From Birth to Practice: An Analysis of Migration Patterns Among U.S. Orthopaedic Surgeons

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Purpose:

The purpose of this study is to understand the geographic migration of orthopaedic surgeons from birth, through training, to final practice location, and determine what predicts where orthopaedic surgeons practice.

Methods:

This retrospective observational study analyzed data gathered by the American Medical Association (AMA) on 8,676 orthopaedic surgeons who completed residency training between 2004 and 2017 and had over 5 years in practice. Data extracted included location of birth, medical school, residency, and final attending practice location as of January 1st, 2023. Relationships were determined using chi-squared analysis and logistic regression.

Results:

Residency location was the most predictive of attending location, with 96.52% of residents from 2008 – 2017 represented. Attending surgeons located where they completed residency training was census division (CD) dependent and ranged from 16.37% (Mountain West) to 71.59% (Middle Atlantic Northeast) with an average of 49.34%. Significant associations ($p<0.00001$) were observed between attending location and birth, medical school, and residency locations for all CDs. Heatmapping of ACGME data showcased that residency allocation across the US is not predicated by the population of the given state.

Conclusion:

This study suggests that birth and training location are highly predictive of where orthopaedic surgeons will practice in the United States. These relationships are stronger in some areas of the country than others. Residency location was most predictive of practice location, and therefore, the geographic allocation of residency positions is likely to influence the distribution of practicing orthopaedic surgeons. Residency allocation and retention is highly variable across the United States, further impacting the distribution. This information should guide decision makers in graduate medical education to ensure that future expansion and/or reallocation of orthopaedic residency positions serves population needs and provides equitable access to orthopaedic care in the United States.