## STROKE CENTERS

A study of Medicare patients led by researchers at Duke University Medical Center found that stroke victims were more likely to survive if care was provided primarily by a neurologist rather than a nonspecialist (119). One-fourth (25%) of older (65+) patients treated for stroke by nonspecialists died within 90 days compared with 16% of those treated by neurologists; the researchers also found patients cared for by neurologists had less disability than other stroke patients.

The importance of specialized health care providers and the urgency of the limited time frames within which to treat stroke led the Brain Attack Coalition (chaired by the National Institute of Neurological Disorders and Stroke at NIH) to publish recommendations in 2000 for the establishment of hospital stroke centers to reduce stroke-related disability and death (120). There are two major goals behind these recommendations: (1) the improvement in the level of care received by stroke victims and (2) the standardization of the acute care provided to patients.

Two types of stroke centers were recommended by the Brain Attack Coalition, primary stroke centers to provide acute care and comprehensive stroke centers to care for those patients in need of extensive care. Based on the guidelines in place for emergency treatment provided in trauma centers, the recommendations for primary stroke centers include:

- an acute stroke team, to include a physician with experience in diagnosing and treating cerebrovascular disease and a minimum of one other health care provider. The team should be available 24 hours a day, seven days a week.
- written protocols to reduce time and complications of treatment
- improved coordination of EMS and hospitals
- an emergency department staff trained in the diagnosis and treatment of stroke
- access to an established stroke unit for specialized care
- provision of neurological services within two hours
- brain imaging capabilities and laboratory services
- a stroke registry or database to track and measure patient outcomes
- continuing medical education to the centers' professional staff

### WEST VIRGINIA STROKE RESOURCES

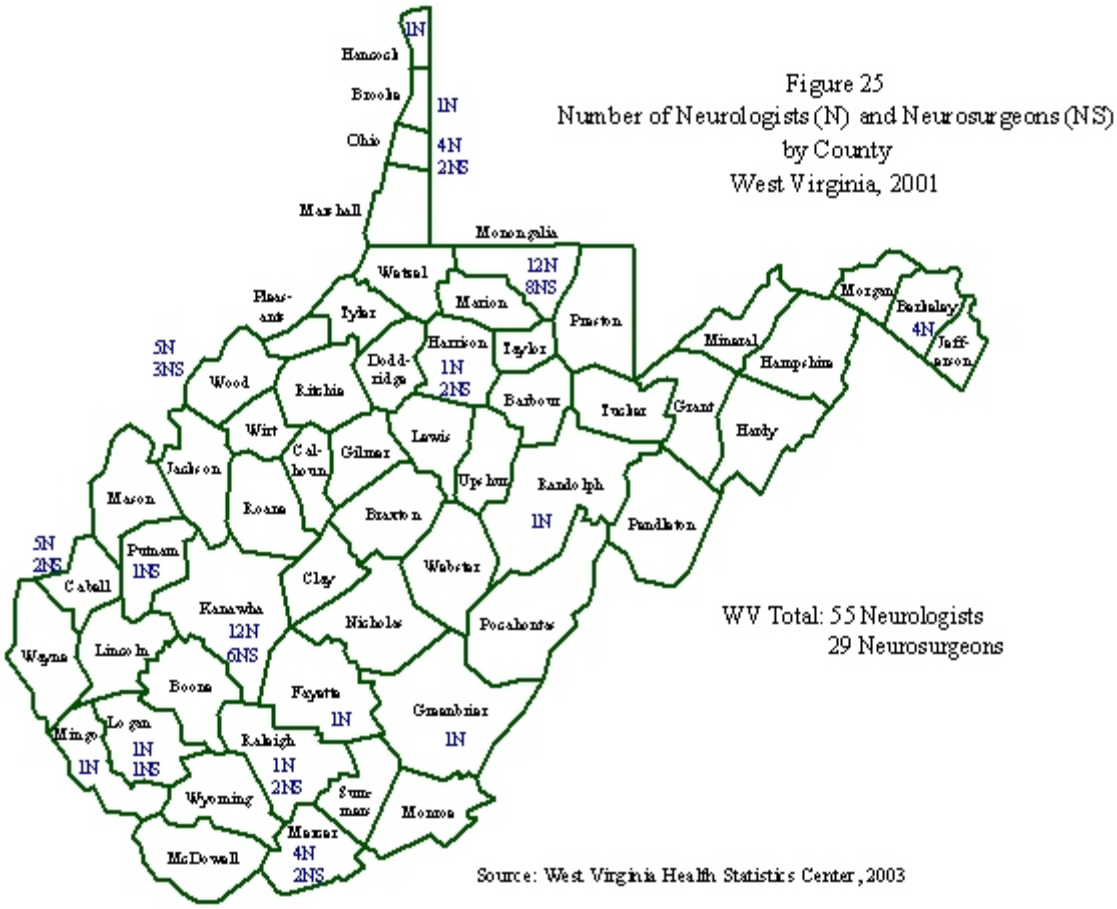
*Neurologists and Neurosurgeons*

As of 2001, West Virginia had 55 licensed neurologists and 29 neurosurgeons providing patient care in the state. Figure 25 shows these practice locales by county. The majority of doctors with a specialty in neurology or neurosurgery are currently located in the southern and northern regions of the state, with limited access in the middle, more rural counties.

*Stroke Registries*

The West Virginia University (WVU) Stroke Center/West Virginia University Hospital (WVUH) Stroke Registry was begun in 2000. It is a hospital-based registry that collects data on all WVUH discharges with DRG 14 and 15 designations (and, as of October 1, 2002, DRG 524)[3]. Data are reviewed annually by the multidisciplinary members of the WVU Stroke Center; the database is used for quality assurance, tracking patient outcomes, and research.

In 2000, the Charleston Area Medical Center (CAMC) participated in a one-year pilot study of the ETHOS Stroke Registry, a national web-based acute stroke treatment registry. The following year, CAMC initiated its own hospital-based stroke registry. Data are collected on a monthly basis for all discharges with DRG 14, 15, and 524 designations and utilized during monthly Stroke Team meetings to monitor patient outcomes and develop and benchmark clinical, financial, and performance improvement activities.




[3]In 2002, coding changes resulted in TIA diagnoses being moved from DRG 15 to DRG 524.