Pediatric neurosurgery

- Integrating Radiomics and Lesion Mapping for Cerebellar Mutism Syndrome Prediction
- The RXR Agonist MSU-42011 Reduces Tumor Burden in a Murine Preclinical NF1-Deficient Model
- Cranial Ultrasonography-Standards in Diagnosis of Intraventricular Hemorrhage and Ventricular Dilatation in Premature Neonates
- Final Fusion Strategies in Early-Onset Scoliosis: Does Implant Density Make a Difference After Magnetically Controlled Growing Rod Treatment?
- Machine Learning and Artificial Intelligence in Intensive Care Medicine: Critical Recalibrations from Rule-Based Systems to Frontier Models
- Recent Advances in Brain Cancers
- Pott's Puffy Tumor in the Adult Population: Systematic Review and Meta-Analysis of Case Reports
- Timing of Magnetic Resonance Imaging (MRI) in Moderate and Severe TBI: A Systematic Review

Books

Pediatric neurosurgery books

Journals

Child's Nervous System

Journal of Pediatric Neurosciences

JOURNAL OF NEUROSURGERY:PEDIATRICS http://thejns.org

NEUROPEDIATRICS https://www.thieme-connect.com/products/ejournals/journal/10.1055/s-00000041

Pediatric neurosurgery journal

Regional comparison demonstrated a preference for the Journal of Neurosurgery and Child's Nervous System, respectively, but four of the top five journals were common to both groups. Applying the verbal formulation of Bradford's law to the North American citation database, a pattern of citation density was identified across the first three zones. Journals residing in the most highly cited first zone are presented as the core journals.

Bradford's law can be applied to identify the core journals of neurosurgical subspecialties. While regional differences exist between the most highly cited and most frequently published in journals among North American and European pediatric neurosurgeons, there is commonality between the top five core journals in both groups [1)].

Societies

Pediatric neurosurgery societies.

Links

International Bureau for Epilepsy

International League Against Epilepsy

Pediatric Neurosurgery Chapter of the Latinamerican Federation of Neurosurgical Societies (FLANC)

Resources

Hydrocephalus Association

About Kids Health Brain Tumours

Association for Spina Bifida and Hydrocephalus

Brain Tumour Research Assistance and Information Network

Hydrocephalus Foundation

Hydro Kids

International Bureau for Epilepsy

International League Against Epilepsy

Trends

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 ($r2 = 0.77$, $p = 0.05$). Spine and cerebrospinal fluid diversion procedures showed decreasing trends at rates of 1.9 ($r2 = 0.70$, $p = 0.08$) and 1.2 ($r2 = 0.70$, $p = 0.08$) cases/year, respectively. The number of trauma and brain tumor cases were shown to have increasing rates at 1.0 ($r2 = 0.86$, $p = 0.02$) and 0.3 ($r2 = 0.69$, $p = 0.08$) 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 ($r2 = 0.99$, $p < 0.001$). 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 [2)].

Perceived benefits and barriers to a career in pediatric neurosurgery: a survey of neurosurgical residents

Research suggests that there may be a growing disparity between the supply of and demand for both pediatric specialists and neurosurgeons. Whether pediatric neurosurgeons are facing such a disparity is disputable, but interest in pediatric neurosurgery (PNS) has waxed and waned as evidenced by the number of applicants for PNS fellowships. The authors undertook a survey to analyze current neurosurgical residents' perceptions of both benefits and deterrents to a pediatric neurosurgical career. METHODS: All residents and PNS fellows in the United States and Canada during the academic year 2008-2009 were invited to complete a Web-based survey that assessed 1) demographic and educational information about residents and their residency training, particularly as it related to training in PNS; 2) residents' exposure to mentoring opportunities from pediatric neurosurgical faculty and their plans for the future; and 3) residents' perceptions about how likely 40 various factors were to influence their decision about whether to pursue a PNS career. RESULTS: Four hundred ninety-six responses were obtained: 89% of the respondents were male, 63% were married, 75% were in at least their 3rd year of postgraduate training, 61% trained in a children's hospital and 29% in a children's “hospital within a hospital,” and 72% were in programs having one or more dedicated PNS faculty members. The residencies of 56% of respondents offered 6-11 months of PNS training and nearly three-quarters of respondents had completed 2 months of PNS training. During medical school, 92% had been exposed to neurosurgery and 45% to PNS during a clinical rotation, but only 7% identified a PNS mentor. Nearly half (43%) are considering a PNS career, and of these, 61% are definitely or probably considering post-residency fellowship. On the other hand, 68% would prefer an enfolded fellowship during residency. Perceived strengths of PNS included working with children, developing lasting relationships, wider variety of operations, fast healing and lack of comorbidities, and altruism. Perceived significant deterrents included shunts, lower reimbursement, cross-coverage issues, higher malpractice premiums and greater legal exposure, and working with parents and pediatric health professionals. The intrinsic nature of PNS was listed as the most significant deterrent (46%) followed by financial concerns (25%), additional training (12%), longer work hours (12%), and medicolegal issues (4%). The majority felt that fellowship training and PNS certification should be recommended for surgeons treating of all but traumatic brain injuries and Chiari I malformations and performing simple shunt-related procedures, although they felt that these credentials should be required only for treating complex craniosynostosis. CONCLUSIONS: The nature of PNS is the most significant barrier to attracting residents, although reimbursement, cross-coverage, and legal issues are also important to residents. The authors provide several recommendations that might enhance resident perceptions of PNS and attract trainees to the specialty [3)].

Central nervous system tumors account for the highest mortality among pediatric malignancies.

Prompts for pediatric neurosurgery

Prompts for pediatric neurosurgery

1)
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2)
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.
3)
Dias MS, Sussman JS, Durham S, Iantosca MR. Perceived benefits and barriers to a career in pediatric neurosurgery: a survey of neurosurgical residents. J Neurosurg Pediatr. 2013 Nov;12(5):422-33. doi: 10.3171/2013.7.PEDS12597. Epub 2013 Aug 30. PubMed PMID: 23992238.