

# Equal Development and Progressive Responsibility: The History of the Mayo Clinic Neurology Residency

Christopher J. Boes

Department of Neurology, Mayo Clinic, Rochester, MN

The first Mayo Clinic neurology resident began training approximately 1 century ago. Over the subsequent 100 years, 639 budding specialists in diseases of the nervous system graduated from the Mayo Clinic Neurology Residency in Rochester, Minnesota. The history of the American residency has been thoroughly covered by Ludmerer in his 2014 book *Let Me Heal*, and a history of the Mayo Clinic Otolaryngology Residency Program was published in 2020.<sup>2</sup> Mulder discussed education in the Mayo Clinic Department of Neurology as part of an overview of the history of the department in 1971.<sup>3</sup> The history of the Mayo Clinic Neurology Residency Program was reviewed in a book by Mulder in 1988, but this was privately printed and not widely available. Todman summarized some of the contents of this book, but did not delve into the history of the training program. Using annual section/department reports and numerous other primary sources in the W. Bruce Fye Center for the History of Medicine at Mayo Clinic, this commentary will review the history of the Mayo Clinic Neurology Residency in detail. It will focus on the training program in Rochester, MN, while noting that neurology residencies were started at Mayo Clinic in Florida and Mayo Clinic in Arizona in the 2000s. Reciprocal development and progressive responsibility were essential components of the residency from the start.

## The Founding of the Mayo Clinic Neurology Residency

Interns and residents at Mayo Clinic in the late 1800s/early 1900s could not receive formal degrees, as the institution had no academic affiliation.<sup>6</sup> Walter Shelden moved from the teaching staff of the University of Minnesota Medical School to Mayo Clinic in 1913 to become its first neurology consultant (Mayo Clinic's term for faculty member).<sup>4</sup> In 1914, the University of Minnesota inaugurated graduate work in various fields of clinical medicine and surgery. Physicians could receive master's or PhD degrees in surgery, internal medicine, and other clinical fields.<sup>7</sup> Henry Woltman, who became Mayo's second neurology consultant in 1917, was a product of this innovative system at the University of Minnesota. He completed medical school at the University of Minnesota in 1913, did 1 year of internship at University Hospital in Minneapolis, MN, and then finished a teaching fellowship in neurology at the University of Minnesota from November 1914 through June 1917.<sup>8</sup> His fellowship was under the jurisdiction of the University of Minnesota Graduate School, not its medical school. Woltman stated that he was "among the first group of 11 vertebrates used in this experiment,"<sup>9</sup> and it worked out well for him. Woltman received a Doctor of Science degree in neurology for his thesis on the

central nervous system changes in pernicious anemia. Later this was changed to a PhD degree in neurology. Earning a master's or PhD degree in a clinical specialty as evidence of being a qualified specialist did not prevail in America in the long run, as specialty board certification won out as a proof of competence.

The Mayo Foundation for Medical Education and Research (Mayo Foundation), incorporated in 1915 from an endowment from William J. and Charles H. Mayo, was a graduate education link between Mayo Clinic and the University of Minnesota with the main purpose of elevating the standard for training medical specialists.<sup>6</sup> Applicants to the 3-year Mayo Foundation fellowships needed to have graduated from college and medical school and completed 1 year of internship. A thesis was required for those pursuing master's or PhD degrees. Neurology was not one of the "fellowships" offered in Rochester, MN, in 1915 through the Mayo Foundation–University of Minnesota affiliation (the word fellow used then equates to our present-day term resident).

The Mayo Clinic Neurology Residency was initiated when John (Jack) B. Doyle began his training in Rochester on August 1, 1919. Doyle had graduated from Rush Medical College in 1917, completed internship in Cincinnati, Ohio, and served in the US Army. While in the military in 1918, he completed a 3-month assignment at Mayo Clinic for special medical instruction.<sup>12</sup> After discharge in 1919, Doyle returned to Mayo Clinic, where his major was internal medicine and minor was neurology.<sup>13</sup> The October 1, 1919, Bulletin of the University of Minnesota clarified that the neurology residency in Rochester was grouped under internal medicine, along with dermatology and general medicine.<sup>14</sup> Shelden and Woltman were listed as supervising "practical work in neurology and psychiatry."<sup>14</sup> Doyle excelled clinically in the Mayo training program.<sup>13</sup> He changed his major from medicine to neurology and became a first assistant in neurology on October 1, 1921.<sup>12,15</sup> The term first assistant could refer to a junior faculty member (in the early years of the neurology section) or a senior resident (by the late 1940s). Doyle received a Master of Science degree in neurology in December 1923 for a thesis on glossopharyngeal neuralgia, and he was named a Mayo Clinic consultant in the section of neurology in January 1925.<sup>12,15,20,21</sup> The label "section" (or later "sections" when there were more faculty members) was used instead of department until 1966 when the neurology sections officially became a department. Doyle worked at Mayo Clinic until 1931, leaving during the Depression to work in California.