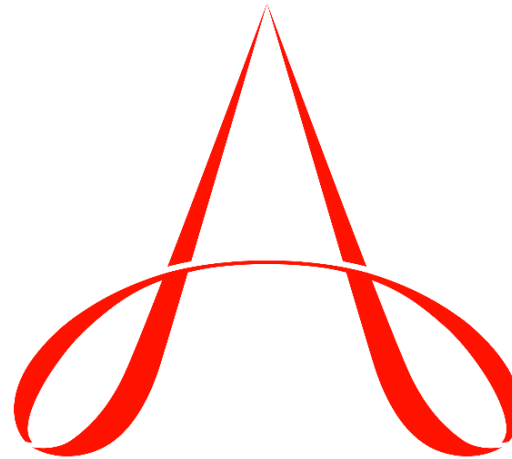# Osteopathic Neuromusculoskeletal Medicine Milestones

The Accreditation Council for Graduate Medical Education

ACGME

Implementation: July 2022
Second Revision: January 2022
First Revision: December 2015

Osteopathic Neuromusculoskeletal Medicine Milestones

The Milestones are designed only for use in evaluation of residents in the context of their participation in ACGME-accredited residency programs. The Milestones provide a framework for the assessment of the development of the resident in key dimensions of the elements of physician competence 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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The ACGME would like to thank the following organizations for their continued support in the development of the Milestones:

American Osteopathic Association

Review Committee for Osteopathic Neuromusculoskeletal Medicine

Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of resident performance, and then report to the ACGME. Milestones are knowledge, skills, attitudes, and other attributes for each of the ACGME Competencies organized in a developmental framework. The narrative descriptions are targets for resident performance throughout their educational program.

Milestones are arranged into levels. Tracking from Level 1 to Level 5 is synonymous with moving from novice to expert resident in the specialty or subspecialty. For each reporting period, the Clinical Competency Committee will review the completed evaluations to select the milestone levels that best describe each learner's current performance, abilities, and attributes for each subcompetency.

These levels *do not* correspond with post-graduate year of education. Depending on previous experience, a junior resident may achieve higher levels early in his/her educational program just as a senior resident may be at a lower level later in his/her educational program. There is no predetermined timing for a resident to attain any particular level. Residents may also regress in achievement of their milestones. This may happen for many reasons, such as over scoring in a previous review, a disjointed experience in a particular procedure, or a significant act by the resident.

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

Additional Notes

Level 4 is designed as a graduation *goal* but *does not* represent a graduation *requirement*. Making decisions about readiness for graduation and unsupervised practice is the purview of the program director. Furthermore, Milestones 2.0 include revisions and changes that preclude using Milestones as a sole assessment in high-stakes decisions (i.e., determination of eligibility for certification or credentialing). Level 5 is designed to represent an expert resident whose achievements in a subcompetency are greater than the expectation. Milestones are primarily designed for formative, developmental purposes to support continuous quality improvement for individual learners, education programs, and the specialty. The ACGME and its partners will continue to evaluate and perform research on the Milestones to assess their impact and value.

Examples are provided for some milestones within this document. Please note: 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 ACGME supervision guidelines as described in the Program Requirements, as well as to institutional and program policies. For example, a resident who performs a procedure independently must, at a minimum, be supervised through oversight.

A Supplemental Guide is also available to provide the intent of each subcompetency, examples for each level, assessment methods or tools, and other available resources. The Supplemental Guide, like examples contained within the Milestones, is designed only to assist the program director and Clinical Competency Committee, and is not meant to demonstrate any required element or outcome.

Supplemental Guides and other resources are available on the Milestones page of each specialty section of the ACGME website. On www.acgme.org, choose the applicable specialty under the "Specialties" menu, then select the "Milestones" link in the lower navigation bar.

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 4: Diagnostic Screening, Testing, and Interpretation				
Level 1	Level 2	Level 3	Level 4	Level 5
Explains the rationale, risks, and benefits for common diagnostic testing	Explains the rationale, risks, and benefits for complex diagnostic testing	Integrates value and test characteristics of various diagnostic strategies in patients with common diseases	Integrates value and test characteristics of various diagnostic strategies in patients with comorbid conditions or multisystem disease	Demonstrates a nuanced understanding of emerging diagnostic tests and procedures
Interprets results of common diagnostic tests	Interprets complex diagnostic data	Integrates complex diagnostic data accurately to reach high-probability diagnoses	Anticipates and accounts for limitations when interpreting diagnostic data	

Comments:

Not Yet Completed Level 1
Not Yet Assessable

Selecting a response box in the middle of a level implies that milestones in that level and in lower levels have been substantially demonstrated.

Selecting a response box on the line in between levels indicates that milestones in lower levels have been substantially demonstrated as well as **some** milestones in the higher level(s).

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

Level 1	Level 2	Level 3	Level 4	Level 5
Integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan, with direct supervision and guidance	Integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan, with indirect supervision	Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan	Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan in complex patients	Role models the effective use of osteopathic-focused history, examination, diagnostic testing, and medication management to minimize the need for further diagnostic testing or intervention
Performs osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition, with direct supervision and guidance	Performs osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition, with indirect supervision	Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition	Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients	Role models the complete osteopathic structural examination and diagnoses somatic dysfunction in patient care
Incorporates osteopathic principles to promote health and wellness in patients with acute and chronic conditions, with direct supervision	Incorporates osteopathic principles to promote health and wellness in patients with acute and chronic conditions, with indirect supervision	Incorporates osteopathic principles to promote health and wellness in patients with complex conditions, with indirect supervision	Independently incorporates osteopathic principles to promote health and wellness in patients with complex conditions	Role models the integration of osteopathic principles to optimize patient health

Comments:

Not Yet Completed Level 1

Not Yet Assessable

Patient Care 2: Osteopathic Manipulative Treatment (OMT) (Direct)				
Level 1	Level 2	Level 3	Level 4	Level 5
Performs direct OMT for identified somatic dysfunction, with direct supervision and guidance	Performs direct OMT for identified somatic dysfunction, with indirect supervision	Independently and effectively performs direct OMT for identified somatic dysfunction in routine patient presentations	Independently and effectively performs direct OMT for identified somatic dysfunction in complex patient presentations	Mentors others to become competent in performing direct OMT for identified somatic dysfunction in complex patient presentations
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Comments:

Not Yet Completed Level 1 ☐
Not Yet Assessable ☐

Patient Care 3: Osteopathic Manipulative Treatments (OMT) (Indirect)

Level 1	Level 2	Level 3	Level 4	Level 5
Performs indirect OMT for identified somatic dysfunction, with direct supervision and guidance	Performs indirect OMT for identified somatic dysfunction, with indirect supervision	Independently and effectively performs indirect OMT for identified somatic dysfunction in routine patient presentations	Independently and effectively performs indirect OMT for identified somatic dysfunction in complex patient presentations	Mentors others to become competent in performing indirect OMT for identified somatic dysfunction in complex patient presentations
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Comments:

Not Yet Completed Level 1   ☐
Not Yet Assessable   ☐

Patient Care 4: Diagnostic Screening, Testing, and Interpretation

Level 1	Level 2	Level 3	Level 4	Level 5
Explains the rationale, risks, and benefits for common diagnostic testing	Explains the rationale, risks, and benefits for complex diagnostic testing	Integrates value and test characteristics of various diagnostic strategies in patients with common diseases	Integrates value and test characteristics of various diagnostic strategies in patients with comorbid conditions or multisystem disease	Demonstrates a nuanced understanding of emerging diagnostic tests and procedures
Interprets results of common diagnostic tests	Interprets complex diagnostic data	Integrates complex diagnostic data accurately to reach high-probability diagnoses	Anticipates and accounts for limitations when interpreting diagnostic data	

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Comments:

Not Yet Completed Level 1   ☐
Not Yet Assessable   ☐

Patient Care 5: Management of Procedural Care (e.g., Trigger Point Injections, Joint Aspirations, Joint Injections)				
Level 1	Level 2	Level 3	Level 4	Level 5
Identifies the procedures that osteopathic neuromusculoskeletal medicine physicians perform	Identifies patients for whom a procedure is indicated and who is equipped to perform it	Demonstrates confidence and motor skills while performing procedures, including addressing complications	Identifies and acquires the skills to independently perform procedures in the current practice environment	Identifies procedures needed in future practice and pursues supplemental training to independently perform
Recognizes osteopathic neuromusculoskeletal medicine physicians' role in referring patients for appropriate procedural care	Counsels patients about expectations for common procedures performed by osteopathic neuromusculoskeletal medicine physicians and consultants	Performs independent risk and appropriateness assessment based on patient-centered priorities for procedures performed by consultants	Collaborates with procedural colleagues to match patients with appropriate procedures, including declining support for procedures that are not in the patient's best interest	
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Comments:

Not Yet Completed Level 1   ☐
Not Yet Assessable   ☐

Medical Knowledge 1: Applied Foundational Sciences				
Level 1	Level 2	Level 3	Level 4	Level 5
Explains the scientific knowledge (e.g., physiologic, pathologic, socioeconomic, and behavioral) for normal function and common conditions	Explains the scientific knowledge for complex conditions	Integrates scientific knowledge into an osteopathic treatment plan while respecting the patient's comorbid conditions	Integrates scientific knowledge into an osteopathic treatment plan while respecting the patient's complex comorbid conditions	Demonstrates a nuanced understanding of the scientific knowledge related to uncommon, atypical, or complex conditions
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Comments:

Not Yet Completed Level 1   ☐
Not Yet Assessable   ☐

Medical Knowledge 2: Manifestation of Systemic Disease through Neuromusculoskeletal System

Level 1	Level 2	Level 3	Level 4	Level 5
Describes the basic interrelationship of structure and function through osteopathic structural findings	Consistently describes the interrelationship of structure and function through osteopathic structural findings	Consistently describes the complex interrelationship of structure and function through osteopathic structural findings as relates to the patient's systemic disease	Demonstrates knowledge of the effects of health and illness on the whole patient – body, mind, and spirit	Teaches the osteopathic tenets to the multidisciplinary team
Forms an osteopathic treatment plan based on the patient's history and physical exam findings, with guidance	Forms an appropriate osteopathic treatment plan based on the patient's history and physical exam findings	Consistently forms an appropriate osteopathic treatment plan based on the patient's complex history and physical exam findings	Develops a long-range treatment plan to support the health and well-being of the patient	Is a leader in the development and dissemination of osteopathic knowledge

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Comments:

Not Yet Completed Level 1   ☐
Not Yet Assessable   ☐

Systems-Based Practice 1: Patient Safety and Quality Improvement

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of common patient safety events	Identifies system factors that lead to patient safety events	Participates in analysis of patient safety events (simulated or actual)	Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)	Actively engages teams and processes to modify systems to prevent patient safety events
Demonstrates knowledge of how to report patient safety events	Reports patient safety events through institutional reporting systems (simulated or actual)	Participates in disclosure of patient safety events to patients and families (simulated or actual)	Discloses patient safety events to patients and families (simulated or actual)	Role models or mentors others in the disclosure of patient safety events
Demonstrates knowledge of basic quality improvement methodologies and metrics	Describes local quality improvement initiatives (e.g., community vaccination rate, infection rate, smoking cessation)	Participates in local quality improvement initiatives	Demonstrates skills required to identify, develop, implement, and analyze a quality improvement project	Designs, implements, and assesses quality improvement initiatives at the institutional or community level
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Comments:

Not Yet Completed Level 1 ☐

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

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination	Coordinates care of patients in routine clinical situations effectively using the roles of the interprofessional team members	Coordinates care of patients in complex clinical situations effectively using the roles of interprofessional team members	Role models effective coordination of patient-centered care among different disciplines and specialties	Analyzes the process of care coordination and leads in the design and implementation of improvements
Identifies key elements for safe and effective transitions of care and hand-offs	Performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Role models and advocates for safe and effective transitions of care/hand-offs within and across health care delivery systems	Improves quality of transitions of care within and across health care delivery systems to optimize patient outcomes
Demonstrates knowledge of population and community health needs and disparities	Identifies specific population and community health needs and inequities in the local population	Uses local resources effectively to meet the needs of a patient population and community	Participates in changing and adapting practice to provide for the needs of specific populations	Leads innovations and advocates for populations and communities with health care inequities

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Comments:

Not Yet Completed Level 1   ☐

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

Level 1	Level 2	Level 3	Level 4	Level 5
Identifies key components of the complex health care system (e.g., hospital, skilled nursing facility, finance, personnel, technology)	Describes how components of a complex health care system are interrelated, and how this impacts patient care	Discusses how individual practice affects the broader system (e.g., length of stay, readmission rates, clinical efficiency)	Manages various components of the complex health care system to provide efficient and effective patient care and transition of care	Advocates for or leads systems change that enhances high-value, efficient, and effective patient care
States factors impacting the costs of osteopathic neuromusculoskeletal medicine care	Documents osteopathic neuromusculoskeletal medicine detail to facilitate accurate billing and reimbursement	Explains the impact of documentation on billing and reimbursement	Practices and advocates for cost-effective patient care	Engages in external activities related to advocacy for cost-effective care
Identifies basic knowledge domains for effective transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)	Demonstrates use of information technology required for medical practice (e.g., electronic health record, documentation required for billing and coding)	Describes core administrative knowledge needed for transition to practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)	Analyzes individual practice patterns and prepares for professional requirements to enter practice	Role models effective practice and practice management

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Comments:

Not Yet Completed Level 1　　☐

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

Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates how to access, categorize, and analyze clinical evidence Understands how to perform a focused literature review	Articulates clinical questions and elicits patient preferences and values to guide evidence-based care Locates and evaluates evidence-based resources to develop an OMT plan	Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients Critically evaluates and develops the OMT plan, integrating evidence-based osteopathic care, to the care of complex patients	Critically appraises and applies evidence even in the face of uncertainty and conflicting evidence to guide osteopathic care, tailored to the individual patient and that patient's neuromusculoskeletal complaints	Coaches others to critically appraise and apply evidence for complex patients Collaboratively researches, develops, and disseminates evidence-based decision-making processes to promote best practices in osteopathic neuromusculoskeletal medicine

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Comments:

Not Yet Completed Level 1　☐

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

Level 1	Level 2	Level 3	Level 4	Level 5
Accepts responsibility for personal and professional development by establishing goals	Demonstrates openness to performance data (feedback and other input) to improve on established goals	Intermittently seeks additional performance data with adaptability and humility	Consistently seeks performance data with adaptability and humility	Leads performance review processes
Identifies the factors that contribute to gap(s) between expectations and actual performance	Self-reflects and analyzes factors that contribute to gap(s) between expectations and actual performance	Self-reflects, analyzes, and institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance	Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance	Coaches others on reflective practice for both treatment plans and OMT skill level
Acknowledges there are always opportunities for self-improvement in both character and skill level	Designs and implements a learning plan, with prompting	Independently creates and implements a learning plan	Uses performance data to measure the effectiveness of the learning plan, and, when necessary, improves it	Facilitates the design and implementing learning plans for others

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Comments:

Not Yet Completed Level 1   ☐

Professionalism 1: Professional Behavior and Ethical Principles

Level 1	Level 2	Level 3	Level 4	Level 5
Describes professional behavior and potential triggers for personal lapses in professionalism	Demonstrates self-reflective behaviors and professionalism in routine situations	Demonstrates professional behavior in complex or stressful situations	Recognizes potential situations that may trigger professionalism lapses and intervenes to prevent lapses in oneself and others	Mentors others in professional behavior
Takes responsibility for personal lapses in professionalism	Describes when and how to report professionalism lapses in oneself and others	Recognizes need to seek help in managing and resolving complex professionalism lapses	Recognizes and uses appropriate resources for managing and resolving dilemmas as needed	Identifies and addresses system-level factors that induce or exacerbate ethical problems and professionalism lapses or impede their resolution
Demonstrates knowledge of ethical principles	Analyzes straightforward situations using ethical principles	Analyzes complex situations using ethical principles		

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Comments:

Not Yet Completed Level 1 ☐

Professionalism 2: Accountability/Conscientiousness

Level 1	Level 2	Level 3	Level 4	Level 5
Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future	Performs tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations	Performs tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations	Recognizes and addresses situations that may impact others' ability to complete tasks and responsibilities in a timely manner	Takes ownership of systemic processes and outcomes
Responds promptly to requests or reminders to complete tasks and responsibilities	Recognizes situations that may impact one's own ability to complete tasks and responsibilities in a timely manner	Proactively implements strategies to ensure that the needs of patients, teams, and systems are met		

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Comments:

Not Yet Completed Level 1   ☐

Professionalism 3: Self-Awareness and Help-Seeking Behaviors

Level 1	Level 2	Level 3	Level 4	Level 5
Recognizes status of personal and professional well-being, with assistance	Independently recognizes status of personal and professional well-being	Proposes a plan to optimize personal and professional well-being, with guidance	Independently develops a plan to optimize personal and professional well-being	Addresses system barriers to maintain personal and professional well-being
Recognizes one's own limits in knowledge/skills, with assistance	Independently recognizes limits in the knowledge/skills of oneself and the team and demonstrates appropriate help-seeking behaviors	Proposes a plan to remediate or improve limits in the knowledge/skills of oneself or the team, with guidance	Independently develops a plan to remediate or improve limits in the knowledge/skills of oneself or the team	Mentors others to enhance knowledge/skills of oneself or the team

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Comments:

Not Yet Completed Level 1   ☐

This sub-competency is not intended to evaluate a resident's well-being. Rather, the intent is to ensure that each resident has the fundamental knowledge of factors that affect well-being, the mechanisms by which those factors affect well-being, and available resources and tools to improve well-being.

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

Level 1	Level 2	Level 3	Level 4	Level 5
Uses language and non-verbal behavior to demonstrate respect and establish rapport while communicating one's own role within the health care system	Establishes a therapeutic relationship in straightforward encounters using active listening and clear language	Establishes a therapeutic relationship in challenging patient encounters	Maintains therapeutic relationships, with attention to patient/patient's family's concerns and context, regardless of complexity	Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships
Recognizes easily-identified barriers to effective communication (e.g., language, disability)	Identifies complex barriers to effective communication (e.g., health literacy, cultural differences)	When prompted, reflects on personal biases while attempting to minimize communication barriers	Independently recognizes personal biases while attempting to proactively minimize communication barriers	Leads or develops initiatives to identify and address bias
Identifies the need to individualize communication strategies	Organizes and initiates communication, sets an agenda, clarifies expectations, and verifies understanding	Sensitively and compassionately delivers medical information, managing patient/patient's family's values, goals, preferences, uncertainty, and conflict	Independently uses shared decision making to align patient/patient's family's values, goals, and preferences with treatment options to make a personalized care plan	Role models shared decision making in communicating with the patient/patient's family, including in situations with a high degree of uncertainty/conflict

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Comments:

Not Yet Completed Level 1 　☐

Interpersonal and Communication Skills 2: Interprofessional and Team Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
Respectfully requests a consultation, with supervision	Clarifies the goals of the consultation request	Ensures understanding of consultant recommendations	Integrates recommendations from consultant into the treatment plan	Leads the health care team in the provision of effective consultative services across the spectrum of disease complexity and acuity
Respectfully responds to a consultation request and conveys recommendations, with supervision	Clearly conveys recommendations following consultations	Seeks and integrates input from different members of the health care team and provides recommendations to the primary team in a clear and timely manner	Provides comprehensive and prioritized recommendations, including assessment and rationale, to all necessary health care team members	Facilitates regular health care team-based feedback in complex situations
Uses language that values all members of the health care team	Communicates information effectively with all health care team members	Communicates concerns and provides feedback to peers and learners	Communicates feedback and constructive criticism to supervising individuals	
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Comments:
Not Yet Completed Level 1　☐

Interpersonal and Communication Skills 3: Communication within Health Care Systems

Level 1	Level 2	Level 3	Level 4	Level 5
Records information in the patient record in an accurate and timely manner	Demonstrates organized medical management reasoning through notes in the patient record	Uses the patient record to communicate updated and concise information in an organized format	Demonstrates efficiency in documenting patient encounters and updating record	Optimizes and improves functionality of the electronic health record within the institutional system
Learns institutional policy and safeguards patient personal health information	Appropriately uses documentation shortcuts; records required data in formats and timeframes specified by institutional policy	Appropriately selects direct (e.g., telephone, in-person) and indirect (e.g., progress notes, text messages) forms of communication based on context	Manages the volume and extent of written and verbal communication required for practice	Guides departmental or institutional communication around policies and procedures
Communicates through appropriate channels as required by institutional policy (e.g., patient safety reports, cell phone/pager use)	Respectfully communicates concerns about the system	Uses appropriate channels to offer clear and constructive suggestions for system improvement while acknowledging system limitations	Initiates difficult conversations with appropriate stakeholders to improve the system	Facilitates dialogue regarding systems issues among larger community stakeholders (residency institution, health care system, field)

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Comments:

Not Yet Completed Level 1   ☐