Accreditation Council for Graduate Medical Education

- A national study of neurosurgical residency competency development
- Defining Benchmarks for Case Minimums During Accreditation Council for Graduate Medical Education Accredited Total Joint Arthroplasty Fellowship Training
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- Biomarker profile and disease burden associated with intermittent and long-term oral corticosteroid use in patients with severe asthma prior to biologic initiation in real-life (STAR)
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see http://www.acgme.org/portals/0/pfassets/acgmenasneurosurgerywebinarslides.pdf

The purpose of a study was to identify the national trends of exposure to pediatric procedures during neurosurgical residency and to subsequently evaluate how neurosurgery residents' experiences correlate with the minimum requirements set forth by the American College of Graduate Medical Education (ACGME).

ACGME resident case logs from residents graduating between 2013 and 2017 were retrospectively reviewed. These reports were analyzed to determine trends in resident operative experience in pediatric procedures. The number of cases performed by residents was compared to the required minimums set by the ACGME within each pediatric surgical category. A linear regression analysis and t tests were utilized to analyze the change in cases performed over the study period.

A mean of 98.8 procedures were performed for each of the 877 residents graduating between 2013 and 2017. The total number of pediatric procedures declined at a rate of 1.7 cases/year ($r^2 = 0.77$, $p = 0.05$). Spine and Cerebrospinal fluid shunt procedures showed decreasing trends at rates of 1.9 ($r^2 = 0.70$, $p = 0.08$) and 1.2 ($r^2 = 0.70$, $p = 0.08$) cases/year, respectively. The number of trauma and brain tumor cases were shown to have increasing rates at 1.0 ($r^2 = 0.86$, $p = 0.02$) and 0.3 ($r^2 = 0.69$, $p = 0.08$) cases/year, respectively, with trauma cases showing significant increases. There was also a trend of increasing cases logged as the lead resident surgeon by 12.9 cases/year ($r^2 = 0.99$, $p < 0.001$). The number of cases performed by the average graduating resident was also significantly higher than the minimums required by the ACGME; residents, on average, performed 3 times the required minimum number of pediatric cases.

Neurosurgical residents graduating from 2013 to 2017 reported significantly higher volumes of pediatric neurosurgery cases than the standards set for by the ACGME. During this time, there was also a significant trend of increasing cases logged as the lead resident surgeon, suggesting more involvement in the critical portions of pediatric cases. There was also a significant, but not clinically impactful, decrease in pediatric case volumes during this time. However, the overall data indicate

that residents are continuing to gain valuable pediatric experience during residency training [1].

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278 Accreditation Council for Graduate Medical Education (ACGME) training programs were assessed to identify 923 full-time faculty members with spinal surgery designation defined by spine fellowship training or surgeon case volume >75% spine surgeries. Faculty were assessed with respect to parent discipline, years of fellowship training, academic rank, gender, and academic productivity (h index).

The spine-teaching workforce contains 55% orthopedic surgeons and 45% neurosurgeons with wide gender asymmetry overall and at all faculty ranks. Of the female spine surgeons, those with neurosurgical training (64.44%) nearly doubled the number with orthopedic training (35.56%). Academic productivity increased with academic rank similarly for both genders and subspecialties. Orthopedic spine surgeons had a higher mean fellowship number than neurological spine surgeons. Fellowship time of completion (intra-residency/infolded vs. post-residency) did not significantly affect h-indices. Addition of fellowship(s) conferred academic productivity benefit for orthopedic surgeons only.

Neurological and orthopedic spine surgery show similar patterns for spread of faculty across academic ranks and trends in academic productivity. There is marked gender disparity seen in both neurosurgical and orthopedic surgery with fewer female spine surgeons seen at every academic rank. Orthopedic spine surgeons have a greater mean fellowship number than their neurosurgical counterparts and lack of fellowship correlated with a lower academic productivity in orthopedic but not neurological spine surgery [2].

Resident work hour regulations are a major concern in residency training programs. Previous studies have noted the risks inherent in daytime sleepiness during the post-call period, including potential adverse patient outcomes.

Residents' self-perceptions of their degree of physiologic sleepiness were poor and that levels approached those of clinical sleep disorders.

Additional studies have shown the negative impact of sleep deprivation and the effects on decision making and memory.

Due to these concerns, the American College of Graduate Medical Education (ACGME) has mandated limits for resident work hours.

A night float system has been implemented in many institutions to address these concerns and to help in achieving this goal.

The daytime physicians are relieved by a night team that admits patients and takes care of patient-related tasks. The day team then returns the following day to continue the care of the patients. Thus, the extended hours of the post-call day are avoided.

Although NF is a potential solution, it has generated a number of concerns. Residents feel that NF does not provide adequate teaching and view the rotation as more of a “service” rotation rather than as a learning opportunity.

Another concern is the discontinuity of care, which may result in poor patient satisfaction and adverse outcomes.

Many studies examining the perceptions of residents towards the NF system have been limited by small sample sizes ranging from 10 to 24 residents, brief surveys consisting of 10 to 30 questions, experiences of a group of residents in a single hospital or a single post-graduate year, and a lack of comparison between a NF and a non-NF system.

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White MD, Zollman J, McDowell MM, Agarwal N, Abel TJ, Hamilton DK. Neurosurgical Resident Exposure to Pediatric Neurosurgery: An Analysis of Resident Case Logs. Pediatr Neurosurg. 2019 May 21:1-7. doi: 10.1159/000500299. [Epub ahead of print] PubMed PMID: 31112956.
2)
Post AF, Dai JB, Li AY, Maniya AY, Haider S, Sobotka S, Germano IM, Choudhri TF. Workforce analysis of spine surgeons involved with neurological and orthopedic surgery residency training. World Neurosurg. 2018 Oct 6. pii: S1878-8750(18)32198-3. doi: 10.1016/j.wneu.2018.09.152. [Epub ahead of print] PubMed PMID: 30300715.