**ABSTRACT**

**PURPOSE:** The purpose of this study is to explore the current practice and geographic location trends of physicians certified in clinical genetics, clinical biochemical genetics, and medical biochemical genetics during the 2011, 2013, and 2015 certification cycles.

**METHODS:** Physicians' personal data was collected from public internet domains including the American Board of Medical Genetics and Genomics (ABMG) provider database, the CMS National Plan and Provider Enumeration System, publicly available professional biographies, and university affiliations. The search results were cross-referenced for the greatest accuracy. Geographic location data was plotted onto maps.

**RESULTS:** Approximately 27% (n=69) physicians board-certified in genetics are currently practicing in non-traditional roles. The physicians practicing outside of the traditional genetics field were categorized as follows: Obstetrics and Gynecology (27%, n=15), Internal Medicine (13%, n=9), Pediatrics (6%, n=4), and other fields (19%, n=13). Geographic location data determined twelve states have no practicing geneticists, and nearly 60% (n=30) of states have 2 or fewer geneticists from recent certification cycles.

**CONCLUSION:** Although geneticists practicing in non-traditional roles make contributions to other medical disciplines, these physicians are helping to perpetuate the growing deficit of practicing clinical geneticists. Further discussion is warranted on recruiting geneticists and geographic distribution to improve the quality of genetics services in the United States.

**INTRODUCTION**

Unequivocally, it is an exciting time to be a geneticist. With the wide expansion of molecular testing, including whole exome sequencing, into clinical practice diagnostic yield for previously undiagnosed conditions has increased drastically. In both the case of diagnostics and therapeutic, clinical geneticists are responsible for much of the disease-specific aspects of care. As ability to diagnose and treat improve, the demand for genetics services increases. Unfortunately, supply is not keeping up with demand.

This work has a shortage has been long discussed. An October 2004 report of the Banbury Summit on Training of Physicians in Medical Genetics was entitled “Situation is Critical” and underscored the increasing role of geneticists beyond traditional genetics roles into oncology, cardiology, and neurology. This report described approximately 80 trainees in slightly over forty programs out of approximately 190 total available positions. Although the breakdown of training is unknown from this document, it certainly does not appear that the situation has improved to any degree.

Unfortunately, the aging of the medical genetics workforce makes increasing recruitment of genetics personnel more crucial. The previously mentioned 2004 report suggests a median age of geneticists of approximately 52 years. In the 13 years since that data set has been collected, the workforce has continued to age, and we would expect that a percentage of the early genetics workforce (originally ABMG certified in 1982 and 1984) are no longer working, and a larger percentage is likely to retire in the next few years. Unfortunately, this cohort represents nearly 26% of the physician workforce.

However, we have cause for optimism in that a large percentage of the current genetics physician workforce has entered in the past five years. However, aside from the basic certification numbers we do not know much about the practices of physicians who have been recently certified in clinical genetics, clinical biochemical genetics, and medical biochemical genetics. This study seeks to explore the professional lives of physician geneticists who are board-certified in patient-oriented specialties by the American Board of Medical Genetics and Genomics (ABMG).