherland Cranial Teaching Foundation or equivalent	• Certificate of completion of a 40-hour basic course in Osteopathic Cranial Manipulative Medicine
Objective 3: By the end of residency, learners will independently be able to apply and teach others how to utilize a variety of OMT techniques that may include techniques recognized by the American Board of Osteopathic Neuromusculoskeletal Medicine (AOBNMM), Educational Council on Osteopathic Principles (ECOP), AACOM, and other treatment modalities that may not yet be recognized (Table 2).[3,8-12]	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 4: By the end of residency, learners will be able to employ appropriate biomechanics in the application of OMT to ensure their own physical safety and prevent injury.	• Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Direct observation and feedback by faculty in OMM clinic and on rotation • ONMM In-Training Exam
Patient Care 4: Diagnostic Screening, Testing, and Interpretation		
Objective 1: By the end of residency, learners will anticipate and account for indications and contra-indications for imaging modalities including, but not limited to x-ray imaging, musculoskeletal ultrasound, computerized tomography (CT) with and without contrast, and magnetic resonance imaging (MRI) with and without contrast.	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 2: By the end of residency, learners will understand indications for screening and testing for widespread or uncontrolled pain based on clinical presentation in complex patient presentations including, but not limited to: • Autoimmune and rheumatological conditions such as rheumatoid arthritis and systemic lupus erythematosus • Vitamin deficiencies, obstructive sleep apnea, restless leg syndrome, autoimmune disease, HIV, and hepatitis C • Fibromyalgia and myalgic encephalomyelitis • Complex Regional Pain Syndrome, peripheral neuropathy, cauda equina syndrome, and vertebral fractures • Peripheral Arterial Disease, Deep Vein Thrombosis, and subarachnoid hemorrhage	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, learners will be able to provide interpretation for x-ray imaging and provide initial management for fractures and dislocations in complex patient presentations.	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 4: By the end of residency, learners will be able to order or, if available, apply musculoskeletal ultrasound at bedside to complex patient presentations.	• Lecture • Case presentation and board review (oral cases) • Hands-on laboratory didactics • Simulation lab • Standardized patient • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 5: By the end of residency, learners will be able to provide initial interpretation for CT imaging in complex patient presentations and provide initial management including, but not limited to: • Acute conditions such as suspected stroke or skeletal trauma • In conditions where MRI imaging may be contraindicated such as the presence of a metal implantable device	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 6: By the end of residency, learners will be able to provide preliminary interpretation for MRI imaging including with and without contrast, or MR arthrogram for complex patient presentations and initiate appropriate management including, but not limited to: • Cervical radiculopathy and myelopathy • Lumbar radiculopathy and myelopathy • Intra-articular pathologies of the shoulder joint including rotator cuff or labral tear • Intra-articular pathologies of the knee joint including meniscal tears or ligamentous tears.	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 7: By the end of residency, learners will be able to understand when it is appropriate to order EMG and how to incorporate results into their clinical decision making including, but not limited to: • Peripheral neuropathies • Cervical and lumbar radiculopathy • Myopathies	• Lecture • Case presentation and board review (oral cases) • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in didactics • Participation in case presentations and board review • Direct observation and feedback by faculty in OMM clinic and on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Patient Care 5: Management of Procedural Care (e.g., Trigger Point Injections, Joint Aspirations, Joint Injections)		
Objective 1: By the end of residency, learners will safely and successfully be able to perform trigger point injections	• Lecture • Simulation laboratory on mannequins • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Conferences and workshops	• Direct observation and feedback by faculty and co-residents in simulation laboratory • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months
Objective 2: By the end of residency, learners will safely, successfully, and appropriately be able to perform a joint aspiration (such as for the knee or elbow), including ordering and interpreting labs.	• Lecture • Simulation laboratory on mannequins • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Conferences and workshops	• Direct observation and feedback by faculty and co-residents in simulation laboratory • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, learners will safely and successfully be able to perform musculoskeletal injection of the major joints including, but not limited to: • Knee injection • Shoulder injection • Hip injection • Carpal tunnel injection • Elbow injection • Sacroiliac joint injection • If able, it is encouraged that these will also be able to be done under ultrasound guidance	• Lecture • Ultrasound laboratory didactics • Simulation laboratory on mannequins • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Conferences and workshops	• Direct observation and feedback by faculty and co-residents in ultrasound and simulation laboratory • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months
Objective 4: By the end of residency, learners are encouraged to gain a foundational knowledge of the benefits, side effects, and the indications for a variety of regenerative injection (orthobiologic) techniques (prolotherapy, platelet rich plasma, etc). They are also encouraged to gain knowledge and learn how to perform these and other specialized injection techniques such as the following, including indications for when to refer to another healthcare provider if unable to perform by oneself: • Prolotherapy • Platelet Rich Plasma • Neural therapy • Botox injections • Hydrodissection • Acupuncture and dry needling • Advanced orthobiologic procedures	• Lecture • Demonstration and case presentation • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Conferences and workshops	• Didactics attendance • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Medical Knowledge 1: Applied Foundational Sciences		
Objective 1: By the end of residency, learners will have a comprehensive understanding of gross anatomy and embryological development including, but not limited to: • Head and neck • Back and upper limb • Lower (deep) back and lower limb • Thorax and abdomen • Pelvis	• Lecture on functional anatomy and embryology by faculty and co-residents • Gross anatomy lab • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance in didactics and anatomy lab • Presentation of a lecture on functional anatomy to co-residents • Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 2 (*cognitive*): By the end of residency, learners will be able to integrate their knowledge of anatomy and physiology to understand the mechanisms of common injuries and problems, including overuse injuries, such as: • Head and neck injuries, including concussion • Common upper and lower extremity injuries • Low back pain • Biomechanical effects of orthopedic and general surgery	• Lecture by faculty and co-residents • Gross anatomy lab • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance in didactics and anatomy lab • Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, learners will understand the appropriate indications, contraindications, and mechanism of action for opioid medications, including recognition and management of side effects, tolerance, withdrawal, and signs of addiction. Learners are also encouraged to understand the appropriate indications, contraindications, and mechanism of action for: [13,14] • Non-opioid pain medications, including non-opioid analgesics (non-steroidal anti-inflammatory medications, acetaminophen, anti-depressants (SNRIs, tricyclic anti-depressants), anti-epileptic drugs (gabapentin and pregabalin), topical agents, botulinum toxin, and muscle relaxants[15] • Disease modifying anti-rheumatic drugs and glucocorticoids • Hormone replacement therapy • Vitamins and supplements	• Lecture • Case presentation • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 4: By the end of residency, learners will be able to integrate their knowledge of anatomy, physiology, and pharmacology using the five Osteopathic models to create a comprehensive assessment and treatment plan:[16] • Biomechanical • Respiratory-Circulatory • Metabolic-Energetic • Neurological • Behavioral	• Lecture • Case presentation • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Medical Knowledge 2: Manifestation of Systemic Disease Through Neuromusculoskeletal System		
Objective 1: By the end of residency, the learner will be able to identify and treat viscero-somatic and Chapman's reflexes.	• Lecture • Case presentation • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Objective 2: By the end of residency, the learner will be able to apply the Tenets of Osteopathic Medicine in the development of a long-term patient treatment plan that emphasizes: *"1. The body is a unit; the person is a unit of body, mind, and spirit.* *2. The body is capable of self-regulation, self-healing, and health maintenance.* *3. Structure and function are reciprocally interrelated.* *4. Rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function."*[16,17]	• Lecture on OMM history and philosophy • Case presentation • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • ONMM In-Training Exam
Systems-Based Practice 1: Patient Safety and Quality Improvement		
Objective 1: By the end of residency, the learner will complete at least one quality improvement project. This may consist of one PDSA (Plan-Do-Study-Act) cycle of a larger quality improvement project.[18]	• Lecture on quality improvement processes • Participation in quality improvement project	• Completion of one quality improvement project under faculty supervision by the end of residency
Objective 2: During residency, the learner will participate in opportunities to review standards of patient care such as through morbidity and mortality case review, chart review, quality improvement, and/or grand rounds	• Lecture and grand rounds • Morbidity and mortality case review • Chart review • Quality improvement projects	• Attendance at didactics, morbidity and mortality case review, and/or grand rounds • Completion of assigned chart review and/or quality improvement project

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Systems-Based Practice 2: System Navigation for Patient-Centered Care		
Objective 1 (*cognitive*): By the end of residency, the learner will be able to oversee "sign-outs among other residents and reinforce use of I-PASS" to safely transfer patient care.[19,20]	• Lecture • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Systems-Based Practice 3: Physician Role in Health Care Systems		
Objective 1: By the end of residency, the learner will be able to manage personal and business-related finances in a cost-effective manner.	• Lecture on practice management and finances • Application of knowledge in personal and business-related matters	• Attendance at didactics • Self-reflection and seeking out additional guidance from faculty and other mentors
Objective 2: By the end of residency, the learner will be able to document appropriate billing and coding to their patient encounters according to level of complexity and modifiers for procedures such as OMT and injections.	• Lecture on practice management and finances • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, the learner will be able to coordinate cost effective care within the health care system.	• Lecture on practice management and finances • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 4: By the end of residency, the learner will be able to evaluate and select an ONMM practice option that meets their long-term career goals.	• Lecture on practice management and finances • Faculty-resident mentorship program[31]	• Attendance at didactics • Participation in faculty-resident mentorship program
Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice		
Objective 1: Throughout residency, the learner will advance their knowledge of evidence-based care through participation in journal club.[21,22]	• Journal club • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Completion of at least one journal club presentation at didactics per year • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 2: By the end of residency, the learner will be able to apply skills such as the following to a research project in the field of osteopathic neuromusculoskeletal medicine to be completed by the end of residency: • Formulate a research question • Conduct a literature review • Design a research study • Apply to an Institutional Review Board • Conduct informed consent • Conduct data collection and entry • Conduct statistical analysis • Synthesize findings and explain their relevance to the field of osteopathic neuromusculoskeletal medicine	• Research didactics including lecture on listed topics • Journal club • Application of skills in completion of a research project during residency with guidance from a faculty member	• Attendance in research didactics • Completion of at least one journal club presentation at didactics per year • Submission of a research proposal during residency • Completion of a research project during residency under faculty guidance including the development of a poster or oral presentation, and a manuscript that can be submitted for publication
Objective 3: By the end of residency, the learner will practice writing scientific literature through experiences such as, but not limited to writing a grant application, research manuscript, research poster, and/or oral presentation for a research project in the field of osteopathic neuromusculoskeletal medicine.	• Research didactics including lecture on listed topics • Journal club • Application of skills in completion of a research project during residency with guidance from a faculty member	• Attendance in research didactics • Presentation of at least one journal club article per year • Submission of a research proposal during residency • Completion of a research project during residency under faculty guidance including the development of a poster or oral presentation, and a manuscript that can be submitted for publication

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth		
Objective 1: By the end of residency, the learner will effectively set goals and gain feedback from faculty, rotation preceptors, and colleagues to monitor and improve their progress as a medical professional.	• Lecture on practice management • Bi-annual review of ONMM Residency Milestone evaluation with program director • Development of an annual individualized learning plan in collaboration with program director or faculty mentor • Faculty-resident mentorship program[31] • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Self-reflection and seeking out additional guidance from faculty and other mentors • Direct observation and feedback by faculty in OMM clinic and while on rotation • Participation in faculty-resident mentorship program • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 2: By the end of residency, the learner is encouraged to be able to effectively provide feedback using methods such as the one-minute preceptor model.[23]	• Resident as Teacher Curriculum[32] • Practice scenarios between residents or with standardized patient experiences • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Anonymous peer evaluation during Milestone Evaluation	• Attendance at OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: By the end of residency, the learner will incorporate formative feedback from faculty, co-residents, patients, and colleagues throughout residency into their learning plan to identify areas of strength and target areas of improvement.	• ONMM Residency Milestone evaluation with program director • Development of an annual individualized learning plan in collaboration with program director or faculty mentor • Faculty-resident mentorship program[31] • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Self-reflection and seeking out additional guidance from faculty and other mentors • Direct observation and feedback by faculty in OMM clinic and while on rotation • Participation in faculty-resident mentorship program • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 4: By the end of residency, the learner will incorporate formative and summative feedback from end-of-rotation evaluations, in-training exam scores, and ONMM Residency Milestone Evaluation into areas into their learning plan to identify areas of strength and target areas of improvement.[14,24]	• Application of knowledge in OMM continuity clinic • Application of knowledge on rotation • Yearly completion of In-Training Exam	• End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months • In-Training Exam
Professionalism 1: Professional Behavior and Ethical Principles		
Objective 1: During residency, the learner will participate in opportunities to review standards of patient care such as through morbidity and mortality case review, chart review, quality improvement, and/or grand rounds	• Lecture and grand rounds • Morbidity and mortality case review • Chart review • Quality improvement projects	• Attendance at didactics, morbidity and mortality case review, and/or grand rounds • Completion of assigned chart review and/or quality improvement project
Objective 2: During residency, the learner is encouraged to apply models of health behavior to their clinical practice such as the Transtheoretical Model (stages of change and motivational interviewing) to promote health and manage difficult patient encounters.[25]	• Lecture on motivational interviewing • Practice scenarios between residents or with standardized patient experiences • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 3: During residency, the learner will participate in longitudinal professionalism experiences which may include, but are not limited to: • Structured didactics curriculum[26] • Faculty mentorship • Leadership roles at the local, state, and/or national level	• Lecture • Case presentation • Small group discussion • Regular meetings with faculty mentor as determined by resident and mentor to meet individual needs • Participation in leadership roles at local, state, and/or national level	• Attendance at didactics • Attendance of meetings scheduled with faculty mentor • ONMM Residency Milestone evaluation every 6 months
Professionalism 2: Professional Conduct and Accountability/Conscientiousness		
Objective 1: During residency, the learner is encouraged to gain a better understanding of personal leadership and communication styles through assessments such as, but not limited to StrengthsFinder and the Myers-Briggs Type Indicator.[27,28]	• Completion of a leadership and/or communication type assessment such as the StrengthsFinder and/or Myers-Briggs Type Indicator • Discussion with faculty mentor and/or small groups • Application in leadership roles during residency such as when on rotation, teaching medical students, interacting with faculty/staff, and/or local, state, or national leadership positions	• Completion of a leadership and/or communication type assessment • Attendance at didactics • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 2: During residency, the learner will participate in opportunities to further their understanding of diversity, "including but not limited to diversity in gender, age, culture, race, religion, disabilities, national origin, socioeconomic status, and sexual orientation."[14]	• Lecture • Case presentation • Small group discussion • Application of knowledge in patient and family interactions in OMM continuity clinic and on rotation • Application of knowledge in professional interactions with faculty, staff, and other colleagues	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 3: During residency, the learner is encouraged to participate in community volunteer and/or moonlighting opportunities to apply OMM skills such as soft tissue clinic and sideline sports game coverage as determined and approved by their individual residency program.	• Participation in and supervision of medical students in soft tissue clinic • Junior and high school sports game coverage • Guest lectures at local meetings and conferences • Other volunteer and/or moonlighting opportunities as approved by the residency	• Participation in yearly community volunteer and/or moonlighting opportunities that allow application of ONMM skills
Professionalism 3: Self-Awareness and Help-Seeking Behaviors		
Objective 1: During residency, the learner will participate in lectures educational opportunities to learn how to manage stress and burnout.	• Lecture • Case presentation	• Attendance at didactics • Self-reflection and seeking out additional guidance from faculty and other mentors

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 2: During residency, the learner will exhibit self-awareness and self-management of their emotional, physical, and emotional health.	• Participation in peer-led wellness curriculum[33,34] • Protected time during didactics for wellness activities • Faculty-resident mentorship program[31] • Residency support and adherence to 80 hour work week and additional time requirements free of clinical work as determined by ACGME[14]	• Participation in peer-led wellness curriculum and faculty-resident mentorship program • Completion of yearly ACGME Resident/Fellow Survey[35]
Objective 3: During residency, the learner is encouraged to have opportunities to engage in wellness activities both within and outside or residency.	• Resident led wellness curriculum[33,34] • Protected time during residency didactics for wellness activities • Residency support and adherence to 80 hour work week and additional time requirements free of clinical work as determined by ACGME[14]	• Participation in peer-led wellness curriculum and faculty-resident mentorship program • Self-reflection and seeking out additional resources and assistance from faculty, co-residents, and other colleagues • Completion of yearly ACGME Resident/Fellow Survey[35]
Objective 4: During residency, the learner is encouraged to pursue areas of continual personal and professional growth both within and outside of residency to promote their wellbeing.	• Resident led wellness curriculum[33,34] • Application of knowledge in personal and professional-related matters	• Participation in resident led wellness curriculum • Self-reflection and seeking out additional resources and assistance from faculty, co-residents, and other colleagues

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication		
Objective 1: During residency, the learner is encouraged to participate in educational opportunities on conflict management.[29]	• Lecture • Case presentation • Practice scenarios between residents or with standardized patient experiences	• Attendance at didactics • Presentation of lecture or case involving conflict management • Participation in practice scenarios
Objective 2: During residency, the learner will participate in journal club to develop skills in evidence-based practice that integrate the triad of best clinical knowledge, individual clinical expertise, and patient values and expectations.[21,22]	• Journal club	• Presentation of at least one research article during journal club at didactics per year
Objective 3: During residency, the learner will participate in OMM continuity clinic to foster continuity of care and the development of meaningful patient relationships.	• Application of knowledge in OMM continuity clinic	• Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Interpersonal and Communication Skills 2: Interprofessional and Team Communication		
Objective 1: By the end of residency, learners will be able to refer patients to appropriate consultation and integrate consultant recommendations into their assessment and plan which may include, but are not limited to:[14] • Neurosurgery • Neurology • Physical Medicine and Rehabilitation • Occupational Medicine • Orthopedic Surgery • Sports Medicine • Rheumatology • Radiology • Pain Management • Podiatry • Dentistry • Functional medicine • Regenerative medicine	• Lecture • Case Presentation • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Didactics attendance • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 2: By the end of residency, learners are encouraged to be able to write prescription for and request appropriate consultation for: • Physical Therapy • Occupational Therapy • Orthotics	• Lecture • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Didactics attendance • Direct observation and feedback by faculty in OMM clinic and while on rotation • ONMM Residency Milestone evaluation every 6 months
Objective 3: By the end of residency, learners are encouraged to apply additional tools or appropriately refer for consultation for: • Diagnostic musculoskeletal ultrasound • Ultrasound-guided interventions • Splinting and casting • Leg length inequality, including radiologic workup and lift therapy • Acupuncture and dry needling • Diet and exercise programming • Yoga	• Lecture • Hands-on laboratory didactics • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Direct observation and feedback by faculty and co-residents in OMM didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 4: During residency, the learner is encouraged to participate in personality type and emotional intelligence inventories to develop better understanding of personal strengths and application to interactions with others on healthcare interprofessional teams[27,30]	• Completion of assessment(s) such as StrengthsFinder 2.0 and the Emotional Quotient Inventory (EQ-i)	• Completion of assessment(s) such as StrengthsFinder 2.0 and the Emotional Quotient Inventory (EQ-i)
Objective 5: During residency, the learner is encouraged to participate in local and regional conferences and trainings related to the field of Osteopathic Neuromusculoskeletal Medicine.	• Local and regional conferences • Local and regional workshops	• CME credit for participation in local and regional conferences

ONMM Competency Based Objective	Educational Method(s)	Evaluation of Learner
Objective 6: During residency, the learner is encouraged to participate in national conferences and trainings related to the field of Osteopathic Neuromusculoskeletal Medicine such the American Academy of Osteopathy Convocation on a yearly basis and will complete a forty-hour introductory cranial course at least once while in residency.	• AAO Convocation • Attendance and completion of a 40-hour basic course in Osteopathic Cranial Manipulative Medicine from the Osteopathic Cranial Academy, Sutherland Cranial Teaching Foundation, or equivalent course • Other national conferences and workshops	• CME credit for participation in AAO Convocation and other national conferences and workshops • Certificate of completion of a 40-hour basic course in Osteopathic Cranial Manipulative Medicine
Interpersonal and Communication Skills 3: Communication within Health Care Systems		
Objective 1: During residency, the learner will develop efficiency in documenting patient encounters to meet current billing and legal requirements.	• Lecture on practice management • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 2: During residency, the learner will develop efficiency in documenting patient encounters including for OMT and injections.	• Lecture on practice management • Application of knowledge in OMM continuity clinic • Application of knowledge on rotation	• Attendance at didactics • Direct observation and feedback by faculty in OMM clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months
Objective 3: During residency, the learner will develop the skills necessary to manage written and verbal communications including documentation of patient encounters, review of lab and imaging results, prior authorization requests, and medication refills.	• Lecture on practice management • Application of knowledge in OMM continuity clinic	• Attendance at didactics • Direct observation and feedback by faculty in OMM

	• Application of knowledge on rotation	clinic and while on rotation • End-of-rotation evaluation • ONMM Residency Milestone evaluation every 6 months

5. Implementation

5.1 Resources

5.1.1. Faculty, Staff, and Residents

The implementation of a curriculum committee is recommended and may consist of the program director, assistant program director, designated faculty, chief resident(s), and/or program coordinator to help coordinate and implement curriculum. It may be appropriate to designate percentage of full-time effort for designated faculty who may assist with leading the coordination and development of program curriculum, scheduling didactics lectures and activities, and leading curriculum evaluation. Program faculty may be engaged to teach lectures and hands-on activities with the assistance of the curriculum committee. The chief resident or other appointed curriculum committee member may be assigned to lead resident-led lectures and hands-on activities.

5.1.2 Didactics Calendar

An academic calendar may be kept to help coordinate sign-ups and track didactics activities. Please see appendix A for an example of a template that may be used. A shared spreadsheet may be used to help facilitate coordination of scheduling.

5.1.3 Time

Time should be blocked off for weekly didactics (4 hours), curriculum committee meetings, faculty curriculum development, and for any assigned chief or resident duties.

5.1.4 Funding

Funding allocated for the following resources may be helpful in the implementation of program curriculum:

- Gross anatomy lab time
- Board review question bank
- 40-hour basic cranial course
- Research and conference related registration and travel
- Additional resources as planned through the curriculum committee prior to and during the academic year

5.1.5. Facilities/Equipment

COVID 19 necessitated a change in structure and implementation to didactics and residency learning activities. The structure of the didactics curriculum should

continue to allow for remote learning through Zoom or other method of video conference. Plans should be in place to support hands-on activities with appropriate PPE, OMM tables, and spacing to allow social distancing as changes in recommendations by the CDC and residency program guidelines may occur.

5.2 Support

5.2.1 Internal

- Curriculum committee including program director, faculty, chief residents, residency coordinator, and other designated curriculum committee members
- Faculty support to teach lectures and hands-on activities
- Resident participation and engagement in curriculum activities

5.2.2 External

- Coordination of curriculum with ACGME guidelines
- Support and continued advocacy by osteopathic and allopathic organizations.

5.3 Barriers and Other Considerations

- Change in structure of didactics from in person to video conferencing and need to incorporate appropriate plans for PPE and social distancing for hands-on activities as changes in recommendations by the CDC and residency program guidelines may occur.
- Guidelines may need to be adjusted alongside anticipated updates in ACGME residency milestones.[36,37]
- For purposes of these guidelines, curriculum content may be applied in a 12 month or 18-month cyclical fashion according to program needs based on residency program structure and resident matriculation into ONMM residency. Current residency pathways include an ONMM1 pathway (36 month ONMM residency program), ONMM2 pathway (matriculation into a 24 month residency program following a 12 month transition year), ONMM3 pathway (a 12 month residency following completion of a previous residency program) or a combined family/ONMM residency program.[38] Curriculum structure for residents matriculating into a 12 month or 24 month program may be based on a 12 month cycling curriculum. A curriculum structure for residents matriculating into a 36-month residency may be based on an 18 month cycle. Likewise, it may be appropriate to consider further development of separate guidelines for each pathway.

6. Evaluation and Feedback

Please see section 4 for formative and summative evaluation of learners.

For program evaluation, please see Appendix B which includes an outline of a questionnaire that may be administered pre- and post- implementation of proposed

curriculum changes.

7. Maintenance of Curriculum

The pre- and post-test survey, as well as in-service exam scores can form the basis for ongoing program evaluation and curriculum re-alignment with program needs. Please see section 4 for formative and summative evaluation of learners. Regular meetings between the program director and chief residents will also allow for informal curriculum feedback.

8. REFERENCES

1. Ahmed AH, Schnatz PF, Adashi EY. Allopathic and Osteopathic Medicine Unify GME Accreditation: A Historic Convergence. *Fam Med.* 2017;49(5):374-377.
2. ACGME. Frequently Asked Questions: Single Accreditation System. Accreditation Council for Graduate Medical Education (ACGME). https://acgme.org/Portals/0/PDFs/Nasca-Community/FAQs.pdf. Published 2019. Updated 12/2019. Accessed 9/6/2020.
3. *Glossary of Osteopathic Terminology: Third Edition.* Chevy Chase, MD: American Association of Colleges of Osteopathic Medicine; 2017.
4. Colter S DE, Edgar L, Gallagher J, Kingery J, LeBoeuf J, et al. Osteopathic Neuromusculoskeletal Medicine Milestones. In: Accreditation Council for Graduate Medical Education (ACGME); 2022.
5. Balyakina ES, Hansen MM, Mason D. Development of Osteopathic Neuromusculoskeletal Medicine (ONMM) residency curriculum guidelines to meet Accreditation Council for Graduate Medical Education (ACGME) milestones. *J Osteopath Med.* 2022;122(4):175-185.
6. Thomas PA KD, Hughes, MT, Chen BY. *Curriculum Development for Medical Education: A Six-Step Approach, Third Edition.* Baltimore, Maryland: John Hopkins University Press; 2016.
7. Nicholas AS, Nicholas EA. *Atlas of Osteopathic Techniques.* Second ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2012.
8. Hensel K, Cymet T. *A Teaching Guide for Osteopathic Manipulative Medicine, Second Edition.* American Association of Colleges of Osteopathic Medicine; 2018.
9. Initial Certification Exam. American Osteopathic Board of Neuromusculoskeletal Medicine. https://certification.osteopathic.org/neuromusculoskeletal-medicine/certification-process/specialty-certification-process/initial-certification-exams/. Accessed on 6/29/2021.
10. Jealous J, DO JJ. *An Osteopathic Odyssey.* Tame Prepress; 2015.
11. Capistrant T, Harrer G. *The Fascial Distortion Model: Philosophy, principles, and clinical applications.* Pencaitland, East Lothian: Handspring Publishing; 2021.
12. John Tortu - Viscerosomatic Release Technique. In. YouTube2019.
13. Pain control in the critically ill adult patient. UpToDate. https://www-uptodate-com.proxy.unthsc.edu/contents/pain-control-in-the-critically-ill-adult-patient?search=opioid&sectionRank=1&usage_type=default&anchor=H230414638&source=machineLearning&selectedTitle=2~146&display_rank=1#H230414638. Accessed February 6, 2021.
14. ACGME. Program Requirements for Graduate Medical Education in Osteopathic Neuromusculoskeletal Medicine. Accessed at https://www.acgme.org/globalassets/pfassets/programrequirements/275_onmm_2022.pdf on February 2, 2023.
15. Tauben D, Stacey BR. Pharmacologic management of chronic non-cancer pain in adults. UpToDate. https://www-uptodate-com.proxy.unthsc.edu/contents/pharmacologic-management-of-chronic-non-cancer-pain-in-adults?search=pain%20medications&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1#H35869065. Accessed February 6, 2021.

16. Chila A. *Foundations of Osteopathic Medicine.* 3 ed. Baltimore, MD: Lippincott Williams & WIlkins; 2011.
17. Special Committee on Osteopathic Principles and Osteopathic Technic, Kirksville College of Osteopathy and Surgery. An interpretation of the osteopathic concept. Tentative formulation of a teaching guide for faculty, hospital staff and student body. *J Osteopath.* 1953;60(10):7-10.
18. Leis JA, Shojania KG. A primer on PDSA: Executing plan-do-study-act cycles in practice, not just in name. *BMJ Qual & Saf.* 2017;26(7):572-577.
19. O'Toole JK, Hepps J, Starmer AJ, et al. I-PASS Mentored Implementation Handoff Curriculum: Frontline Provider Training Materials. *MedEdPORTAL.* 2020;16:10912.
20. Supplemental Guide: Osteopathic Neuromusculoskeletal Medicine. In: Accreditation Counsel for Graduate Medical Education (ACGME); 2022.
21. Schlegl E, Ducournau P, Ruof J. Different Weights of the Evidence-Based Medicine Triad in Regulatory, Health Technology Assessment, and Clinical Decision Making. *Pharmaceut Med.* 2017;31(4):213-216.
22. Al Achkar M. Redesigning journal club in residency. *Adv Med Educ Pract.* 2016;7:317-320.
23. Furney SL, Orsini AN, Orsetti KE, Stern DT, Gruppen LD, Irby DM. Teaching the one-minute preceptor. A randomized controlled trial. *J Gen Intern Med.* 2001;16(9):620-624.
24. Carnes M EL, Kisiel S, Leuenberger J, Moss T, Zajdel B. *The Osteopathic Neuromusculoskeletal Medicine Milestone Project.* 2015.
25. *Health Behavior and Health Education: Theory, research, and practice.* 3 ed. San Francisco, CA: Jossey-Bass: A Wiley Imprint; 2002.
26. Dawkins R, Fogarasi S. Implementing A Professionalism Program for a Pediatric Residency Program. *MedEdPORTAL.* 2014;10.
27. Tom Rath G, Inc. *Strengthsfinder 2.0: Discover your CliftonStrengths.* New York, New York: Gallup Press; 2017.
28. Hirth SK. Myers-Briggs type indicator. In. Palo Alto, CA: Consulting Psychologists Press; 1995.
29. Cochran N, Charlton P, Reed V, Thurber P, Fisher E. Beyond fight or flight: The need for conflict management training in medical education. *Conflict Resolution Quarterly.* 2018;35:393-402.
30. Bar-On R. The Bar-On model of emotional-social intelligence (ESI). *Psicothema.* 2006;18 Suppl:13-25.
31. Patel D, Windish D, Hay S. A Mentor, Advisor, and Coach (MAC) Program to Enhance the Resident and Mentor Experience. *MedEdPORTAL.* 2020;16:11005.
32. Harrell H, Wipf J, Aronowitz P, Rencic J, Smith DG, et al. Resident as Teacher Curriculum. *MedEdPORTAL.* 2015.
33. Romcevich LE, Reed S, Flowers SR, Kemper KJ, Mahan JD. Mind-Body Skills Training for Resident Wellness: A Pilot Study of a Brief Mindfulness Intervention. *J Med Educ Curric Dev.* 2018;5:2382120518773061.
34. Aggarwal R, Deutsch JK, Medina J, Kothari N. Resident Wellness: An Intervention to Decrease Burnout and Increase Resiliency and Happiness. *MedEdPORTAL.* 2017;13:10651.

35. *ACGME Resident/Fellow Survey - Program FAQs.* Accreditation Council for Graduate Medical Education. https://www.acgme.org/Data-Collection-Systems/Resident-Fellow-and-Faculty-Surveys. Published 1/2021. Accessed 2/7/2021.
36. ACGME. Milestones 2.0: Completed Specialties and Subspecialties and Effective Dates. https://www.acgme.org/Portals/0/PDFs/Milestones/Milestones2.0EffectiveDates.pdf. Published 2020. Accessed June 20, 2021.
37. Laura Edgar SM, Sean O Hogan, Stan Hamstra, Eric S. Homboe. The Milestones Guidebook, Version 2020. In: Accreditation Council for Graduate Medical Education; 2020.
38. 2021-22 AAO ONMM Residency Programs. American Academy of Osteopathy. http://files.academyofosteopathy.org/PAAO/ONMM_ResidencyPrograms.pdf. Accessed 2/7/2021.

9. SUPPLEMENTS/APPENDICES

Appendix A: Academic Calendar Template

		First Week of the Month		Second Week of the Month		Third Week of the Month		Fourth Week of the Month		Fifth Week of the Month	
		Topic	**Speaker**	**Topic**	**Speaker**	**Topic**	**Speaker**	**Topic**	**Speaker**	**Topic**	**Speaker**
Month and Monthly Topic	**1:00 PM**	Residency Updates	**Program Director**	Hands-On Session	**Faculty**	Resident Led Lecture	**Resident**	Research	**Faculty**	Wellness Activity	
	2:00 PM	Resident Led Lecture	**Resident**			Resident Led Lecture	**Resident**	Research	**Faculty**		
	3:00 PM	Faculty Led Lecture	**Faculty**	Hands-On Session	**Faculty**	Anatomy Lab	**Faculty**	Journal Club	**Resident**		
	4:00 PM	Faculty Led Lecture	**Faculty**					Wellness Activity	Resident		
	5:00 PM										

Appendix B: Pre- and Post-test Following Implementation of Curriculum Changes

Please rank how well the following topics were covered during Osteopathic Neuromusculoskeletal Medicine (ONMM) Didactics this academic year.

	Did not meet my learning expectations	Met my learning expectations	Exceeded my learning expectations	Not Applicable
Osteopathic Manipulative Techniques (OMT) (Direct and Indirect)	☐	☐	☐	☐
Trigger Point Injection, Joint Aspiration, and Injection	☐	☐	☐	☐
Patient Management	☐	☐	☐	☐
Providing and Requesting Consultation	☐	☐	☐	☐
Clinical Knowledge				
Anatomy	☐	☐	☐	☐
Physiology	☐	☐	☐	☐
Pharmacology	☐	☐	☐	☐
Assessment	☐	☐	☐	☐
Treatment	☐	☐	☐	☐
Manifestation of systemic disease through neuromusculoskeletal system and related visceral and somatic reflex patterns	☐	☐	☐	☐
Patient Safety and Advocacy	☐	☐	☐	☐
Practice Management and Economics	☐	☐	☐	☐
Developing a Learning Plan and Providing Feedback	☐	☐	☐	☐
Literature Review and Research	☐	☐	☐	☐
Patient and Community Interactions	☐	☐	☐	☐
Professional Conduct and Accountability	☐	☐	☐	☐
Resident Wellness	☐	☐	☐	☐
Communicating with Patients and Families	☐	☐	☐	☐
Interprofessional Communication	☐	☐	☐	☐

What was most helpful about ONMM didactics?

What was least helpful about ONMM didactics?

How can ONMM didactics be improved to enhance your learning?

Please complete the following statement: As a result of OMM didactics, I feel more confident in my knowledge of…

Please complete the following statement: I wish I were more confident in my knowledge of…