



**WRITTEN STATEMENT OF DR. RALPH SACCO, MD, FAHA**

Chairman of Neurology, Professor of Neurology, Public Health Sciences, Human Genetics, and Neurosurgery, University of Miami Miller School of Medicine, and Chief of the Neurology Service, Jackson Memorial Hospital, Miami, FL, and Past President of the American Heart Association/American Stroke Association

**Senate Special Committee on Aging Roundtable:  
Harnessing the Power of Telehealth: Promises and Challenges?  
Tuesday, September 16, 2014**

Chairman Nelson, Ranking Member Collins, and other Members of the Committee, thank you for the opportunity to participate on behalf of the American Heart Association/American Stroke Association at today's Roundtable on telehealth.

Numerous studies have demonstrated that the use of telemedicine in the treatment of stroke – now commonly referred to as “telestroke” care – can be tremendously helpful in improving access to high quality stroke care. Stroke is the fourth leading killer of Americans, a leading cause of serious, long-term disability, and the second leading cause of dementia. Approximately 795,000 people experience a stroke each year in the United States, and about 70 percent of the total hospitalizations for stroke occur among adults ages 65 and older.

Every minute matters when treating stroke. The recommended treatment for acute stroke must begin as soon as possible after symptom onset to be most effective and reduce disability but within no longer than 3 to 4-1/2 hours of the onset of stroke signs or symptoms. There are, however, a number of barriers that prevent patients from receiving acute treatment within this critical timeframe, including long distances to stroke center hospitals, a shortage of vascular neurologists, and patients not arriving at the hospital within the treatment time window. As a result of these and other barriers, only 3 to 6 percent of patients receive the clot-busting treatment tPA recommended by the latest scientific guidelines for acute stroke.

The use of telestroke has shown great promise in improving patient access to recommended stroke treatments in rural and other “neurologically underserved” areas – enhancing access to high quality stroke consults and increasing the number of patients who receive tPA by six-fold in some hospitals. Moreover, the outcomes for stroke patients who are cared for in hospitals with telemedicine support have been comparable to those achieved in other stroke centers and have surpassed those achieved by general hospitals without telemedicine support or stroke units.

Rapid and accurate diagnosis of acute ischemic stroke, the most common type of stroke, is a critical first step to ensuring that these patients receive the optimal care. A variety of conditions can mimic acute stroke, but many rural or community hospitals do not have stroke neurologists available or on-call around-the-clock to examine and diagnose patients in-person. Telemedicine, using the “hub-and-spoke model,” can meet this need. When a patient presents at a rural or community hospital that does not have a stroke expert readily available, the Emergency Department physician can use a telemedicine

network to consult with a stroke expert at a stroke center serving as the hub. Using fully interactive audio-video systems, the stroke expert at the hub hospital can interact with the patient and the bedside physician and swiftly and accurately perform the NIH Stroke Scale, a 13-item neurological exam. The other component of a telestroke evaluation is reading of the patient's brain CT scan to ensure that the patient is having an ischemic stroke, the most common type of stroke caused by a clot, and is therefore a candidate for clot-busting therapy. Here too, review of the CT scan by a stroke specialist or radiologist using a teleradiology system can occur in an accurate and timely manner and a medical opinion for or against use of tPA can be made when on-site stroke expertise is not immediately available. This use of telemedicine in the acute treatment of stroke has greatly helped to improve the percentage of patients who receive the recommended acute stroke treatment and thus have reduced disability and lowered costs.

Despite the proven benefits of telestroke, there are still a number of barriers to its effective implementation. These barriers were outlined in a 2009 policy statement from the American Heart Association that made recommendations for the implementation of telemedicine within stroke systems of care. Three key barriers are the inadequate reimbursement by Medicare for telemedicine consultation for patients at urban and suburban hospitals, limitations in access to telemedicine due to difficulty with cross-state medical licensing, and lack of infrastructure funding. We particularly encourage Congress to address the Medicare reimbursement barrier and help make telestroke care more widely available.

The most significant step Congress could take would be to allow Medicare to reimburse for telehealth services that originate in urban and suburban areas, as well as in rural areas. Although many areas not served or underserved by neurologists and other specialists are rural, many other areas of the country – including some urban and suburban areas – do not have appropriate access to acute stroke care. There are roughly four neurologists per 100,000 people in the United States treating the nearly 800,000 new or recurrent strokes that occur each year. Even in urban settings, patients may experience delays to diagnosis and treatment, largely as a result of neurologists having competing demands on their time that prevent them from being in the Emergency Department 24/7 in person. Telestroke has proven to be an effective means of helping provide high-quality stroke care in areas underserved by neurologists, including in New York, Massachusetts, and many other regions that are not just rural areas. One recent study of four urban hospitals in Illinois with low tPA treatment rates found that their utilization of tPA increased by two to six times after telestroke was implemented. However, the Medicare policy of limiting reimbursement for telehealth services to those originating in only rural areas has hampered the development of sufficient stroke consultation coverage. We urge Medicare to expand coverage for telestroke consultations beyond that of rural regions.

Medical licensure can also be a challenge for telestroke networks that cross state lines. The American Heart Association/American Stroke Association has supported steps taken by the Centers for Medicare and Medicaid Services to make the credentialing and privileging process less burdensome for telemedicine practitioners. However, multi-state licensure continues to be an administrative and financial burden for telestroke networks. Under current law, the remote consulting physicians must be licensed in the state where the patient is located. In most telestroke programs, the hub hospitals have addressed the licensure issue by assuming the burden of ensuring that all consulting physicians are licensed to practice in all necessary states. There are a number of proposals that have been put forward to address the complicated problem of licensure. For instance, the Federation of State Medical Boards

has proposed a draft Interstate Licensure Compact that would provide a streamlined process for physicians to get licensed in states that adopt the compact. In Congress, legislation has been proposed that would allow Medicare providers who are licensed in one state to treat Medicare patients in another state without obtaining a license in the second state. In its 2009 policy statement on telestroke, the AHA/ASA recommended that state medical boards adopt a uniform national licensure process for telemedicine practice.

Finally, lack of infrastructure funding continues to be a common barrier to the development and implementation of new telestroke networks. There are a range of necessary costs involved in developing and setting up telestroke networks, including planning costs, the purchase of equipment, training for medical personnel in the use of the equipment, the establishment of appropriate telecommunications connections, and the costs of licensing and credentialing medical personnel to participate in the network. These costs have largely been borne by the telestroke hub hospitals.

In addition to improving access to the recommended care, we believe the greater use of telestroke will also result in healthcare cost savings to the federal government by reducing disability and the need for more extensive medical care. Several studies have clearly shown that the use of tPA is cost-saving for stroke care. According to a study published in the *New England Journal of Medicine*, stroke patients receiving clot-busting therapy were at least 30 percent more likely to have minimal or no disability at three months, compared to patients who did not receive this treatment. These patients also have shorter hospital stays and are more frequently discharged to their homes rather than to more costly nursing homes. In addition, the Veterans Administration Stroke Study (VAST) showed that neurologist care for acute stroke patients, which can be provided via telemedicine when local neurological expertise is lacking, was associated with lower in-hospital mortality and less long-term disability.

Numerous studies have found that greater utilization of tPA can achieve significant cost savings. For example, one study found that the average cost savings when administering tPA was \$4,255.00 per treated patient, largely as a result of decreased need for nursing home care and decreased utilization of rehabilitation by the patient who received treatment. Another study estimated net savings of \$1,436 per patient, even after the costs of implementing the telestroke network and administering tPA were accounted for.

In conclusion, thank you again for the opportunity to participate in today's Roundtable. We are convinced that expanding the use of telestroke will greatly improve the quality of care that stroke patients receive, increase the utilization of effective acute stroke treatments, reduce stroke-related disability for many Americans, and save the health care system money. Unfortunately, however, the current Medicare policy of limiting reimbursement for telehealth services only to those beneficiaries originating in rural areas has particularly hampered the development of sufficient stroke consultation coverage. We therefore encourage Congress to eliminate the Medicare rural originating site requirement altogether or, if that is not feasible, specifically eliminate the rural originating site requirement for acute stroke telehealth services, such as is proposed in Section 105 of the bipartisan Telehealth Enhancement Act of 2013, introduced by Senator Cochran in the Senate and Representatives Gregg Harper, Mike Thompson, and others in the House. Thank you for your consideration of my comments.