Background

Neurology is the diagnosis and treatment of all types of disease or impaired function of the brain; spinal cord; peripheral nerves, muscles, and autonomic nervous system; and the blood vessels that relate to these structures, according to the American Board of Medical Specialties (ABMS). Neurologists may concentrate in areas such as strokes, movement disorders, or epilepsy.

According to the ABMS, subspecialties of neurology (and child neurology) include:

➤ Clinical neurophysiology (see Clinical Privilege White Paper, Clinical neurophysiology—Practice area 423)
➤ Hospice and palliative medicine (see Clinical Privilege White Paper, Clinical hospice and palliative medicine—Practice area 406)
➤ Neurodevelopmental disabilities
➤ Neuromuscular medicine
➤ Pain medicine (see Clinical Privilege White Paper, Pain medicine—Practice area 108)
➤ Sleep medicine (see Clinical Privilege White Paper, Sleep medicine—Practice area 117)
➤ Vascular neurology (see Clinical Privilege White Paper, Vascular neurology—Practice area 410)

Neurologists provide treatment to patients with neurodevelopmental disabilities as well as administer hospice and palliative medicine, according to the ABMS.

Neurologists treat a wide variety of diseases and medical conditions, including:

➤ Alzheimer’s disease and other memory disorders
➤ Amyotrophic lateral sclerosis
➤ Brain and spinal chord injuries
➤ Brain tumors
➤ Encephalitis
➤ Epilepsy
➤ Meningitis
➤ Migraine headaches and other kinds of pain
➤ Multiple sclerosis
➤ Parkinson’s disease
➤ Peripheral nerve disorders
➤ Sleep disorders
➤ Spinal cord injuries
➤ Stroke
According to the Accreditation Council for Graduate Medical Education (ACGME), a complete neurology residency training program lasts 48 months. After completing residency training, neurologists can elect to subspecialize by enrolling in a fellowship program lasting from one to three years. A fellowship gives a neurologist the opportunity to develop expertise in areas such as child neurology, movement disorders, and sleep medicine.

This paper focuses on neurologists. For information on child neurology, please see Clinical Privilege White Paper, Child neurology—Practice area 401.

**Involved specialties**

- Neurologists

**Positions of specialty boards**

- The American Board of Psychiatry and Neurology (ABPN) offers certificates for neurology and neurology with special qualification in child neurology.

ABPN

There are two acceptable paths to certification in neurology by the ABPN:

- A three-year neurology residency program that includes one year of ACGME-accredited training in internal medicine. A full year in an ACGME-accredited program that includes six months of training in internal medicine is also acceptable. However, the composition of these six months may not include rotations in neurology, family medicine, or emergency medicine. The ABPN states that to ensure a high-quality experience, these six months should emphasize progressive responsibility for the resident. At least two of the other six months must be spent in internal medicine, pediatrics, and/or emergency medicine. For candidates entering neurology residency on or after July 1, 2001, at least two of those additional six months must be spent in internal medicine, pediatrics, family medicine, and/or emergency medicine. No more than two of the remaining four months may be spent in neurology.

- A four-year neurology residency program accredited by the ACGME.

Effective for residents who are entering residency training in neurology as of July 1, 2002, six months of neurology credit may be granted for neurosurgery training, provided that the training has not already been accepted by another board for certification.
To qualify to sit for examination, an applicant must:
➤ Be a graduate of an accredited medical school in the United States or Canada or of an international medical school listed by the World Health Organization
➤ Have a medical license
➤ Have satisfactorily completed the ABPN specialized training requirements in neurology or child neurology
➤ Submit a completed official application form, including all required attachments and the appropriate application and examination fees by the specified deadlines

AOBNP  According to the American Osteopathic Board of Neurology and Psychiatry (AOBNP), the practice of neurology shall consist of and include that branch of osteopathic medical science which deals with the neuromuscular system, both normal and diseased. It includes all accepted therapies, assessments, and diagnostic studies.

In order to obtain certification in neurology, candidates must satisfy the following requirements:
➤ Be a graduate of an American Osteopathic Association (AOA)-accredited college of osteopathic medicine.
➤ Be licensed to practice in the state or territory where their practice is conducted.
➤ Show evidence of conformity to the standards set forth in the Code of Ethics of the AOA.
➤ Be a member in good standing of the AOA or the Canadian Osteopathic Association for the two years immediately prior to the date of certification.
➤ Complete an AOA-approved internship and spend a period of three years in an AOA-approved training in neurology after the required one year of internship. One year of credit may be given for two years in an AOA-approved residency training program as determined by this board (i.e., internal medicine, neurological surgery).
➤ Pass exams issued by the AOBNP.

Positions of societies, academies, colleges, and associations

AAN  The American Academy of Neurology (AAN) is a medical specialty society established to advance the art and science of neurology. It publishes recommendations on the core curricula for neurology residency training.
The AAN’s requirements for residency training in neurology are similar to those set by the ACGME. Objectives include teaching or reinforcing the ability to perform the following:

➤ Procedural skills:
  — Complete neurologic histories and examinations, as well as urgent screenings
  — Lumbar punctures
  — Neurophysiologic testing (or familiarity with this skill)
  — Caloric testing
  — Prostigmine/tensilon testing (or familiarity with this skill)

➤ Analytical skills:
  — Recognize symptoms and signs that suggest neurologic disease
  — Localize symptoms and signs to the appropriate anatomic parts of the nervous system
  — Formulate differential diagnoses, evaluations, and management strategies based on relevant history, examination, and laboratory features
  — Familiarity with basic tests used to evaluate neurologic problems (e.g., neuroimaging, electroencephalography [EEG], electromyography evaluation [EMG], nerve conduction velocity [NCV], evoked potentials, sleep studies) and how to interpret the results of those tests

According to the AAN, residency programs in neurology must include at least 18 months of clinical adult neurology, with primary responsibility in patient care. A minimum of three months must be spent in clinical pediatric neurology, with primary responsibility in patient care, and at least six months must be spent in clinical neurology training in an outpatient setting.

A core curriculum in neurology includes these areas of training:

➤ Neurosciences:
  — Neuroanatomy
  — Neurophysiology
  — Neuropharmacology/neurochemistry
  — Neuropsychology
  — Neuropathology
  — Neuroimmunology
  — Neurogenetics
  — Neuroepidemiology
  — Neuroendocrinology
  — Embryology and the development of the nervous system
  — The aging brain
► Clinical neurology:
   — Epilepsy and related convulsive disorders
   — Disease of the peripheral nerve, autonomic nerves, neuromuscular junction, and muscle
   — Loss of alteration and consciousness
   — Headache and facial pain
   — Neck and back pain
   — Head and spinal cord trauma and injury
   — Disorders of the special senses
   — Inherited and acquired metabolic disorders
   — Neurotoxicology and effects of drugs and alcohol on the nervous system
   — Stroke and related disorders of brain ischemia
   — Behavioral neurology
   — Neurology of aging
   — Movement disorders
   — Demyelinating disorders
   — Neurointensive care
   — Neuroophthalmology
   — Neurooncology
   — Neurootology
   — Neuroinfectious diseases
   — Sleep disorders
   — Pediatric neurology
   — Neurosurgery
   — Neurehabilitation
   — Psychiatry
   — Pain management

► Laboratory neurology:
   — Neuroradiology (e.g., MRI, magnetic resonance angiography, CT, single photon emission CT, angiography, myelography)
   — Invasive thrombolysis and related procedures such as stent placement
   — EEG, EMG, evoked potentials, and sleep monitoring
   — Ultrasonography, including cardiac, carotid, and intracranial vasculature
   — Electronystagmography, vestibulo-ocular reflex, and formal visual field tests
   — Nerve, muscle, and brain biopsies
   — Neurocognitive tests

► Procedures:
   — Significant, hands-on experience with indications for, and performance and interpretation of, lumbar puncture, tensilon tests, and caloric testing
— EMG, NCV, evoked potentials, and sleep testing, including when to order, how to place electrodes and needles, and interpretation of results
— Baclofen pumps, deep brain stimulators, and vagal stimulators, including indications for placement and manipulation, as well as how to manipulate them
— Botulinum toxin injection, including indications for its use and techniques and side effects of injections

**ANA**

The American Neurological Association (ANA) is a professional society of academic neurologists and neuroscientists devoted to advancing the goals of academic neurology, training and educating neurologists and other physicians in the neurologic sciences, and expanding the understanding of nervous system diseases and the ability to treat them.

The ANA does not publish guidelines regarding the delineation of clinical privileges for neurologists.

**Positions of accreditation bodies**

**CMS**

CMS has no formal position concerning the delineation of privileges for neurology. However, the CMS *Conditions of Participation (CoP)* define a requirement for a criteria-based privileging process in §482.22(c)(6), stating, “The bylaws must include criteria for determining the privileges to be granted to individual practitioners and a procedure for applying the criteria to individuals requesting privileges.”

§482.12(a)(6) states, “The governing body must assure that the medical staff bylaws describe the privileging process. The process articulated in the bylaws, rules or regulations must include criteria for determining the privileges that may be granted to individual practitioners and a procedure for applying the criteria to individual practitioners that considers:

➤ Individual character
➤ Individual competence
➤ Individual training
➤ Individual experience
➤ Individual judgment

The governing body must ensure that the hospital’s bylaws governing medical staff membership or the granting of privileges apply equally to all practitioners in each professional category of practitioners.”
Specific privileges must reflect activities that the majority of practitioners in that category can perform competently and that the hospital can support. Privileges are not granted for tasks, procedures, or activities that are not conducted within the hospital, regardless of the practitioner’s ability to perform them.

Each practitioner must be individually evaluated for requested privileges. It cannot be assumed that every practitioner can perform every task, activity, or privilege specific to a specialty, nor can it be assumed that the practitioner should be automatically granted the full range of privileges. The individual practitioner’s ability to perform each task, activity, or privilege must be individually assessed.

CMS also requires that the organization have a process to ensure that practitioners granted privileges are working within the scope of those privileges.

CMS’ CoPs include the need for a periodic appraisal of practitioners appointed to the medical staff/granted medical staff privileges (§482.22[a][1]). In the absence of a state law that establishes a time frame for the periodic appraisal, CMS recommends that an appraisal be conducted at least every 24 months. The purpose of the periodic appraisal is to determine whether clinical privileges or membership should be continued, discontinued, revised, or otherwise changed.

The Joint Commission (formerly JCAHO) has no formal position concerning the delineation of privileges for neurology. However, in its Comprehensive Accreditation Manual for Hospitals, The Joint Commission states, “The hospital collects information regarding each practitioner’s current license status, training, experience, competence, and ability to perform the requested privilege” (MS.06.01.03).

In the introduction for MS.06.01.03, The Joint Commission states that there must be a reliable and consistent system in place to process applications and verify credentials. The organized medical staff must then review and evaluate the data collected. The resultant privilege recommendations to the governing body are based on the assessment of the data.

The Joint Commission introduces MS.06.01.05 by stating, “The organized medical staff is responsible for planning and
implementing a privileging process.” It goes on to state that this process typically includes:

➤ Developing and approving a procedures list
➤ Processing the application
➤ Evaluating applicant-specific information
➤ Submitting recommendations to the governing body for applicant-specific delineated privileges
➤ Notifying the applicant, relevant personnel, and, as required by law, external entities of the privileging decision
➤ Monitoring the use of privileges and quality-of-care issues

MS.06.01.05 further states, “The decision to grant or deny a privilege(s) and/or to renew an existing privilege(s) is an objective, evidence-based process.”

The EPs for standard MS.06.01.05 include several requirements as follows:

➤ The need for all licensed independent practitioners who provide care, treatment, and services to have a current license, certification, or registration, as required by law and regulation
➤ Established criteria as recommended by the organized medical staff and approved by the governing body with specific evaluation of current licensure and/or certification, specific relevant training, evidence of physical ability, professional practice review data from the applicant’s current organization, peer and/or faculty recommendation, and a review of the practitioner’s performance within the hospital (for renewal of privileges)
➤ Consistent application of criteria
➤ A clearly defined (documented) procedure for processing clinical privilege requests that is approved by the organized medical staff
➤ Documentation and confirmation of the applicant’s statement that no health problems exist that would affect his or her ability to perform privileges requested
➤ A query of the NPDB for initial privileges, renewal of privileges, and when a new privilege is requested
➤ Written peer recommendations that address the practitioner’s current medical/clinical knowledge, technical and clinical skills, clinical judgment, interpersonal skills, communication skills, and professionalism
> A list of specific challenges or concerns that the organized medical staff must evaluate prior to recommending privileges (MS.06.01.05, EP 9)
> A process to determine whether there is sufficient clinical performance information to make a decision related to privileges
> A decision (action) on the completed application for privileges occurring within the time period specified in the organization’s medical staff bylaws
> Updating of information regarding any changes to practitioners’ clinical privileges as they occur

The Joint Commission further states, “The organized medical staff reviews and analyzes information regarding each requesting practitioner’s current licensure status, training, experience, current competence, and ability to perform the requested privilege” (MS.06.01.07).

In the EPs for standard MS.06.01.07, The Joint Commission states that the information review and analysis process is clearly defined and that the decision process must be timely. The organization, based on recommendations by the organized medical staff and approval by the governing body, develops criteria that will be considered in the decision to grant, limit, or deny a request for privileges. The criteria must be consistently applied and directly relate to the quality of care, treatment, and services. Ultimately, the governing body or delegated governing body has the final authority for granting, renewing, or denying clinical privileges. Privileges may not be granted for a period beyond two years.

Criteria that determine a practitioner’s ability to provide patient care, treatment, and services within the scope of the privilege(s) requested are consistently evaluated.

The Joint Commission further states, “Ongoing professional practice evaluation information is factored into the decision to maintain existing privilege(s), to revise existing privileges, or to revoke an existing privilege prior to or at the time of renewal” (MS.08.01.03).

In the EPs for MS.08.01.03, The Joint Commission says there is a clearly defined process facilitating the evaluation of each practitioner’s professional practice, in which the type of information collected is determined by individual departments and approved by the organized medical staff. Information resulting
from the ongoing professional practice evaluation is used to determine whether to continue, limit, or revoke any existing privilege.

HFAP

The Healthcare Facilities Accreditation Program (HFAP) has no formal position concerning the delineation of privileges for neurology. The bylaws must include the criteria for determining the privileges to be granted to the individual practitioners and the procedure for applying the criteria to individuals requesting privileges (03.01.09). Privileges are granted based on the medical staff’s review of an individual practitioner’s qualifications and its recommendation regarding that individual practitioner to the governing body.

It is also required that the organization have a process to ensure that practitioners granted privileges are working within the scope of those privileges.

Privileges must be granted within the capabilities of the facility. For example, if an organization is not capable of performing open-heart surgery, no physician should be granted that privilege.

In the explanation for standard 03.01.13 related to membership selection criteria, HFAP states, “Basic criteria listed in the bylaws, or the credentials manual, include the items listed in this standard. (Emphasis is placed on training and competence in the requested privileges.)”

The bylaws also define the mechanisms by which the clinical departments, if applicable, or the medical staff as a whole establish criteria for specific privilege delineation.

Periodic appraisals of the suitability for membership and clinical privileges are required to determine whether the individual practitioner’s clinical privileges should be approved, continued, discontinued, revised, or otherwise changed (03.00.04). The appraisals are to be conducted at least every 24 months.

The medical staff is accountable to the governing body for the quality of medical care provided, and quality assessment and performance improvement (03.02.01) information must be used in the process of evaluating and acting on re-privileging
and reappointment requests from members and other credentialed staff.

**Det Norske Veritas (DNV)**

DNV has no formal position concerning the delineation of privileges for neurology. MS.12 Standard Requirement (SR) 1 states, “The medical staff bylaws shall include criteria for determining the privileges to be granted to individual practitioners and a procedure for applying the criteria to those individuals that request privileges.”

The governing body shall ensure that under no circumstances is medical staff membership or professional privileges in the organization dependent solely upon certification, fellowship, or membership in a specialty body or society.

Regarding the Medical Staff Standards related to Clinical Privileges (MS.12), DNV requires specific provisions within the medical staff bylaws for:

- The consideration of automatic suspension of clinical privileges in the following circumstances: revocation/restriction of licensure; revocation, suspension, probation of a DEA registration; failure to maintain professional liability insurance as specified; and noncompliance with written medical record delinquency/deficiency requirements
- Immediate and automatic suspension of clinical privileges due to the termination or revocation of the practitioner’s Medicare/Medicaid status
- Fair hearing and appeal

The Interpretive Guidelines also state that core privileges for general surgery and surgical subspecialties are acceptable as long as the core is properly defined.

DNV also requires a mechanism (outlined in the bylaws) to ensure that all individuals provide services only within the scope of privileges granted (MS.12, SR.4).

Clinical privileges (and appointments or reappointments) are for a period as defined by state law or, if permitted by state law, not to exceed three years (MS.12, SR.2).

Individual practitioner performance data must be measured, utilized, and evaluated as a part of the decision-making for appointment and reappointment. Although not specifically stated,
this would apply to the individual practitioner’s respective declination of privilege requests.

**CRC draft criteria**

The following draft criteria are intended to serve solely as a starting point for the development of an institution’s policy regarding neurology. The core privileges and accompanying procedure list are not meant to be all-encompassing. They define the types of activities, procedures, and privileges that the majority of practitioners in this specialty perform. Additionally, it cannot be expected or required that practitioners perform every procedure listed. Instruct practitioners that they may strike through or delete any procedures they do not wish to request.

**Minimum threshold criteria for requesting core privileges in neurology**

<table>
<thead>
<tr>
<th>Basic education:</th>
<th>MD or DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal formal training:</td>
<td>Successful completion of an ACGME- or AOA-accredited residency in neurology.</td>
</tr>
</tbody>
</table>

AND/OR

Current certification or active participation in the examination process (with achievement of certification within [n] years) leading to certification in neurology by the ABPN or the AOBNP.

**Required current experience:** Neurological services to at least 24 inpatients, reflective of the scope of privileges requested, within the past 12 months or successful completion of an ACGME- or AOA-accredited residency or clinical fellowship within the past 12 months.

**References**

If the applicant is recently trained, a letter of reference should come from the director of the applicant’s training program. Alternatively, a letter of reference may come from the applicable department chair and/or clinical service chief at the facility where the applicant most recently practiced.

**Core privileges in neurology**

Core privileges in neurology include the ability to admit, evaluate, diagnose, treat, and provide consultation to patients 16 years of age and older with diseases, disorders, or impaired function of the brain, spinal cord, peripheral nerves, muscles, autonomic nervous system, and the blood vessels that relate to these structures. Neurologists may provide care to patients in the intensive care setting in conformance with unit policies. Neurologists may assess, stabilize, and determine the disposition of patients with emergent conditions consistent with medical
staff policy regarding emergency and consultative call services. The core privileges in this specialty include the procedures on the attached procedures list and such other procedures that are extensions of the same techniques and skills:

- Performance of history and physical exam
- Autonomic testing
- Baclofen pump
- Evoked potentials
- Interpretation of EEG
- Interpretation of EMG (determine whether core or noncore)
- Lumbar puncture
- Tensilon testing
- Botulinum toxin injection
- Caloric testing

**Special requests in neurology**

If desired, noncore privileges are requested individually in addition to requesting the core. Each individual requesting noncore privileges must meet the specific threshold criteria governing the exercise of the privilege requested, including training, required previous experience, and maintenance of clinical competence. Noncore privileges include:

- Performance and interpretation of EMG and nerve conduction studies
- Mechanical retriever (e.g., Merci)
- Transcranial Doppler (TCD) ultrasonography
- Percutaneous lumbar discectomy
- Neuroimaging
- Carotid stenting
- Administration of sedation and analgesia

**Reappointment**

Reappointment should be based on unbiased, objective results of care according to a hospital’s quality assurance mechanism.

Applicants must demonstrate current competence and an adequate volume of experience (48 inpatients or outpatients) with acceptable results, reflective of the scope of privileges requested, for the past 24 months based on results of ongoing professional practice evaluation and outcomes. Evidence of current physical and mental ability to perform privileges requested is required of all applicants for renewal of privileges.

In addition, continuing education related to neurology should be required.
For more information

Accreditation Council for Graduate Medical Education
515 North State Street, Suite 2000
Chicago, IL 60654
Telephone: 312/755-5000
Fax: 312/755-7498
Website: www.acgme.org

American Academy of Neurology
1080 Montreal Avenue
St. Paul, MN 55116
Telephone: 800/879-1960 or 651/695-2717
Fax: 651/695-2791
Website: www.aan.com

American Board of Medical Specialties
1007 Church Street, Suite 404
Evanston, IL 60201-5913
Telephone: 847/491-9091
Fax: 847/328-3596
Website: www.abms.org

American Board of Psychiatry and Neurology
2150 East Lake Cook Road, Suite 900
Buffalo Grove, IL 60089
Telephone: 847/229-6500
Fax: 847/229-6600
Website: www.abpn.com

American Neurological Association
5841 Cedar Lake Road, Suite 204
Minneapolis, MN 55416
Telephone: 952/545-6284
Fax: 952/545-6073
Website: www.aneuroa.org

American Osteopathic Board of Neurology and Psychiatry
c/o American Osteopathic Association
142 East Ontario Street
Chicago, IL 60611
Telephone: 800/621-1773 or 312/202-8000
Fax: 312/202-8200
Website: www.do-online.org
The information contained in this document is general. It has been designed and is intended for use by hospitals and their credentials committees in developing their own local approaches and policies for various credentialing issues. This information, including the materials, opinions, and draft criteria set forth herein, should not be adopted for use without careful consideration, discussion, additional research by physicians and counsel in local settings, and adaptation to local needs. The Credentialing Resource Center does not provide legal or clinical advice; for such advice, the counsel of competent individuals in these fields must be obtained.

Reproduction in any form outside the recipient's institution is forbidden without prior written permission. Copyright © 2011 HCPro, Inc., Danvers, MA 01923.