ACGME Program Requirements for Graduate Medical Education
in Neurological Surgery
Summary and Impact of Focused Requirement Revisions

Requirement #: I.B.1.a)-I.B.1.a).(1)

Requirement Revision (significant change only):

Residents from ACGME-accredited programs in anesthesiology, diagnostic radiology, internal medicine, neurology, pediatrics, and surgery, should be available at either the primary clinical site or a participating site in significant numbers. (Core)

To request an exception, programs must submit a plan for how the intent of the requirement will be met. (Core)

Specialty Background and Intent: The intent of this requirement is to promote and ensure interdisciplinary education, since these specialties are regularly involved in the care of the same patients. Residents who learn together also learn the value that each discipline contributes to each patient’s care, and the result is more team-based care, a national goal espoused not only by the ACGME, but also the Institute of Medicine (IOM) and other organizations.

1. Describe the Review Committee’s rationale for this revision:
The revision clarifies that the sponsor of the neurological surgery program is not required to also sponsor ACGME-accredited programs in each of the listed specialties. The expectation is that residents from accredited programs in each of the specialties will be part of the neurological surgery residents’ learning environment for a significant portion of educational program. By ACGME definition, the primary clinical site is the site that is most commonly used for clinical education, and therefore the expectation is that residents from the other specialties will be present at the primary clinical site in significant numbers so as to ensure interdisciplinary education. The Review Committee will consider other approaches to providing this learning environment. Because each program’s situation is unique, there are no hard rules for what would be an acceptable alternative proposal.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
The intent of the requirement is to promote and ensure interdisciplinary education, and thus to inculcate a team-based approach to patient care.

3. How will the proposed requirement or revision impact continuity of patient care?
A team-based approach to patient care is expected to positively impact continuity of patient care.

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

Programs applying for accreditation will need to ensure the availability of residents from the listed specialties. Currently accredited programs that make changes in participating sites where the sites are providing the required exposure to residents
from other specialties may need to submit a plan for how the intent of the requirement will be met.

5. How will the proposed revision impact other accredited programs?
   None anticipated.

Requirement #: I.D.4.a)(1)-(2)

Requirement Revision (significant change only):
There should be a total of at least 500 major neurological surgery procedures at the primary clinical site per year for each resident completing the program. (Core)

Each hospital participating in the program should have at least 100 major neurological surgery procedures per year distributed appropriately among the spectrum of cases-clinical areas that are the focus for rotations at each site. (Core)

1. Describe the Review Committee’s rationale for this revision:
   The revision clarifies that a minimum of 500 cases is expected to be available at the primary clinical site, since by ACGME definition, this is the site that is most commonly used for clinical education and where residents spend most of their time. Participating sites are commonly added in order to enrich resident education in specific case types. The expectation is that at least 100 such cases would be available at such sites. Sites used for general neurological surgery education are expected to have at least 100 cases distributed across all defined case categories.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Ensuring the availability of cases at each site will help to ensure that residents have experience in all defined case categories.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   Additional sites may be needed if the primary clinical site does not provide sufficient case resources for resident education.

5. How will the proposed revision impact other accredited programs?
   n/a

Requirement #: II.A.3.b)(1)

Requirement Revision (significant change only):
CPR II.A.3. Qualifications of the program director:

The Review Committee only accepts ABNS or AOBS neurological surgery certification for the program director. (Core)

1. Describe the Review Committee’s rationale for this revision:
The current FAQs state that the Review Committee expects all program directors to have current certification, but also indicates that an exception can be requested. This was previously in place primarily so that current program directors who were not certified could be reviewed and approved by the Review Committee. The Review Committee no longer approves certification exceptions for new program directors, and so with this proposed new requirement, the current FAQ will be removed.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Board certification is one important metric for highly competent, up-to-date surgeons who operate with safety and quality in mind; and board-certified neurological surgeons are better prepared to serve as role models and mentors for residents and to provide high quality, safe patient care.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   n/a

5. How will the proposed revision impact other accredited programs?
   n/a

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<td>Requirement Revision (significant change only):</td>
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<td>CPR II.A.3. Qualifications of the program director:</td>
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<td>must include ongoing scholarly activity, including contributions to the peer-reviewed literature; and, (Core)</td>
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<td>must include demonstrated ability as a faculty leader within the department and as a resident mentor. (Core)</td>
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<td>Current residents must be involved in the selection of a new program director. (Core)</td>
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1. Describe the Review Committee’s rationale for this revision:
   The Review Committee adopted guidelines it has been using to review newly appointed program directors. These guidelines ensure the program director evidences the qualities considered essential for being a role model and mentor for residents and faculty members. The rationale for the requirement that residents be involved in the selection of a new program director is the observation that programs with poor surveys or other evidence of a poor learning environment often have a program director who never had or who had lost a connection with the residents. Increasing resident investment in the program director selection process encourages programs to identify resident concerns about leadership, culture, and the educational environment, and to address them proactively, and it has the potential for creating a virtuous educational cycle. The use of these guidelines by the Review Committee has required that staff members contact the program to
obtain required information when a program director change is made in ADS, since the change in ADS is what triggers the committee’s review. With these proposed new requirements, the guidelines for requesting a change in program director can be posted on the specialty section of the ACGME website, which should result in a more timely approval process.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Ensuring the timely review of a well-qualified program director who has the support of current residents is expected to maintain the quality of, if not improve, resident education.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a.

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   n/a

5. How will the proposed revision impact other accredited programs?
   n/a

Requirement #: II.C.2.a)-II.C.2.a).(1)

Requirement Revision (significant change only):

There should must be a full-time designated program coordinator with financial support from the Sponsoring Institution who is designated specifically for the neurological surgery program. (Core)

Programs with an approved complement of seven residents seeking to assign to the coordinator limited additional responsibilities unrelated to program administrative needs must first obtain approval from the Review Committee. (Core)

1. Describe the Review Committee’s rationale for this revision:
   The revision clarifies that the full-time coordinator must be designated for the neurological surgery program. The new requirement for small programs had been an FAQ. The Review Committee recognizes the important and essential role of a program coordinator, even for small programs. The new requirement for small programs allows such programs to utilize the program coordinator for other roles, so long as the neurological surgery program is not negatively impacted.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   The intent of the requirement is to ensure the program has sufficient administrative support for all aspects of neurological surgery resident education.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a
4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?  
   Some institutions may need to provide additional support if they do not currently provide support for a full time coordinator.

5. How will the proposed revision impact other accredited programs?
   n/a

Requirement #: III.C.2.

Requirement Revision (significant change only):

Prior to matriculating a resident to fill a vacancy at the PGY-2 level and above, the program must obtain Review Committee approval. (Core)

1. Describe the Review Committee’s rationale for this revision:  
The Review Committee noted that backfilling vacancies with residents at a different PGY can lead to program instability with a negative impact on the learning environment. Because the committee does not currently require programs to get approval for backfilling, it may take several years before a growing instability becomes known to the Committee, and in such cases, resident education often suffers during that time. The intent of the requirement is to help programs anticipate the potential negative impact of such practices.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?  
   By more closely monitoring the learning environment, the Review Committee anticipates that resident education will improve for some programs.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?  
   Should the Review Committee not approve a request to fill a vacancy, additional resources, such as physician extenders, may be needed.

5. How will the proposed revision impact other accredited programs?
   n/a

Requirement #: IV.B.1.b).(1).(c).(iii)

Requirement Revision (significant change only):

IV.B.1.b).(1).(c) Residents must demonstrate competence in:

providing health care services aimed at preventing health problems and maintaining health, including opioid addiction in the management of acute and chronic pain. (Core)
1. Describe the Review Committee's rationale for this revision:

   Common Program Requirement IV.C.2. requires that programs provide instruction and experience in pain management, including recognition of the signs of addiction. Review Committees are allowed to further specify. Because pain management is a critically important aspect of the practice of neurological surgery and is not limited to cranial/extracranial procedures for pain that are part of that defined case category, the Review Committee chose to further specify its expectations in the form of a patient care competency requirement.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?

   The proposed requirement will ensure residents develop competence not only in procedures for pain management commonly used in the practice of neurological surgery, but will also ensure that residents develop competence in the medical aspects of pain management.

3. How will the proposed requirement or revision impact continuity of patient care?

   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?

   n/a

5. How will the proposed revision impact other accredited programs?

   n/a

Requirement #: IV.B.1.b).(2).(a).(vi).(a)-IV.B.1.b).(2).(a).(vi).(h)

Requirement Revision (significant change only):
PR IV.A.1.b).(2).(a).(vi) Residents must demonstrate competence in: performing neurosurgical operative procedures, including: (Core)

adult cranial procedures, to include: (Core)

- craniotomy for brain tumors, such as intra-axial, extra-axial, skull base, and trephination for biopsy of cranial or intracranial tumors; (Core)
- craniotomy and EEA for transsphenoidal-sellar/parasellar tumors (endoscopic and microsurgical); and, (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(ix)]
- craniotomy/cranietomy/cranioplasty for trauma and non-tumor conditions; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(iv)]
- craniotomy open procedures for intracranial-vascular lesions, including aneurysm, vascular malformation, ischemia, and extracranial cerebrovascular; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(ii)]
endovascular/interventional procedures for intracranial cerebrovascular and neurooncologic conditions—vascular lesions, including aneurysm, vascular malformation, ischemia, and tumor; (Core)

CSF diversion and intraventricular surgery; (Core)

procedures for cranial/extracranial treatment of craniotomy for pain, including craniotomy, stereotaxy, and rhizotomy; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(iii)]

cranial/extracranial vascular procedures for functional disorders (open surgery and endovascular); and, (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(vi)]

cranial/extracranial procedures craniotomy for epilepsy for—(adult and pediatric patients). (Core) [Moved from IV.B.1.b).(2).(a).(vi).(d)]

ventriculoperitoneal (VP) shunt. (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(x)]

functional procedures; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(vii)]

adult spinal procedures, to include: (Core)

anterior cervical approaches for decompression/stabilizations spinal conditions (e.g., tumor, non-tumor, and trauma); (Core)

posterior cervical approaches for decompression/stabilization spinal conditions (e.g., tumor, non-tumor, and trauma); (Core) [Moved from IV.B.1.b).(2).(a).(vi).(b).(vi)]

thoracic/lumbar instrumentation and fusion for spinal conditions (e.g., tumor, non-tumor, and trauma); (Core) [Moved from IV.B.1.b).(2).(a).(vi).(b).(vii)]

lumbar laminectomy/laminotomy for spinal conditions (e.g., tumor, non-tumor, and trauma) discectomy; and, (Core)

interventional procedures for spinal conditions (stimulation, lesion, pump, other). (Core) [Moved from IV.B.1.b).(2).(a).(vi).(b).(iii)]

peripheral nerve procedures; and, (Core) [Moved from IV.B.1.b).(2).(a).(vi).(b).(v)]

radiosurgery; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(a).(viii)]

peripheral device management; (Core)

critical care procedures, to include: (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e)]

airway management; and, (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(vi)]

angiography; (Core)

arterial line placement. (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(vii)]

CVP line placement; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(v)]
external ventricular drain/ICP transdural monitor placement; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(i)-(ii)]  

lumbar/other puncture/drain placement; and, (Core) 

percutaneous tap of CSF space/reservoir. (Core) 

VP shunt tap/programming; (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(iii)]  

cervical; spine traction. (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(iv)] 

pediatric procedures, to include: (Core) [Moved from IV.B.1.b).(2).(a).(vi).(e).(c)]  

craniotomy procedures for brain tumor (Core) [Moved from IV.B.1.b).(2).(a).(vi).(c).(i)]  

procedures for cranial trauma and non-tumor conditions; (Core) 

CSF diversion and intraventricular surgery; and, (Core) 

spinal procedures, including Chiari decompressions, laminectomy for conditions such as dysraphism, tethered cord, laminectomy for spinal tumors, laminectomy for syringomyelia, and correction of spinal deformity, and trauma; and (Core) [Moved from IV.B.1.b).(2).(a).(vi).(c).(ii)] 

VP shunt. (Core) [Moved from IV.B.1.b).(2).(a).(vi).(c).(iii)]  

intradural microdissection. (Core) 

1. Describe the Review Committee’s rationale for this revision: 
   The current requirements for procedural competence were revised and reordered as needed to be consistent with the announced new defined case categories. 

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality? 
   The new case categories represent a refinement of the previous defined case categories that permit a more robust reporting of resident procedural experiences, and thus more robust information for the Review Committee to use to assess the quality of resident education in a program. 

3. How will the proposed requirement or revision impact continuity of patient care? 
   n/a 

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how? 
   n/a 

5. How will the proposed revision impact other accredited programs? 
   n/a
Requirement #: IV.C.1.a)-IV.C.1.b)

Requirement Revision (significant change only):
Common Program Requirement IV.C.1. The curriculum must be structured to optimize resident educational experiences, the length of these experiences, and supervisory continuity. (Core)

The number of participating sites for required rotations should be limited to no more than five health care facilities. (Core)

Participating sites should be located less than 25 miles from the primary clinical site. (Core)

**Specialty Background and Intent:** Models of the learning environment for successful residency education and training in neurological surgery vary and will certainly evolve in the future. That said, certain qualities have emerged that define highly effective educational programs. Principally, effective programs are typified by a primary clinical site that offers either all or the vast majority of the elements critical for education. Affiliate participating sites that offer special experiences can also be effectively utilized to achieve comprehensive neurological surgery education. However, large numbers of participating sites that lack an integrated educational environment tend to degrade the efficiency and effectiveness of the learning environment. Geographically dispersed programs also negatively impact resident well-being in several ways, including through disruption of the residents’ living arrangements; demands on residents’ family and friends; reducing “quality time” away from the work environment for rest, travel, and recreation; disruption of the cohesiveness of the faculty/resident team; and providing variable levels of institutional support for travel, housing, and insurance for “away” rotations. Widely separated geographic sites also degrade the integrity of the educational environment by diminishing participation in educational conferences, mentorship, faculty-directed scholarly activity, cohesive experience in institutional quality improvement, and a team approach to residency education. Continuity of care and patient safety may also be compromised by multiple short-duration rotations, particularly when travel time to the participating site is excessive. Patient safety may also be compromised by inadequate supervision, if faculty members are not immediately available at distant participating sites, or if the faculty members are not experienced in and dedicated to the education process.

Core (non-elective) rotations during PGY-3-7 at the primary clinical site and at all participating sites must be at least three months in duration. (Core)

1. Describe the Review Committee’s rationale for this revision:
   In conjunction with the Common Program Requirements that became effective July 1, 2017, the Review Committee, in conjunction with all major neurosurgical national organizations, developed and approved a position statement on “The Learning Environment for ACGME-Accredited Residency Programs in Neurological Surgery.” The intent of the statement was and continues to be to provide additional guidance to programs applying for ACGME accreditation regarding best practices for program design to ensure an appropriate learning environment for neurological surgery resident education. The statement may also be used to provide guidance to Accreditation Field Representatives conducting site visits for certain programs. The Background and Intent and the three new requirements are derived directly from that
statement and directly address the issues highlighted in Common Program Requirement IV.C.1.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?  
   **Attention to the learning environment will improve resident education by ensuring resident well-being and patient safety through provision of adequate supervision.**

3. How will the proposed requirement or revision impact continuity of patient care?  
   **By requiring longer core rotations, residents are more likely to have opportunities to follow the same patient throughout the continuum of care.**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?  
   **Programs that currently use more than five sites may need to provide a rationale for continuing the current program structure. Some programs may need to review and revise the educational plan to ensure rotation lengths of at least three months for core rotations during the PGY-3-7.**

5. How will the proposed revision impact other accredited programs?  
   n/a

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**Requirement #: IV.C.4.d)(1)**

**Requirement Revision (significant change only):**

All permanent electives and any electives requiring the addition of a new participating site must receive prior approval by the Review Committee. *(Core)*

**Specialty Background and Intent:** There are no specific expectations for the type of electives residents should have. For example, a program may propose an international elective, a transition-to-practice elective, or a research elective, any of which will be offered as a regular component of the program. Alternatively, a program may create a one-time elective to meet the needs of one or more specific residents. For example, a program may direct a resident to have an additional outpatient elective or specific rotation(s) to gain more experience in particular surgical procedures. Contact the Executive Director for additional information. Contact information is available on the [Neurological Surgery](#) section of the ACGME website.

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1. Describe the Review Committee’s rationale for this revision:  
   **While current requirement I.B.4.a) already indicates that the Review Committee must approve new sites or changes in rotations at existing sites, there has been confusion among programs about how this applies to elective rotations due to the need to obtain American Board of Neurological Surgery approval for electives. The intent of this requirement is to clarify that prior approval of the Review Committee is also needed for electives as specified in the new requirement. The Background and Intent is derived directly from a current FAQ, which will be eliminated with approval of the new requirement.**
2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   
   By closely monitoring the learning environment, the committee expects resident education will improve.

3. How will the proposed requirement or revision impact continuity of patient care?
   
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   
   n/a

5. How will the proposed revision impact other accredited programs?
   
   n/a

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<td>Requirement Revision (significant change only):</td>
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<td>PR IV.C.7. Resident experiences must include:</td>
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<tr>
<td>Clinical experience in neuroradiology, including endovascular surgical neuroradiology, and neuropathology designed specifically for neurological surgery residents. (Core)</td>
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<td>Such experience should take place under the direction of qualified neuroradiologists and preferably endovascular neurosurgeons or neurologists, and neuropathologists. (Detail)</td>
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1. Describe the Review Committee’s rationale for this revision:
   
   The change to add neurologists as supervisors for residents for the indicated clinical experiences recognizes that endovascular neuroradiology is a jointly sponsored ACGME-accredited subspecialty that includes neurology.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   
   n/a

3. How will the proposed requirement or revision impact continuity of patient care?
   
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   
   n/a

5. How will the proposed revision impact other accredited programs?
   
   n/a

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Resources must be sufficient to ensure that faculty members are annually involved in scholarly activity that is disseminated through peer-reviewed publication. (Core)

1. Describe the Review Committee’s rationale for this revision:
The proposed requirement reflects the current expectation for dissemination of faculty scholarship. The topics that are the subject of scholarly activity may be any of those domains listed in Common Program Requirement IV.D.2.a), and dissemination may include other methods in addition to peer-reviewed publication, as indicated in Common Program Requirements IV.D.2.b).(1)-(2). As stated in the position statement “The Learning Environment for ACGME-Accredited Residency Programs in Neurological Surgery”:

“The goal of residency training in Neurological Surgery is for the resident to acquire the knowledge and skills required for the safe and effective practice of this specialty. The ACGME has defined six general competencies, which frame the educational environment for residency training. These require the development of expertise in the following areas: Professionalism (PROF), Interpersonal and Communication Skills (ICS), Practice-Based Learning and Improvement (PBLI), Systems-Based Practice (SBP), Medical Knowledge (MK) and Patient Care (PC). Achievement of expertise in these areas requires an environment that supports a cohesive curriculum, the development of technical proficiency, the ability for self-analysis of practice, and the preparation for life-long continuous quality improvement. To realize these goals, residency programs must also have the basic elements of a scholarly approach to learning by both faculty and residents, must be cohesive, and must integrate the six general ACGME competencies.”

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
Continued emphasis on a scholarly approach to learning by both faculty members and residents will ensure the realization of the committee’s goals for residency education: the development of technical competence; the ability for self-analysis of practice; and the preparation for lifelong continuous quality improvement.

3. How will the proposed requirement or revision impact continuity of patient care?
n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
Programs that do not currently provide sufficient resources for scholarly activity may need to obtain such resources. Examples include adding a director of research, providing on-site statistical expertise, or developing a local IRB.

5. How will the proposed revision impact other accredited programs?
Resources provided for a neurological surgery program could be shared with other programs and improve their scholarly activity.

Requirement #: IV.D.3.a).(2)

Requirement Revision (significant change only):
At least 80 percent of residents must be involved annually in scholarly activity that is disseminated through peer- or non-peer reviewed publications, chapters, abstracts, or presentations. (Core)

1. Describe the Review Committee’s rationale for this revision:
   The proposed requirement reflects the current expectation for dissemination of resident scholarship, and is much lower than that expected of faculty members. The citation rate for currently accredited programs in this category using these criteria is extremely low (less than one percent). As stated in the position statement “The Learning Environment for ACGME-Accredited Residency Programs in Neurological Surgery”:

   “The goal of residency training in Neurological Surgery is for the resident to acquire the knowledge and skills required for the safe and effective practice of this specialty. The ACGME has defined six general competencies, which frame the educational environment for residency training. These require the development of expertise in the following areas: Professionalism (PROF), Interpersonal and Communication Skills (ICS), Practice-Based Learning and Improvement (PBLI), Systems-Based Practice (SBP), Medical Knowledge (MK) and Patient Care (PC). Achievement of expertise in these areas requires an environment that supports a cohesive curriculum, the development of technical proficiency, the ability for self-analysis of practice, and the preparation for life-long continuous quality improvement. To realize these goals, residency programs must also have the basic elements of a scholarly approach to learning by both faculty and residents, must be cohesive, and must integrate the six general ACGME competencies.”

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Continued emphasis on a scholarly approach to learning by both faculty members and residents will ensure the realization of the committee’s goals for residency education: the development of technical competence; the ability for self-analysis of practice; and the preparation for lifelong continuous quality improvement.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   Programs that do not currently provide sufficient resources for scholarly activity may need to obtain such resources. Examples include adding a director of research, providing on-site statistical expertise, or developing a local IRB.

5. How will the proposed revision impact other accredited programs?
   Resources provided for a neurological surgery program could be shared with other programs and improve their scholarly activity.

Requirement #: VI.B.2.c).(1)-VI.B.2.c).(1).(b)
Requirement Revision (significant change only):

**Common Program Requirement VI.B.2.c)** The learning objectives of the program must: ensure manageable patient care responsibilities. *(Core)*

The program director must make an assessment of the learning environment with input from faculty members and residents. *(Core)*

Minimum patient loads for most residents should be five on the general inpatient unit and four while on clinical neurological surgery services. *(Core)*

Programs must justify lower patient loads with evidence such as severity of illness indicators or other factors. *(Core)*

Because residents in the chief year or final year of education generally take on more patient care responsibilities than earlier in the educational program, minimum patient loads should be 10 on the general inpatient unit, and three in the intensive care unit. *(Core)*

1. Describe the Review Committee’s rationale for this revision:
   - The Common Program Requirement revision of Section VI (approved in 2017) included specific requirements for professionalism, including balancing service and education, and Review Committees were asked to specify expectations for manageable patient care responsibilities. The Review Committee did this in an FAQ, and attempted to propose patient loads in different environments and for residents at different levels to ensure sufficient clinical experience without an excess reliance on service. The proposed new requirements are derived from that current FAQ. By converting the FAQ to requirements, the intent is to ensure that programs pay particular attention to resident workload versus learning needs. The numerical requirements are worded as “should” and not “must” in recognition of the normal variations in clinical environments that occur on a daily basis and that are dependent on local circumstances.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   - **Ensuring an appropriate education and service balance will improve the learning environment and resident education.**

3. How will the proposed requirement or revision impact continuity of patient care?
   - **n/a**

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   - **Programs that have become heavily reliant on residents to provide non-educational service will need to add personnel, such as APs, NPs, etc., to do this instead of residents.**

5. How will the proposed revision impact other accredited programs?
   - **n/a**

**Requirement #: VI.E.2.a)**
Requirement Revision (significant change only): 

As members of the interprofessional health care team, residents must have key roles in diagnostic work-up, operative procedures, treatment decisions, measurement of treatment outcomes, and the communication and coordination of these activities with program faculty members and referring sources. (Core)

Specialty Background and Intent: Advanced practice providers, audiologists, certified registered nurse anesthetists (CRNAs), child-life specialists, nurses, nutritionists, operating room technicians, pharmacists, physical and occupational therapists, physician assistants, psychologists, radiology technicians, respiratory therapists, social workers, and speech and language pathologists are examples of professional personnel who may be part of interprofessional teams. The Review Committee recognizes that the needs of specific patients change with their health statuses and circumstances. The Review Committee’s intent is to ensure that the program has access to these professional and paraprofessional personnel, and that interprofessional teams be constituted as appropriate and as needed, not to mandate that all be included in every case/care environment.

1. Describe the Review Committee’s rationale for this revision:
   The Common Program Requirement revision to Section VI (approved in 2017) included specific requirements for teamwork, and Review Committees were asked to specify expectations for teams to address such issues as team composition, education, and/or resident role(s) in teams. The Review Committee did this in an FAQ. The part of the FAQ that specifies expectations for the role of residents in interprofessional teams was converted to a requirement, since teamwork is an essential aspect in the care of neurological surgery patients, and therefore an essential skill to be learned and practiced by residents. The remaining part of the FAQ was placed into the requirements document as Background and Intent to ensure this important element is considered by programs in planning the curriculum.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Emphasizing the importance of teamwork experiences will improve resident education and the quality of patient care.

3. How will the proposed requirement or revision impact continuity of patient care?
   n/a

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   n/a

5. How will the proposed revision impact other accredited programs?
   n/a

Requirement #: VI.F.4.c).(3)-(4)

Requirement Revision (significant change only):
The Review Committee will consider requests for a clinical and educational work hour exception only for residents at the PGY-2 level and above. (Core)

Programs submitting a first-time exception request must have a site visit prior to consideration by the Review Committee. (Core)

Specialty Background and Intent: Requests for a continued exception will be considered only at the second Review Committee meeting of a calendar year. Details for what to include in such a request are available on the Neurological Surgery section of the ACGME website. All required documentation, including the Site Visit Report when needed, must be received by the posted agenda closing date in order for a request to be considered at a specific meeting.

1. Describe the Review Committee’s rationale for this revision:
   The Review Committee for Neurological Surgery continues to be the only Review Committee that will consider requests for rotation-specific exceptions to the 80-hour educational work rule. The unique characteristics of the specialty that support this practice include long case duration for specialized operations that require intense concentration and psychomotor persistence. These abilities must be conditioned by exposure to these long cases many times over many years of the educational program. Further, unplanned urgent and emergent patient care needs are more common in this specialty than other surgical specialties, given the focus of practice. Neurological surgery educators have long appreciated the value of pre- and post-operative care by the neurological surgeon and accordingly increased the emphasis for outpatient education and training. The concern has been that limiting work hours could limit the availability of a resident to participate in the operation for a patient the resident has seen in the clinic and to be responsible for that patient’s post-operative care and counseling. The chief resident must develop not only technical competence as a surgeon, but also accountability and an emotional commitment to patient care decisions. Finally, neurological surgery educators place a special emphasis on scholarship as part of education and training. The Review Committee implemented rigorous guidelines in 2012 for use by programs to request an exception. Since then, the percent of programs with a current approved exception has declined to five percent. The guidelines have been and continue to be posted on the Neurological Surgery section of the ACGME website. The essential aspects of those guidelines have been converted to the four proposed new requirements, while the guidelines will continue to remain available on the website.

2. How will the proposed requirement or revision improve resident/fellow education, patient safety, and/or patient care quality?
   Continuing to permit an exception for a well-defined purpose is important to ensuring the availability of highly qualified neurological surgeons.

3. How will the proposed requirement or revision impact continuity of patient care?
   Some programs have obtained an exception for certain rotations specifically to ensure continuity of patient care.

4. Will the proposed requirement or revision necessitate additional institutional resources (e.g., facilities, organization of other services, addition of faculty members, financial support; volume and variety of patients), if so, how?
   n/a
5. How will the proposed revision impact other accredited programs?
   n/a