Neuromuscular Medicine Milestones

The Milestones are designed only for use in evaluation of fellows in the context of their participation in ACGME-accredited fellowship programs. The Milestones provide a framework for the assessment of the development of the fellow 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.
Neuromuscular Medicine Milestones

Work Group

Miguel Chuquilin, MD         Laurie Gutmann, MD
Daniel DiCapua, MD          Nasheed Jamal, MD
Christopher Doughty, MD    Hani Kushlaf, MD
Laura Edgar, EdD, CAE      Janice Massey, MD
  Karissa Gable, MD          Lawrence Robison, MD
Christopher Geiger, DO     Komal Sawlani, MD

The ACGME would like to thank the following organizations for their continued support in the development of the Milestones:

American Board of Physical Medicine and Rehabilitation
American Board of Psychiatry and Neurology
Review Committee for Neurology
Review Committee for Physical Medicine and Rehabilitation
Understanding Milestone Levels and Reporting

This document presents the Milestones, which programs use in a semi-annual review of fellow 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 fellow 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 fellow 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 fellow may achieve higher levels early in his/her educational program just as a senior fellow may be at a lower level later in his/her educational program. There is no predetermined timing for a fellow to attain any particular level. Fellows 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 fellow.

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

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.

Additional resources are available in the Milestones section of the ACGME website. Follow the links under “What We Do” at www.acgme.org.
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 fellow’s performance on the milestones for each sub-competency will be indicated by selecting the level of milestones that best describes that fellow’s performance in relation to those milestones.

<table>
<thead>
<tr>
<th>Systems-Based Practice 1: Patient Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Demonstrates knowledge of common patient safety events</td>
</tr>
<tr>
<td>Demonstrates knowledge of how to report patient safety events</td>
</tr>
</tbody>
</table>

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).
<table>
<thead>
<tr>
<th>Patient Care 1: History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Obtains a relevant and organized history that identifies a neuromuscular condition, including review of medical records and family history</td>
</tr>
</tbody>
</table>

**Comments:**

Not Yet Completed Level 1
Not Yet Assessable
## Patient Care 2: Neuromuscular Examination

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
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</thead>
<tbody>
<tr>
<td>Performs a relevant general, neurologic, and neuromuscular exam</td>
<td>Performs a relevant general, neurologic, and neuromuscular exam, accurately incorporating additional appropriate maneuvers</td>
<td>Consistently performs an examination sufficient to evaluate and narrow the diagnostic evaluation for common neuromuscular disorders</td>
<td>Consistently performs a nuanced examination that identifies subtle findings and patterns sufficient to evaluate and narrow the diagnostic evaluation for uncommon neuromuscular disorders</td>
<td>Serves as a role model to other learners for performing an examination regarding neuromuscular diagnoses and management</td>
</tr>
</tbody>
</table>

**Comments:**

Not Yet Completed Level 1

Not Yet Assessable
## Patient Care 3: Management and Treatment

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies treatment options for neuromuscular disorders</td>
<td>Discusses risks and benefits and monitoring plan of treatment options with patients and patients' families</td>
<td>Monitors treatment, and recognizes and manages complications of immunomodulating/immunosuppressive and genetic therapies</td>
<td>Considers clinical trials for patient management</td>
<td>Applies sophisticated knowledge of treatment subtleties and controversies</td>
</tr>
<tr>
<td>Identifies symptoms and complications associated with neuromuscular disorders (pain, joint contractures, fatigue, mood disorders, etc.)</td>
<td>Employs first-line interventions for symptoms and complications associated with neuromuscular disorders</td>
<td>Employs second-line interventions for symptoms and complications associated with neuromuscular disorders and coordinates care with other health care practitioners</td>
<td>Independently adapts interventions for symptoms and complications associated with neuromuscular disorders based on patient response</td>
<td>Demonstrates sophisticated knowledge and serves as resource for orthotics, mobility aids, and rehabilitation for neuromuscular disorders</td>
</tr>
<tr>
<td>Describes assistive technologies and their indications</td>
<td>Recognizes the indications for basic orthotics and mobility aids for patients with neuromuscular disorders</td>
<td>Prescribes basic orthotics and mobility aids for patients with neuromuscular disorders</td>
<td>Integrates recommendations for patient needs for a full range of assistive technologies based on impairments, considering barriers, contraindications, comorbidities, and input from other professionals</td>
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### Comments:

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# Patient Care 4: Nerve Conduction Studies

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<tr>
<th>Level 1</th>
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<th>Level 5</th>
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</thead>
<tbody>
<tr>
<td>Applies knowledge of peripheral nerve anatomy in the performance of nerve conduction studies</td>
<td>Performs and interprets common motor and sensory nerve conduction studies, and late response studies (e.g., F-waves, H-reflexes)</td>
<td>Performs and interprets neuromuscular junction testing (e.g., repetitive stimulation study)</td>
<td>Performs and interprets uncommon motor and sensory nerve conduction studies, including cranial nerve testing (e.g., blink reflex, facial nerve)</td>
<td>Performs and interprets special nerve conduction studies procedures (e.g., near nerve testing, phrenic nerve testing)</td>
</tr>
<tr>
<td>Formulates basic nerve conduction studies plan for specific, common clinical presentations</td>
<td>Identifies technical artifacts in the interpretation of nerve conduction studies</td>
<td>Recognizes common anatomical variants in the interpretation of nerve conduction studies</td>
<td>Recognizes performance quality and inconsistencies of nerve conduction studies</td>
<td>Recognizes uncommon anatomical variants in the interpretation of nerve conduction studies</td>
</tr>
</tbody>
</table>

**Comments:**

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Not Yet Assessable
## Patient Care 5: Electromyography (EMG)

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<th>Level 1</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies knowledge of nerve and muscle anatomy in the study design and performance of EMG (e.g., muscle localization)</td>
<td>Performs EMG of commonly sampled muscles</td>
<td>Performs EMG of uncommonly sampled muscles</td>
<td>Performs EMG of cranial nerve innervated muscles (e.g., tongue)</td>
<td>Performs and interprets special EMG procedures (e.g., single fiber EMG, quantitative EMG studies)</td>
</tr>
<tr>
<td>Explains the procedure to patients and patients’ families</td>
<td>Monitors patient comfort during the procedure</td>
<td>Modifies the procedure for challenging or high-risk patients</td>
<td>Proactively organizes and efficiently completes procedure to optimize diagnostic yield in challenging or high-risk patients</td>
<td>Performs and interprets EMG of rarely sampled muscles (e.g., diaphragm)</td>
</tr>
<tr>
<td>Describes nerve physiology and instrumentation involved in electromyography</td>
<td>Distinguishes normal from abnormal electrodiagnostic findings with guidance and recognizes artifacts</td>
<td>Independently interprets abnormal electrodiagnostic findings and troubleshoots artifacts</td>
<td>Interprets uncommon EMG findings and patterns of unique disorders and modifies the study accordingly</td>
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</tr>
</tbody>
</table>

**Comments:**
- Not Yet Completed Level 1
- Not Yet Assessable
### Patient Care 6: Anterior Horn Cell Disorders

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<tr>
<th>Level 1</th>
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</thead>
<tbody>
<tr>
<td>Recognizes signs and symptoms that should prompt consideration of anterior horn cell disorders</td>
<td>Diagnoses anterior horn cell disorders</td>
<td>Distinguishes anterior horn cell disorders from mimics</td>
<td>Diagnoses atypical anterior horn cell disorders, including within the context of other neurodegenerative conditions</td>
<td>Engages in scholarly activity (e.g., teaching, research) in anterior horn cell disorders</td>
</tr>
<tr>
<td>Recognizes when electrodiagnostic and serologic testing is indicated</td>
<td>Incorporates results of electrodiagnostic and serologic testing in context of clinical presentation</td>
<td>Orders and incorporates additional testing, including routine genetic testing, to distinguish anterior horn cell disorder from mimics and co-existing disease</td>
<td>Continuously evaluates accuracy of anterior horn cell diagnosis</td>
<td></td>
</tr>
<tr>
<td>Recognizes common anterior horn cell disorders and complications</td>
<td>Manages anterior horn cell disorders and complications, with direct supervision</td>
<td>Manages anterior horn cell disorders and complications, with indirect supervision</td>
<td>Independently manages common anterior horn cell disorders and complications with the interdisciplinary team, as needed</td>
<td>Independently manages atypical anterior horn cell disorders and complications with the interdisciplinary team</td>
</tr>
</tbody>
</table>

**Comments:**

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Not Yet Assessable
## Patient Care 7: Root, Plexus, and Peripheral Nerve Disorders

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</thead>
<tbody>
<tr>
<td>Recognizes common presentations of nerve root, plexus, and peripheral nerve disorders</td>
<td>Diagnoses common nerve root, plexus, and peripheral nerve disorders</td>
<td>Diagnoses uncommon nerve root, plexus, and peripheral nerve disorders</td>
<td>Continuously evaluates the accuracy of the diagnosis of nerve root, plexus, and peripheral nerve disorders</td>
<td>Engages in scholarly activity (e.g., teaching, research) on nerve root, plexus, and peripheral nerve disorders</td>
</tr>
<tr>
<td>Recognizes when electrodiagnostic, serologic and genetic testing is indicated</td>
<td>Incorporates results of electrodiagnostic, serologic and genetic testing in context of clinical presentation</td>
<td>Recognizes indications for special diagnostic techniques (e.g., nerve biopsy, skin biopsy, ultrasound, quantitative sensory testing)</td>
<td>Relates the results of special diagnostic testing (e.g., nerve biopsy) to the context of the clinical presentation</td>
<td></td>
</tr>
<tr>
<td>Recognizes common peripheral nerve disorder emergencies (e.g., Guillain Barre Syndrome)</td>
<td>Manages patients with common nerve root, plexus, and peripheral nerve disorders (e.g., Guillain Barre Syndrome) under direct supervision</td>
<td>Manages patients with uncommon nerve root, plexus, and peripheral nerve disorders under indirect supervision</td>
<td>Independently manages common nerve root, plexus, and peripheral nerve disorders and complications with the interdisciplinary team as needed</td>
<td>Independently manages uncommon nerve root, plexus, and peripheral nerve disorders and complications with the interdisciplinary team as needed</td>
</tr>
</tbody>
</table>

**Comments:**
- Not Yet Completed Level 1
- Not Yet Assessable

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<table>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnoses common neuromuscular junction disorders</td>
<td>Diagnoses uncommon neuromuscular junction disorders</td>
<td>Diagnoses neuromuscular junction disorders, even when the presentation is atypical</td>
<td>Distinguishes worsening of neuromuscular junction disorders from complications of treatment or new disorders</td>
<td>Engages in scholarly activity (e.g., teaching, research) in neuromuscular junction disorders</td>
</tr>
<tr>
<td>Recognizes when electrodiagnostic and serologic testing are indicated</td>
<td>Incorporates results of electrodiagnostic and serologic testing in context of clinical presentation (e.g., false positives, false negatives)</td>
<td>Recognizes indications for special diagnostic techniques (e.g., single fiber EMG); tracks disease activity with formal scales and patient reported outcome measures (PROMs)</td>
<td>Recognizes when genetic testing is indicated (e.g., congenital myasthenic syndromes)</td>
<td></td>
</tr>
<tr>
<td>Recognizes common neuromuscular junction emergencies (e.g., myasthenic crisis)</td>
<td>Manages common neuromuscular junction emergencies</td>
<td>Manages uncommon neuromuscular junction disorders</td>
<td>Manages patients with refractory neuromuscular junction disorders</td>
<td>Manages patient with neuromuscular junction disorders and complex co-morbidities</td>
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# Patient Care 9: Myopathies

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<tr>
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</thead>
<tbody>
<tr>
<td>Recognizes common presentations of myopathies</td>
<td>Diagnoses common myopathies</td>
<td>Diagnoses uncommon myopathies</td>
<td>Distinguishes worsening of myopathies from complications of treatment or new disorders</td>
<td>Engages in scholarly activity (e.g., teaching, research) on myopathies</td>
</tr>
<tr>
<td>Recognizes when electrodiagnostic and serologic testing is indicated</td>
<td>Incorporates results of electrodiagnostic and serologic testing in the context of the clinical presentation (e.g., false negatives and false positives); recognizes when genetic testing or muscle biopsy is indicated</td>
<td>Interprets genetic testing and/or findings on muscle biopsy in the context of the clinical presentation</td>
<td>Discusses the implications of variants of uncertain significance on genetic testing and interprets in the context of the clinical presentation</td>
<td></td>
</tr>
<tr>
<td>Prescribes basic orthotics, mobility aids, and therapies (e.g., physical therapy [PT], occupational therapy [OT], speech therapy [ST]) as indicated</td>
<td>Manages patients with common myopathies; provides collaborative care with relevant medical specialties</td>
<td>Recognizes medical complications of myopathies, including respiratory failure, cardiac disease, and ocular manifestations</td>
<td>Manages patients with uncommon myopathies, including genetic counseling and goals of care for those with inherited myopathies</td>
<td>Manages patients with myopathies and complex co-morbidities</td>
</tr>
</tbody>
</table>

**Comments:**

- Not Yet Completed Level 1
- Not Yet Assessable
### Patient Care 10: Digital Health

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</thead>
<tbody>
<tr>
<td>Expands use of the electronic health record (EHR) to include and reconcile secondary data sources in patient care activities</td>
<td>Utilizes EHR capabilities and identifies use for digital or remote monitoring data in patient care activities</td>
<td>Utilizes EHR capabilities to manage and monitor patients, including through patient-reported outcomes</td>
<td>Uses the EHR to communicate complex care plans with patients and other providers</td>
<td>Leads improvements in the EHR specific for neuromuscular patients</td>
</tr>
<tr>
<td>Initiates and carries out a telehealth visit</td>
<td>Identifies which clinical situations can be managed through a telehealth visit</td>
<td>Demonstrates the ability to perform a neuromuscular history and examination in a telehealth visit</td>
<td>Uses telehealth visits for complex patient management</td>
<td>Innovates and leads in the use of emerging technologies for care of neuromuscular patients</td>
</tr>
</tbody>
</table>

**Comments:**

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<table>
<thead>
<tr>
<th>Medical Knowledge 1: Localization</th>
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<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Localizes neuromuscular lesions to general components</td>
</tr>
<tr>
<td>Describes basic anatomy of the peripheral nervous system</td>
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</thead>
<tbody>
<tr>
<td>Summarizes key elements of history and exam and generates a relevant differential diagnosis</td>
<td>Synthesizes information to focus and prioritize diagnostic possibilities for neuromuscular disorders</td>
<td>Efficiently synthesizes information to focus and prioritize diagnostic possibilities</td>
<td>Continuously reconsiders diagnostic possibilities in response to new clinical information</td>
<td>Effectively educates others about neuromuscular diagnostic reasoning</td>
</tr>
<tr>
<td>Correlates under guidance the clinical presentation with basic anatomy but not with pathophysiology of nerve and muscle disorders</td>
<td>Correlates under guidance the clinical presentation with basic anatomy and pathophysiology of neuromuscular disorders</td>
<td>Independently correlates the clinical presentation with detailed anatomy and pathophysiology of neuromuscular disorders</td>
<td>Demonstrates sophisticated and detailed knowledge of neuromuscular disorders</td>
<td>Discriminates coexisting multiple neurologic and neuromuscular diagnoses</td>
</tr>
</tbody>
</table>

**Comments:**

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## Medical Knowledge 3: Diagnostic Investigation

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<tbody>
<tr>
<td>Summarizes key elements of history and exam findings and generates a broad differential diagnosis</td>
<td>Identifies the first steps in working up common neuromuscular disorders</td>
<td>Efficiently synthesizes information to focus and prioritize diagnostic possibilities</td>
<td>Continuously reconsiders diagnostic possibilities in response to new clinical information</td>
<td>Effectively educates others about neuromuscular diagnostic reasoning</td>
</tr>
<tr>
<td>Recognizes common indications for serologic and electrodiagnostic testing</td>
<td>Sequences laboratory testing, electrodiagnostic testing, imaging, and genetic testing for common neuromuscular disorders</td>
<td>Integrates the use of nerve and muscle imaging (e.g., ultrasound, magnetic resonance imaging [MRI]) into the diagnostic process; recognizes the indications for nerve and muscle biopsy and genetic testing</td>
<td>Reconciles conflicting data from diagnostic tests and the clinical presentation; efficiently provides genetic testing suited to the clinical situation (e.g., single gene versus panel testing versus whole exome sequencing)</td>
<td>Engages in scholarly activity on diagnostic testing for neuromuscular disorders</td>
</tr>
</tbody>
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### Comments:
- Not Yet Completed Level 1
- Not Yet Assessable
## Medical Knowledge 4: Muscle and Nerve Pathology

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<th>Level 5</th>
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</thead>
<tbody>
<tr>
<td>Demonstrates the ability to identify specific stains and differentiate tissue types, as well as knowledge of normal and abnormal histopathology of peripheral nerve and skeletal muscle</td>
<td>Demonstrates knowledge of tissue fixation and utility of specific stains, and recognizes common pathologic findings and technical artifacts in nerve and muscle biopsy preparations</td>
<td>Demonstrates advanced knowledge of abnormal histopathology of peripheral nerve and skeletal muscle, and correlates the nerve and muscle biopsy findings with the clinical presentation</td>
<td>Recognizes uncommon pathologic findings in nerve and muscle preparations</td>
<td>Independently interprets nerve and muscle biopsy specimens and generates a report</td>
</tr>
</tbody>
</table>

### Comments:

- Not Yet Completed Level 1
- Not Yet Assessable
### Systems-Based Practice 1: Patient Safety and Quality Improvement

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</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates knowledge of commonly reported patient safety events</td>
<td>Identifies system factors that lead to patient safety events</td>
<td>Participates in analysis of patient safety events</td>
<td>Conducts analysis of patient safety events and offers error prevention strategies</td>
<td>Actively engages teams and processes to modify systems to prevent patient safety events</td>
</tr>
<tr>
<td>Demonstrates knowledge of how to report patient safety events</td>
<td>Reports patient safety events through institutional reporting systems</td>
<td>Participates in disclosure of patient safety events to patients and patients’ families</td>
<td>Discloses patient safety events to patients and patients’ families</td>
<td>Role models or mentors others in the disclosure of patient safety events</td>
</tr>
<tr>
<td>Demonstrates knowledge of basic quality improvement methodologies and metrics</td>
<td>Describes local quality improvement initiatives</td>
<td>Participates in local quality improvement initiatives</td>
<td>Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project</td>
<td>Creates, implements, and assesses quality improvement initiatives at the institutional or community level</td>
</tr>
</tbody>
</table>

**Comments:**

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<table>
<thead>
<tr>
<th>Systems-Based Practice 2: System Navigation for Patient-Centered Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level 1</strong></td>
</tr>
<tr>
<td>Demonstrates knowledge of care coordination</td>
</tr>
<tr>
<td>Performs safe and effective transitions of care/hand-offs in routine clinical situations</td>
</tr>
</tbody>
</table>

**Comments:**
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# Systems-Based Practice 3: Population Health and Advocacy

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<thead>
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<th>Level 1</th>
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<tbody>
<tr>
<td>Demonstrates knowledge of population and community health needs and inequities</td>
</tr>
<tr>
<td>Describes social determinants of health and their roles in neuromuscular disease</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 2</th>
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</thead>
<tbody>
<tr>
<td>Identifies specific population and community health needs and inequities for the local population and community</td>
</tr>
<tr>
<td>Identifies behavioral and social interventions that can improve neuromuscular health</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 3</th>
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</thead>
<tbody>
<tr>
<td>Effectively uses local resources to meet the needs of a patient population and community</td>
</tr>
<tr>
<td>Effectively advocates for interventions that can improve social determinants of health</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Level 4</th>
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</thead>
<tbody>
<tr>
<td>Adapts approach to patient care to provide for the needs of specific populations</td>
</tr>
<tr>
<td>Implements social and behavioral changes for patients and patients’ families that improve health, such as exercise and diet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leads innovations in adapting patient care for populations and communities with health care inequities</td>
</tr>
<tr>
<td>Leads community-based interventions that improve population health</td>
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### Comments:

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## Systems-Based Practice 4: Physician Role in Health Care Systems

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<tr>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describes how components of a complex health care system are interrelated, and how this impacts patient care</td>
<td>Identifies how the health care system limits access to care, creates financial burdens to patients, and leads to inequity in care</td>
<td>Engages with components of the complex health care system to provide efficient and effective patient care for everyone who needs it, regardless of finances, social status, or insurance coverage</td>
<td>Leads teams to provide efficient and effective patient care by managing components of the complex health care system while advocating for systems changes that address inequities</td>
<td>Leads advocacy efforts for systems change that enhances equitable, high-value, efficient, and effective patient care that is accessible to all who need it</td>
</tr>
<tr>
<td>Describes basic health care payment systems, (e.g., government, private, public, uninsured care) and practice models</td>
<td>Delivers patient-centered care that considers each patient’s medical needs, as well as the payment model</td>
<td>Engages with patients in shared decision making, informed by each patient’s payment model</td>
<td>Uses available resources to promote optimal patient care (e.g., community resources, patient assistance resources) considering each patient’s payment model</td>
<td>Participates in health policy advocacy activities to promote better access and quality of care</td>
</tr>
<tr>
<td>Identifies basic knowledge domains for effective transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)</td>
<td>Demonstrates use of information technology required for medical practice (e.g., electronic health record, documentation required for billing and coding)</td>
<td>Consistently demonstrates timely and accurate documentation, including coding and billing requirements</td>
<td>Implements changes in individual practice patterns in response to professional requirements and in preparation for practice</td>
<td>Educates others to prepare them for transition to practice</td>
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### Comments:

Not Yet Completed Level 1
## Practice-Based Learning and Improvement 1: Evidence-Based and -Informed Practice

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<tbody>
<tr>
<td>Demonstrates how to access and use available evidence, and to incorporate patient preferences and values to the care of a routine patient</td>
<td>Articulates clinical questions and elicits patient preferences and values to guide evidence-based care</td>
<td>Locates and applies the best available evidence, integrated with patient preference, to the care of complex patients</td>
<td>Critically appraises and applies evidence, even in the face of uncertainty, and interprets conflicting evidence to guide care tailored to the individual patient</td>
<td>Coaches others to critically appraise and apply evidence for complex patients, and/or participates in the development of guidelines</td>
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### Comments:

Not Yet Completed Level 1
# Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth

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<tbody>
<tr>
<td>Accepts responsibility for personal and professional development by establishing goals</td>
<td>Demonstrates openness to performance data (feedback and other input) to inform goals</td>
<td>Seeks performance data sporadically, with adaptability and humility</td>
<td>Seeks performance data consistently</td>
<td>Role models seeking performance data with adaptability and humility</td>
</tr>
<tr>
<td>Identifies the factors that contribute to gap(s) between expectations and actual performance</td>
<td>Analyzes and reflects on the factors that contribute to gap(s) between expectations and actual performance</td>
<td>Institutes behavioral change(s) to narrow the gap(s) between expectations and actual performance</td>
<td>Challenges assumptions and considers alternatives in narrowing the gap(s) between expectations and actual performance</td>
<td>Coaches others on reflective practice</td>
</tr>
<tr>
<td>Actively seeks opportunities to improve</td>
<td>Designs and implements a learning plan, with prompting</td>
<td>Independently creates and implements a learning plan</td>
<td>Uses performance data to measure the effectiveness of the learning plan, and, when necessary, improves it</td>
<td>Facilitates the design and implementation of learning plans for others</td>
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<tr>
<td>Identifies and describes potential triggers for professionalism lapses and how to report them</td>
<td>Demonstrates insight into professional behavior in routine situations and takes responsibility for one’s own behavior</td>
<td>Demonstrates professional behavior in complex or stressful situations</td>
<td>Intervenes to prevent professionalism lapses in oneself and others</td>
<td>Coaches others when their behavior fails to meet professional expectations</td>
</tr>
<tr>
<td>Demonstrates knowledge of ethical principles related to patient care</td>
<td>Analyzes straightforward situations using ethical principles</td>
<td>Analyzes complex situations using ethical principles</td>
<td>Recognizes and uses appropriate resources for managing and resolving ethical dilemmas as needed</td>
<td>Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution</td>
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<tr>
<td>Takes responsibility for failure to complete tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future</td>
<td>Performs tasks and responsibilities in a timely manner, recognizing situations that may impact one’s own ability to do so</td>
<td>Proactively implements strategies to ensure that the needs of patients, teams, and systems are met</td>
<td>Recognizes situations in which one’s own behavior may impact others’ ability to complete tasks and responsibilities in a timely manner</td>
<td>Develops or implements strategies to improve system-wide problems to improve ability for oneself and others to complete tasks and responsibilities in a timely fashion</td>
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### Professionalism 3: Well-Being

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<tr>
<td>Recognizes status of personal and professional well-being, with assistance</td>
<td>Identifies resources to improve well-being</td>
<td>Independently recognizes status of personal and professional well-being</td>
<td>Independently develops a strategy to optimize personal and professional well-being</td>
<td>Coaches others when emotional responses or limitations in knowledge/ skills do not meet professional expectations</td>
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**Comments:**

This subcompetency is not intended to evaluate a fellow’s well-being, but to ensure each fellow has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being.

Not Yet Completed Level 1
## Interpersonal and Communication Skills 1: Patient- and Family-Centered Communication

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<tr>
<td>Uses language and non-verbal behavior to demonstrate respect and establish rapport</td>
<td>Establishes an effective patient-physician relationship in straightforward encounters using active listening and clear language</td>
<td>Establishes an effective patient-physician relationship in challenging patient encounters</td>
<td>Easily establishes effective patient-physician relationships, with attention to the patient’s/patient’s family’s concerns and context, regardless of complexity</td>
<td>Mentors others in situational awareness and critical self-reflection to consistently develop positive therapeutic relationships</td>
</tr>
<tr>
<td>Identifies the need to individualize communication strategies based on the patient’s/patient’s family’s expectations and understanding</td>
<td>Communicates compassionately with the patient/patient’s family to clarify expectations and verify understanding of the clinical situation</td>
<td>Communicates medical information in the context of the patient’s/patient’s family’s values, uncertainty, and conflict</td>
<td>Uses shared decision making to align the patient’s/patient’s family’s values, goals, and preferences with treatment options</td>
<td>Role models shared decision making in the context of the patient’s/patient’s family’s values, uncertainty, and conflict</td>
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<td>Identifies common barriers to effective patient care (e.g., language,</td>
<td>Identifies complex barriers to effective patient care (e.g., health</td>
<td>Recognizes personal biases and mitigates barriers to optimize patient care, when prompted</td>
<td>Recognizes personal biases and proactively mitigates barriers to optimize patient care</td>
<td>Mentors others on recognition of bias and mitigation of barriers to optimize patient care</td>
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Not Yet Completed Level 1
## Interpersonal and Communication Skills 3: Interprofessional and Team Communication

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<tbody>
<tr>
<td>Recognizes the need for and professionally requests a consultation</td>
<td>Clearly and concisely formulates a consultation request</td>
<td>Confirms understanding of a consultant’s recommendations</td>
<td>Integrates recommendations from different members of the health care team to optimize patient care</td>
<td>Role models and facilitates flexible communication strategies that demonstrate the value of input from all health care team members, resolving conflict when needed</td>
</tr>
<tr>
<td>Recognizes the role of a neuromuscular consultant</td>
<td>Professionally accepts a consultation request</td>
<td>Clearly and concisely responds to a consultation request</td>
<td>Solicits and communicates feedback to other members of the health care team</td>
<td></td>
</tr>
<tr>
<td>Understands and respects the role and function of interdisciplinary team members</td>
<td>Solicits insights from and uses language that demonstrates that one values all interdisciplinary team members</td>
<td>Integrates contributions from interdisciplinary team members into the care plan</td>
<td>Prevents and mediates conflict and distress among interdisciplinary team members</td>
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### Comments:

Not Yet Completed Level 1
# Interpersonal and Communication Skills 4: Communication within Health Care Systems

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<tr>
<td>Documents accurate and up-to-date patient information</td>
<td>Demonstrates diagnostic reasoning through organized and timely notes</td>
<td>Communicates the diagnostic and therapeutic reasoning</td>
<td>Demonstrates concise, organized written and verbal communication, including anticipatory guidance</td>
<td>Guides departmental or institutional communication policies and procedures</td>
</tr>
<tr>
<td>Recognizes the basic structure of the nerve conduction study report</td>
<td>Creates a report for a nerve conduction study in conjunction with EMG</td>
<td>Provides a detailed report of common and uncommon nerve conduction study findings and neuromuscular junction testing</td>
<td>Provides a detailed report of common and uncommon nerve conduction findings and cranial nerve testing</td>
<td></td>
</tr>
<tr>
<td>Communicates in a way that safeguards patient information</td>
<td>Communicates through appropriate channels as required by institutional policy</td>
<td>Selects optimal mode of communication based on clinical context</td>
<td>Demonstrates clear, concise communication with referring providers for continuity of care</td>
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**Comments:**

Not Yet Completed Level 1