GENDER DIVERSITY IN UNITED STATES NEUROSURGERY TRAINING PROGRAMS

Katelyn Donaldson¹, Katherine E. Callahan¹, Aaron Gelinne¹, Wyll Everett¹, S. Elizabeth Ames MD², Ellen L. Air MD, PhD ³, Susan R. Durham MD MS⁴

¹University of Vermont College of Medicine, Burlington, Vermont; ²Department of Orthopaedics and Rehabilitation, University of Vermont College of Medicine, Burlington, Vermont; ³Department of Neurosurgery, Henry Ford Health System, Detroit, Michigan; ⁴Division of Neurosurgery, University of Vermont College of Medicine, Burlington, Vermont
DISCLOSURES

- The authors do not have any disclosures.
INTRODUCTION

- Neurosurgery continues to be one of the medical specialties with the lowest representation of females in both the resident and faculty workforce. Women comprised nearly one half of all medical school graduates in the United States (US) in 2018\(^3\). Female residents account for nearly half of the total resident workforce in all specialties in US residency programs\(^1\). However, women account for 17.7% of neurosurgery residents according to the most recent report by the American Association of Medical College (AAMC), joining orthopedic surgery as the lowest among all medical specialties\(^1\). The gender gap in neurosurgery widens over the course of a neurosurgery career as women currently comprise only 7.4% of all practicing board certified neurosurgeons within the US\(^2\).

- There is limited data available on the gender distribution of faculty and residents in ACGME-accredited neurosurgery training programs. This information is critical in order to accurately measure the results of any effort to improve both the recruitment and retention of women in neurosurgery.

- The objective of the current study is to define the current gender distribution of faculty and residents in ACGME-accredited neurosurgery training programs.

METHODS

- Data publicly available through institutional and supplemental websites for neurosurgical faculty and residents at ACGME-accredited programs was analyzed for the 2017 - 2018 academic year. Data collected for faculty included gender, age, academic rank, H-index, ABNS certification status and leadership positions. Resident data included gender and post-graduate year of training.
RESULTS

- 106 ACGME-accredited neurosurgery programs included in the analysis

- Residents: 1350 neurosurgery residents in training
  - 246 (18.2%) female
  - 1104 (81.8%) male

- Faculty: 1,320 neurosurgery faculty
  - 115 (8.7%) female
  - 1205 (91.3%) male

- Academic rank:
  - Women more frequently assistant professors (female 18.0% vs male 36.1%, p<0.05)
RESULTS

- H-index: Male 18.8 vs Female 11.7 (p<0.0001)
  - Gender effect on H-index, p=0.0054
  - Academic rank on H-index, p<0.001

Figure 2. H-Index of Male and Female Neurosurgical Faculty
RESULTS

- ABNS certification:
  - 943 (78.3%) male faculty vs 69 (60%) female faculty, p<0.0001

Figure 3. Rate of ABNS Certification by Male and Female Faculty
DISCUSSION

This study serves to provide a snapshot of gender diversity in ACGME-accredited neurosurgery training programs. Although progress has been made toward greater gender diversity in the neurosurgical workforce, there are still disproportionately fewer female neurosurgeons achieving positions of higher academic rank and serving in leadership positions. Continued efforts to remove barriers to resident recruitment and career advancement opportunities for females is critical as our profession and our patients stand to benefit greatly from a diverse physician workforce.