

**Neurologists** are trained to diagnose, treat, and manage disorders of the brain and nervous system such as dementia, Alzheimer's, Parkinson's, epilepsy, migraine, ALS, multiple sclerosis (MS), traumatic brain injury (TBI), and stroke.

#### **Demand for neurologic care is increasing:**

- Stroke is ranked as the third leading cause of death in the United States.<sup>1</sup>
- Alzheimer's disease is ranked as the sixth leading cause of death in the United States.<sup>2</sup>
- 5.4 million Americans are currently diagnosed with Alzheimer's disease. The American Alzheimer's association projects that the number will triple to 16 million by the year 2050.<sup>3</sup>
- Parkinson's disease affects 1 million Americans, with at least 60,000 new cases reported annually.<sup>4,5</sup>
- According to a global study conducted by the World Health Organization, 8 out of 10 disorders in the 3 highest disability classes are neurologic problems.<sup>6</sup>
- In 2008, migraine-related headaches were the first-listed diagnosis for over 3 million emergency room visits in the United States (comprising 2.4 percent of all emergency room visits).<sup>7</sup>

#### **Neurologists provide best quality care for patients with neurologic disorders:**

- Patients consider MS-related care significantly superior when it is delivered by neurologists compared to other physicians.<sup>8</sup>
- An increased number of stroke physicians, including neurologists and neurosurgeons, were associated with an increased usage of rt-PA – an FDA approved treatment that is considered the most effective therapy for acute ischemic stroke.<sup>9</sup>
- Stroke patients seen by a neurologist (5.6 percent) were less likely to die during hospitalization than those seen by a non-neurologist (13.5 percent).<sup>10</sup>
- The risk of 1-year mortality for stroke patients who received neurology care was 77 percent of the risk for patients who did not.<sup>11</sup>
- Ischemic stroke patients admitted to neurology services had better prognostic profiles, i.e., lower likelihood of having either completed stroke or cardiac comorbidity, and were less likely to die within one and six months of stroke onset.<sup>12</sup>

#### **Neurologic care limits unnecessary health care costs:**

- Ischemic stroke patients treated by a neurologist had a lower risk of in-hospital mortality (4.6 percent) than patients treated by non-neurologists (9.5 percent). In addition, a traditional analysis of data showed that ischemic stroke patients treated by a neurologist had shorter hospital stays and lower charges.<sup>13</sup>
- Patients with intracerebral hemorrhage who were seen by both neurologists and neurosurgeons stayed at a hospital for a shorter time than patients seen by internists: the median 'hospital length of stay' for patients seen by neurologists was 4.5 days, for patients seen by neurosurgeons it was 5 days, whereas for patients seen by internists 7 days.<sup>14</sup>
- Sixty-five percent of patients were discharged earlier as a result of neurologic consultation. Also, neurologic consultation resulted in a significant change in diagnosis in 55.5 percent of cases and a significant change in case management in nearly 70 percent of cases.<sup>15</sup>
- Stroke patients treated by the department of neurology were discharged an average 16 days earlier (24 vs. 40 days) than patients treated in other medical departments.<sup>16</sup>
- Non-neurologists may over-utilize EEG tests: when non-neurologists had neurologist oversight when ordering EEGs, the rate of normal results decreased dramatically from 73 percent to 43 percent. Over the same period of time, the rate of normal results for neurologists was 28 percent.<sup>17</sup>
- There may be a 25-percent reduction in the ordering of unnecessary EMG tests if patients were seen by a neurologist.<sup>18</sup>

#### **We face a shortage of neurologists to treat an increasing number of neurologic patients:**

- The supply of neurologists will fall 20 percent below demand by 2020.<sup>19</sup>
- Nonprocedural specialties, like neurology, experience difficulties attracting US medical students.<sup>20</sup>
- US medical student and residents perceive neurology as the most difficult specialty.<sup>21</sup>
- Current health care regulations and policies favor procedural specialties over nonprocedural specialties like neurology; e.g., between 2000 and 2008, Medicare payments for procedural services grew by 84 percent, while payments for nonprocedural services grew by 48 percent.<sup>22</sup>

- <sup>1</sup> National Center for Health Statistics. Available at: [www.cdc.gov/nchs/fastats/deaths.htm](http://www.cdc.gov/nchs/fastats/deaths.htm)
- <sup>2</sup> National Center for Health Statistics. Available at: [www.cdc.gov/nchs/fastats/deaths.htm](http://www.cdc.gov/nchs/fastats/deaths.htm)
- <sup>3</sup> 2011 Alzheimer's disease Facts and Figures (online). Available at: [www.alz.org/downloads/Facts\\_Figures\\_2011.pdf](http://www.alz.org/downloads/Facts_Figures_2011.pdf). Accessed May 12, 2011.
- <sup>4</sup> Parkinson's Disease Foundation (online). Available at: [www.pdf.org/en/parkinson\\_statistics](http://www.pdf.org/en/parkinson_statistics). Accessed May 12, 2011.
- <sup>5</sup> ARRA Investments in Parkinson's Disease (online). Available at: [report.nih.gov/recovery/investmentreports/ViewARRAInvRpt.aspx?csid=286](http://report.nih.gov/recovery/investmentreports/ViewARRAInvRpt.aspx?csid=286). Accessed on May 18, 2011.
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