The Osteopathic Neuromusculoskeletal Medicine Milestone Project

An Initiative of

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The Milestones are designed only for use in evaluation of the resident in the context of their participation in ACGME-accredited residency programs. The Milestones provide a framework for assessment of the development of the resident in key dimensions of the elements of physician competency in a specialty or subspecialty. They neither represent the entirety of the dimensions of the six domains of physician competency, nor are they designed to be relevant in any other context.

Osteopathic Neuromusculoskeletal Medicine Milestones

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Milestone Reporting

This document presents Milestones designed for programs to use in semi-annual review of resident performance and reporting to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME competencies organized in a developmental framework from less to more advanced. They are descriptors and targets for resident performance as a resident moves from entry into residency through graduation. In the initial years of implementation, the Review Committee will examine Milestone performance data for each program's residents as one element in the Next Accreditation System (NAS) to determine whether residents overall are progressing.

For each period, review and reporting will involve selecting milestone levels that best describe a resident's current performance and attributes. Milestones are arranged into numbered levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert in the subspecialty.

Selection of a level implies that the resident substantially demonstrates the milestones in that level, as well as those in lower levels (see the diagram on page v).

Level 1: The resident demonstrates milestones expected of an incoming resident.

Level 2: The resident is advancing and demonstrates additional milestones, but is not yet performing at a midresidency level.

- Level 3: The resident continues to advance and demonstrate additional milestones, consistently including the majority of milestones targeted for residency.
- Level 4: The resident has advanced so that he or she now substantially demonstrates the milestones targeted for residency. This level is designed as the graduation target.
- Level 5: The resident has advanced beyond performance targets set for residency and is demonstrating "aspirational" goals which might describe the performance of someone who has been in practice for several years. It is expected that only a few exceptional residents will reach this level.

Additional Notes

Level 4 is designed as the graduation *target* and *does not* represent a graduation *requirement*. Making decisions about readiness for graduation is the purview of the residency program director. Study of Milestone performance data will be required before the ACGME and its partners will be able to determine whether milestones in the first four levels appropriately represent the developmental framework, and whether Milestone data are of sufficient quality to be used for high-stakes decisions.

Examples are provided with some milestones. Please note that the examples are not the required element or outcome; they are provided as a way to share the intent of the element.

Some milestone descriptions include statements about performing independently. These activities must occur in conformity to the ACGME supervision guidelines, as well as institutional and program policies. For example, a resident who performs a procedure independently must, at a minimum, be supervised through oversight.

Answers to Frequently Asked Questions about Milestones are available on the Milestones web page.

The diagram below presents an example set of milestones for one sub-competency in the same format as the ACGME Report Worksheet. For each reporting period, a resident's performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that resident's performance in relation to those milestones.

Patient Care 2: Trigger Point Injection, Joint Aspiration and Injection				
Level 1	Level 2	Level 3	Level 4	Level 5
Inconsistently recognizes cases in which procedures are unwarranted or unsafe Limited understanding of the indications, processes, or potential risks of the procedure	Possesses insufficient technical skill for safe completion of common procedures with direct supervision Recognizes the ethical principles and need to obtain informed consent for procedures, but ineffectively obtains it Inattentive to patient safety and comfort when performing procedures	Possesses basic technical skill for the completion and interpretation of common procedures with indirect supervision Obtains and documents informed consent Inconsistently manages patient safety and comfort when performing procedures	Consistently demonstrates technical skill to successfully and safely perform procedure Effectively obtains and documents informed consent Maximizes patient comfort and safety when performing procedures	Demonstrates expertise to teach and supervise others in the performance of procedures Quantifies evidence for risk-benefit analysis while obtaining informed consent for complex procedures
			$R \Box \Box$	
Comments:			Not Ye	et Achieved level 1 💭
a level implies	ponse box in the middle of that milestones in that lev vels have been substantia	rel lev ally ha	lecting a response box on rels indicates that milestor ve been substantially dem me milestones in the high	nes in lower levels nonstrated as well as

Patient Care 1: Osteopathic Manipulative Techniques (OMT) (Direct and Indirect)				
Level 1	Level 2	Level 3	Level 4	Level 5
Performs basic osteopathic techniques for a variety of somatic dysfunctions under direct supervision Inconsistently describes indication and contraindications of OMT Performs osteopathic treatment of somatic dysfunction, based on findings of complete osteopathic structural examination, for most patients, with minimal supervision	Performs osteopathic treatment of somatic dysfunction for most patients, with direct supervision Consistently describes indication and contraindications of OMT Independently performs accurate and complete osteopathic treatment following detailed osteopathic structural examination; treatment includes advanced techniques for patients with acute and chronic conditions	Obtains and documents informed consent Attentive to patient comfort and safety when performing OMT Performs comprehensive osteopathic structural examination and correlates with patient presentation	Independently instructs others in the use of direct and indirect techniques in a variety of settings	Mentors others to become competent in the use of OMT Independently modifies and integrates multiple techniques in a variety of settings
Comments:			Not Ye	et Achieved level 1

_evel 1	Level 2	Level 3	Level 4	Level 5
nconsistently ecognizes cases in vhich procedures are unwarranted or	Possesses insufficient technical skill for safe completion of common procedures with direct	Possesses basic technical skill for the completion and interpretation of	Consistently demonstrates technical skill to successfully and safely perform	Demonstrates expertise to teach and supervise others in the performance of
insafe Demonstrates a	supervision Recognizes the ethical	common procedures with indirect supervision	procedures Effectively obtains and	procedures Quantifies evidence for
mited Inderstanding of the Indications,	principles and need to obtain informed consent for procedures, but	Obtains and documents	documents informed consent	risk-benefit analysis while obtaining informed consent for
processes, or potential risks of the	ineffectively obtains it	Inconsistently	Maximizes patient comfort and safety when	complex procedures
procedure	Is inattentive to patient safety and comfort when performing procedures	manages patient safety and comfort when performing procedures	performing procedures	

_evel 1	Level 2	Level 3	Level 4	Level 5
nconsistently ncorporates osteopathic principles to promote nealth and wellness n patients with common conditions nconsistently integrates nistory, examination, diagnostic testing, and nedication management nto osteopathic patient care plan nconsistently performs osteopathic structural examination and diagnoses somatic dysfunction appropriate o patient condition	Incorporates osteopathic principles to promote health and wellness in patients with acute and chronic conditions Integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan, with supervision Performs osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition, with supervision	Incorporates osteopathic principles to promote health and wellness in patients with complex conditions Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition	Mentors others to incorporate osteopathic principles in patient care Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan in complex patients Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients	Role models and teaches the effective integration of osteopathic principles to optimize patient health Serves as role model and teaches the effective use of osteopathic focused history, examination, diagnostic testing, and medication management to minimize the need for further diagnostic testing or intervention Role models and teaches accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients

Patient Care 4: Providing and Requesting Consultation				
Level 1	Level 2	Level 3	Level 4	Level 5
Is unable to address questions or concerns of others when acting as a consultant or utilizing consultant services Is unable to recognize the need to utilize consultant services when appropriate for patient care	Inconsistently manages patients as a consultant to other physicians/health care teams Inconsistently applies risk assessment principles to patients while acting as a consultant Inconsistently formulates a clinical question for a consultant to address	Provides consultation services for patients with clinical problems requiring basic risk assessment	Provides consultation services for patients with basic and complex clinical problems requiring detailed risk assessment Appropriately integrates recommendations from other consultants in order to effectively manage patient care	Provides consultation services for patients with very complex clinical problems requiring extensive risk assessment Models management of discordant recommendations from multiple consultants
Comments:				
			Not Ye	et Achieved level 1

Medical Knowledge 1: Po	ossesses Clinical Knowle	edge (Anatomy, Physiolog	y, Pharmacology, Assess	sment, and Treatment)
Level 1	Level 2	Level 3	Level 4	Level 5
Lacks the scientific, socioeconomic, or behavioral knowledge required to provide care for common conditions	Possesses insufficient scientific, socioeconomic, and behavioral knowledge required to provide care for common conditions	Possesses the scientific, socioeconomic, and behavioral knowledge required to provide care and prevention for common conditions	Possesses the scientific, socioeconomic, and behavioral knowledge required to provide comprehensive care, prevention, and maintenance of health for complex conditions	Possesses the scientific, socioeconomic, and behavioral knowledge required to successfully diagnose, prevent, and treat complex, uncommon, and ambiguous conditions
Comments:			Not Yet	Achieved Level 1

somatic reflex patterns				
Level 1	Level 2	Level 3	Level 4	Level 5
Inconsistently describes the interrelationship of structure and function through osteopathic structural findings Inconsistently forms an appropriate osteopathic treatment plan based on the patient's history and physical exam findings	Consistently describes the interrelationship of structure and function through osteopathic structural findings Forms an osteopathic treatment plan based on the patient's history and physical exam findings, with guidance	Consistently describes the interrelationship of structure and function through osteopathic structural findings as it relates to the patient's systemic disease Consistently forms an appropriate osteopathic treatment plan based on the patient's history and physical exam findings	Demonstrates knowledge of the effects of health and illness on the whole patient – body, mind, and spirit Develops a long range treatment plan to support the health and well-being of the patient	the osteopathic profession
Comments:			Not Yet A	Achieved level 1

Medical Knowledge 2: Manifestation of systemic disease through neuromusculoskelatal system and related visceral and

Systems-Based Pract	Systems-Based Practice 1: Patient Safety and Advocacy			
Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes that medical errors affect patient health and safety, and that their occurrence varies across settings and between providers Recognizes that effective team- based care plays a role in patient safety Recognizes the safety and effectiveness of osteopathic treatment as part of the care plan for all medical conditions	Identifies medical errors when they occur, including those that do not have adverse outcomes Describes the mechanisms that cause medical errors Follows protocols to promote patient safety and prevent medical errors Participates in effective and safe hand-offs and transitions of care Identifies barriers to quality osteopathic care	Uses current methods of analysis to identify individual and system causes of medical errors common to osteopathic neuromusculoskeletal medicine Develops individual improvement plan and participates in system improvement plans that promote patient safety and prevent medical errors Assists patients in obtaining quality osteopathic care	Consistently engages in self- directed and practice improvement activities that identify and address medical errors and patient safety in daily practice Fosters adherence to patient care protocols amongst team members that enhance patient safety and prevent medical errors Identifies and remedies system deficiencies related to osteopathic care	Role models self- directed and system improvement activities that continuously anticipate, identify, and prevent medical errors to improve patient safety in all practice settings, including the development, use, and promotion of patient care protocols and other tools Demonstrates leadership in organized advocacy efforts for the osteopathic care
Comments:			Not Ye	t Achieved Level 1

Systems-Based Practice 2: Practice Management and Economics				
Level 1	Level 2	Level 3	Level 4	Level 5
Has basic knowledge of the advantages and disadvantages of different payment systems Demonstrates knowledge of the practice of osteopathic medicine in the health care delivery system Demonstrates knowledge of required medical documentation related to the patient encounter, including somatic dysfunction	Has basic knowledge of the economics of inpatient vs. outpatient care, and the impact of quality improvement incentives Develops understanding of cost of various procedures and treatments Provides cost- effective osteopathic patient care within a health care delivery system, with supervision Documents patient encounters, including somatic dysfunction and codes OMT, with supervision	Has basic practical knowledge of the pre-certification process and structured computer-based order entry systems Independently provides cost- effective osteopathic patient care within a health care delivery system Independently documents patient encounters, including somatic dysfunction and coding	Has advanced practical knowledge of the pre- certification process and structured computer-based order entry systems Coordinates cost- effective osteopathic patient care within the health care delivery system Accurately determines the level of complexity of the visit in relation to a patient encounter, including somatic dysfunction	Develops optimal, cost-effective osteopathic patient care within the health care delivery system Role models and promotes efficient and cost-effective use of resources in the care of patients in all settings
Comments:				
			Not Yet	Achieved Level 1

Practice-based Learning and Improvement 1: Learning and Feedback				
Level 1	Level 2	Level 3	Level 4	Level 5
Acknowledges gaps in osteopathic knowledge and expertise	Incorporates feedback to begin developing a learning plan	Develops an ongoing self-directed learning plan based upon clinical experience and	Modifies self-directed learning plan based upon clinical experience and	Independently pursues continuous learning, including new and emerging
Describes evidence- based medicine principles and how these relate to osteopathic patient care	Performs self-evaluation of osteopathic practice patterns	feedback Performs self- evaluation of osteopathic practice patterns and practice- based improvement activities	feedback Performs self- evaluation of osteopathic practice patterns and practice- based improvement activities using systematic methodology	osteopathic knowledge and skills
Comments:			Not Ye	et Achieved level 1

_evel 1	Level 2	Level 3	Level 4	Level 5
Performs osteopathic neuromusculoskeletal medicine-focused literature review Describes basic concepts in clinical epidemiology, biostatistics, and clinical reasoning Categorizes the design of a research study	Incorporates osteopathic neuromusculoskeletal medicine literature into rounds, case presentations, or a didactic session Identifies pros and cons of various study designs, associated types of bias, and patient-centered outcomes Formulates a searchable question from a clinical question Evaluates evidence- based point-of-care resources	Prepares and presents osteopathic neuromusculoskeletal medicine-focused scholarly activity for leading a didactic session Applies a set of critical appraisal criteria to different types of research, including synopses of original research findings, systematic reviews and meta-analyses, and clinical practice guidelines Critically evaluates information from others, including colleagues, experts, and pharmaceutical representatives, as well as patient- delivered information	 Prepares and presents osteopathic neuromusculoskeletal medicine-focused scholarly activity at local, regional, or national meeting(s) Designs a study or research project in the field of osteopathic neuromusculoskeletal medicine Incorporates principles of evidence-based care and information mastery into clinical practice 	Performs and publishes peer- reviewed research related to osteopathic principles Independently teaches and assesses evidence-based medicine and information mastery techniques
Comments:				chieved Level 1

Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes own	Demonstrates non-	Demonstrates	Mentors others in	Develops policies and
pias in issues of	discriminatory	compassionate	utilizing osteopathic	procedures regarding
culture, religion,	behavior in all	practice	principles and	compassionate
age, gender, sexual	interactions,	of osteopathic	appropriate use of	practice
prientation, and	including with	medicine, even in the	touch in all patient care	of osteopathic
mental and physical	diverse and	context of	settings	medicine
disabilities	vulnerable populations	disagreement		
		with patient beliefs	Mentors others in	Demonstrates
dentifies the effect	Recognizes a patient's		managing difficult	leadership in the
of osteopathic	unique perception of	Incorporates	osteopathic patient-	advancement of
principles and	touch and how this	recognition of patients'	physician relationships	patient-centered
practice, including	influences osteopathic	mind, body, and	while ensuring patient	osteopathic health
ouch, on the	patient care	spiritual characteristics	care needs are met	care
patient-physician		into osteopathic patient		
elationship	Identifies the risk of	care	Identifies opportunities	Develops policies and
	boundary violations in		to participate in	procedures regarding
Recognizes the	the osteopathic	Manages difficult	community education	the management of
need within the	patient-physician	osteopathic patient-	of the unique aspects	difficult osteopathic
community for	relationship	physician relationships	of osteopathic patient	patient-physician
education about	-	while ensuring patient	care	relationships while
osteopathic patient		care needs are met		ensuring patient care
care				needs are met
Comments:				
			Criti	cal Deficiencies

Professionalism 2: Professional Conduct and Accountability						
Level 1	Level 2	Level 3	Level 4	Level 5		
Presents him or herself in a respectful and professional manner	Consistently recognizes limits of knowledge and asks for assistance	Consistently maintains professional behavior with minimal guidance	Maintains appropriate professional behavior without external guidance	Models professional conduct placing the needs of each patient above self-interest		
Attends to responsibilities and completes duties as required	Has insight into his or her own behavior and likely triggers for professionalism lapses,	Recognizes professionalism lapses in self and others	Exhibits self-awareness, self-management, social awareness, and relationship management	Helps implement organizational policies to sustain medicine as a		
Maintains patient confidentiality	and is able to use this information to be professional	Reports professionalism lapses using appropriate reporting procedures	Negotiates professional lapses of the medical	profession Advocates nationally for		
Documents and reports clinical and administrative information truthfully	Completes all clinical and administrative tasks promptly		team through appropriate channels	the osteopathic profession		
	Identifies appropriate channels to report unprofessional behavior					
Comments: Critical Deficiencies						

Professionalism 3: Maintains emotional, physical, and mental health; and pursues continual personal and professional growth Level 5 Level 1 Level 2 Level 3 Level 4 Applies basic principles Actively seeks feedback Optimizes professional **Demonstrates** Appropriately manages of physician wellness and provides situations in which responsibilities through awareness of the and balance in life to constructive feedback to maintaining personal the application of importance of maintenance of adequately manage others emotional, physical, and principles of physician emotional, physical, and personal emotional, mental health are wellness to the practice physical, and mental Recognizes signs of challenged mental health of medicine health impairment in self and Recognizes fatigue, team members, and Maintains competency sleep deprivation, and Balances physician wellresponds appropriately appropriate to scope of impairment being with patient care practice needs Comments: Critical Deficiencies

Interpersonal and Communication Skills 1: Develops Meaningful, Therapeutic Relationships with Patients and Families

Level 1	Level 2	Level 3	Level 4	Level 5		
Recognizes that	Creates a non-	Effectively builds	Connects with patients	Role models effective,		
effective	judgmental, safe	rapport with a growing	and families in a	continuous, personal		
relationships are	environment to actively	panel of continuity	continuous manner	relationships that		
important to quality	engage patients and	patients and families	that fosters trust,	optimize the well-being		
care	families to share		respect, and	of the patient and		
	information and their	Consistently	understanding,	family		
Inconsistently	perspectives	describes	including the ability to			
describes		osteopathic	manage conflict	Role models and		
osteopathic	Consistently	principles and		teaches patient		
principles and	describes	treatment to patients	Respects patients'	engagement in shared		
treatment to patients	osteopathic	and families in all	autonomy in their	decision making in		
and families	principles and	settings	health care decisions	regards to osteopathic		
	treatment to patients		and clarifies patients'	care plan		
Develops a positive	and families in the	Utilizes appropriate	goals to provide care			
relationship with patients	outpatient setting	verbal and non-verbal	consistent with their			
_		skills when	values			
Demonstrates	Participates in shared	communicating with				
knowledge of cultural	decision making in	patients and families	Uses patient-centered			
competency and its	regards to osteopathic		communication to			
impact on	care plan, utilizing	Engages patient in	manage conflict in			
communication	easy to understand	shared decision	complex situations			
	language	making in regards to				
		the osteopathic care				
	Incorporates cultural	plan				
	competency into					
	customized					
	communication					
Comments:						
Not Yet Achieved level 1						

Interpersonal and Communication Skills 2: Interprofessional Communications					
Level 1	Level 2	Level 3	Level 4	Level 5	
Understands the importance of the health care team and shows respect for the skills and contributions of others Describes osteopathic principles to interprofessional collaborative team members	Demonstrates consultative exchange that includes clear expectations and timely, appropriate exchange of information Presents and documents patient data in a clear, concise, and organized manner Describes osteopathic principles and treatment to interprofessional collaborative team members	 Effectively uses Electronic Health Record (EHR) to exchange information with the health care team Communicates collaboratively with the health care team by listening attentively, sharing information, and giving and receiving constructive feedback Utilizes appropriate verbal and non-verbal skills (including touch) when communicating with interprofessional collaborative team members Demonstrates osteopathic treatment to interprofessional collaborative team 	Sustains collaborative working relationships during complex and challenging situations, including transitions of care Effectively negotiates and manages conflict among members of the health care team in the best interest of the patient Utilizes verbal, non- verbal and written communication and consistently acts to facilitate collaboration with team members to enhance patient care Utilizes patient-centered communication to manage conflict between specialties and systems of care	Role models effective collaboration with other providers that emphasizes efficient patient-centered care Role models and teaches patient engagement in shared decision making in regards to osteopathic care plan	
		members			
Comments: Not Yet Achieved level 1					