

Valuation of Neurological Services: Overview & Competitive Environment

Neurological services encompass the diagnosis, treatment, and long-term management of disorders of the brain, spinal cord, and nervous system, a category of conditions that together represent some of the most prevalent and disabling in the U.S. As the population ages and the incidence of chronic and acute neurological conditions continues to rise, demand for neurological services is growing at a pace that increasingly outstrips the available supply of specialists, with significant implications for the valuation of physician services and related healthcare entities. This first installment in a four-part series examining the valuation of neurological services begins with an overview of the specialty and an analysis of the competitive environment.

Overview of Neurological Services

Neurology is the medical specialty concerned with the diagnosis, treatment, and management of disorders of the brain, spinal cord, peripheral nerves, and muscles, as well as the blood vessels supplying these structures. Neurologists are medical doctors specially trained to evaluate complex clinical presentations through detailed neurological examination and interpretation of advanced diagnostic studies, including electroencephalography (EEG), nerve conduction studies, electromyography (EMG), and advanced neuroimaging.¹

The breadth of neurological disease contributes to its substantial impact on the U.S. healthcare system. Nearly one in two Americans lives with a neurological disease or disorder.² Neurological conditions span a wide clinical spectrum, including acute conditions such as stroke and traumatic brain injury, episodic conditions such as epilepsy and migraine, and chronic progressive conditions such as multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis (ALS), and Alzheimer's disease and other dementias. This clinical diversity means that neurological services are delivered across a wide range of settings and care models, from outpatient subspecialty clinic to inpatient consult service to dedicated neurological critical care unit.

Within the specialty, neurologists frequently pursue additional fellowship training in a recognized subspecialty. The Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Psychiatry and Neurology (ABPN) recognize subspecialty training in vascular neurology, epilepsy, clinical neurophysiology, neuromuscular medicine, and child neurology, among others. The United Council for

Neurologic Subspecialties (UCNS), established in 2003, accredits training programs and certifies physicians in ten additional neurologic subspecialties, including behavioral neurology and neuropsychiatry, headache medicine, geriatric neurology, neurocritical care, and interventional neurology.³ Practice settings range from outpatient general and subspecialty clinics to hospital-based inpatient consult services, dedicated neurology units, and neurological critical care units at major academic medical centers. This diversity of conditions, subspecialties, and practice configurations directly shapes the structure and terms of neurological service arrangements, with meaningful implications for valuation analysis.

Competitive Environment

Supply of Neurologists

As of 2024, there were over one million active physicians in the U.S., of which approximately 14,949 were neurologists.⁴ Additionally, approximately 23.9% of the U.S. physician workforce was age 65 or older as of 2024; this percentage was even higher in neurology, with 31.5% of neurologists aged 65 or older,⁵ indicating that a substantial portion of the current physician population will approach retirement in the coming decade. According to an Association of American Medical Colleges (AAMC) physician workforce analysis, physicians typically retire around age 67.⁶ This trend may account for the anticipated stagnant growth in physician supply going forward. In addition to workforce attrition through retirement, another key factor in the supply of available physicians is the pace at which new physicians enter the workforce.

Over the past two decades, the average number of hours worked per week has decreased 7.6% among all physicians, from 52.6 to 48.6 hours per week.⁷ This progressive decline in physician productivity indicates that the supply of neurologists will be constrained not only by a decline in the absolute number of providers, but also by the reduction in hours worked by the remaining workforce. The AAMC projects a total physician shortage of 13,500 to 86,000 physicians by 2036, with the American Academy of Neurology (AAN) Workforce Task Force estimating a 19% neurologist shortfall representing approximately 3,380 unfilled positions.⁸ Combined with a mean neurologist age of 52 years and the continued growth of the U.S. population over age 65,

the U.S. faces a critical shortage of these specialists in the near future.

According to a 2021 AAN workforce report, nearly every state has a “large mismatch...between the need for neurologists and neurologic services and the availability of neurologists to provide these services.”⁹ As a result, patients are experiencing reduced access to care and worse outcomes, while neurologists attempting to meet this demand face significant burnout.¹⁰ In an effort to address this shortage, the AAN has suggested increased adoption of teleneurology and educating referral sources on which conditions require a neurological intervention.¹¹

Demand for Neurology Services

The demand for neurological services is driven principally by the rising prevalence of neurological disorders and the widening gap between the supply of neurological specialists and the patient population requiring their services. A 2021 study found that the incidence and prevalence of stroke, Alzheimer’s disease

and other dementias, and migraines increased across all states between 1990 and 2017.¹² Because neurological disorders are associated with aging, the incidence and prevalence of these conditions is anticipated to continue to increase as the U.S. population grows progressively older; by 2027, nearly one in five Americans will be age 65 or older.¹³

Despite the substantial gap between the supply of neurologists and the demand for their services, workforce scarcity does not translate into correspondingly higher reimbursement for neurological services. Unlike private markets, where supply constraints can drive up prices, government reimbursement is set through a fixed payment framework that applies uniformly regardless of workforce supply and demand. The second installment of this series will examine the reimbursement environment applicable to neurological services, including the structure of Medicare physician payment and evolving telehealth reimbursement policy.

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