

American Stroke Month The Role of the Professional Stroke Community

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The past year has been an exciting one for the stroke field. In 2017 and early 2018, we saw the results of clinical trials demonstrating the benefits of mechanical thrombectomy in selected patients with large vessel occlusion up to 24 hours after stroke,^{1,2} data suggesting a benefit in stroke prevention by closing patent foramen ovale in some patients,³ and the publication of new American Heart Association (AHA)/American Stroke Association (ASA) guidelines on acute stroke⁴ and the definition and management of high blood pressure.⁵ These critical advances have the potential to improve public health by reducing the incidence, mortality, and morbidity of stroke. All of the consequences of this critical work, however, can only reach their full potential through public awareness and education: prevention and treatment can only succeed if they reach the public and our patients.

While the AHA has focused on fighting stroke since the 1950s, the American Stroke Association (ASA) was created as a division of the AHA 20 years ago to amplify its efforts to educate the public and healthcare providers about stroke prevention, treatment, and rehabilitation. The ASA is, in essence, the public-facing arm of the AHA's stroke efforts. The mission of the ASA is to accelerate the implementation of science into practice by providing a link between the high quality, crucial research published in *Stroke* and similar journals, and the public. Essential to this link is a clear, consistent message that is directed at the level of public understanding. For example, the ASA likes to say "stroke is preventable, treatable, and beatable," which provides a simple way to combine into a single statement its three core messages around prevention, acute treatment and intervention, and rehabilitation and recovery after stroke.

One of the year's main events for the ASA is American Stroke Month, recognized during May, when the ASA, together with other organizations such as the National Institute of Neurological Disorders and Stroke, amplifies its stroke awareness and education messages for the public and professionals. Through its Together to End Stroke initiative, the ASA brings together many of its stroke educational and outreach programs. Details of these programs can be found at strokeassociation.org.

The opinions expressed in this article are not necessarily those of the editors or of the American Heart Association.

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The website makes available free materials designed for patients, caregivers, and the public at-large, including informational handouts about stroke warning signs and blood pressure treatment, educational videos, and materials specific for multicultural communities. The website's Stroke Resource Center (www.strokeassociation.org/resources) pulls together all of the tools to help health professionals further their own knowledge and that of their patients into a single location. All of the materials are intended to be used by stroke specialists and other physicians, nurses, health educators, and others in emergency rooms, hospitals, and doctors' offices. Consistent with the AHA/ASA value of reaching people where they are, these materials can also be used in other settings, including schools, community centers, churches, and other places where people at risk of stroke gather. It is anticipated that the professional stroke community will endeavor to work with their colleagues and other partners to facilitate these important messages about stroke, and that, in particular, those with particular skills and interests in health education will work to demonstrate the effectiveness of these outreach methods.

One of the main messages promoted by the ASA during American Stroke Month is the F.A.S.T. educational campaign to increase recognition of stroke symptoms and emphasize the importance of seeking emergency treatment in the case of potential stroke. F.A.S.T. uses a catchy acronym—standing for Face drooping—Arm weakness—Speech difficulty—Time to call 911—to remind people of stroke signs and symptoms and of the need to seek help immediately by calling 911. ASA data suggest that the familiarity of the public with the F.A.S.T. warning signs has jumped over the past 5 years from 24% to 47% (unpublished data). Health literacy and behavioral science experts have now provided peer-reviewed evidence, moreover, that campaigns such as F.A.S.T. can improve public awareness and reaction to the presence of stroke symptoms. For example, a public education campaign using the F.A.S.T. mnemonic increased the proportion of people in New York who expressed an intention to call 911 in response to stroke symptoms being present in themselves and others.⁶ More recently, the use of video games to teach stroke symptoms to children was shown to improve their recognition of stroke⁷; in some cases, these children have even appropriately called 911 in response to witnessing a stroke in public, potentially saving lives. Key to public health education is cultural literacy or familiarity with the needs and interests of the specific subpopulation being targeted; thus, culturally tailored video messages for black and Hispanic populations were effective at increasing intent to call 911 after witnessing a stroke.⁸ Despite these efforts, delays in seeking treatment continue to persist.^{9,10} Just as evidence-based strategies demonstrate the efficacy of clinical interventions, the community of stroke professionals has engaged in behavioral and education research to demonstrate the effectiveness of interventions designed to

improve public health awareness and knowledge around stroke, but further research is needed to improve our understanding of the barriers to calling 911 and effective strategies and messaging to break down these barriers.^{9,10}

Stroke professionals have also enthusiastically endorsed other activities as part of American Stroke Month in an effort to get treatments to their patients in an optimal manner. Stroke simulations, for example, have been embraced as a way to prepare the stroke response team and the receiving healthcare team more broadly for patients with acute strokes. In light of the mantra “time is brain,” the ASA encourages consistent and streamlined responses to stroke care to maximize effectiveness. Online stroke simulation support materials can also be found at the ASA website. Data are beginning to emerge to demonstrate that simulations can reduce door-to-needle times, though more research in this area is needed, as well.¹¹ With similar goals to improve acute care, the ASA national quality improvement program Get With The Guidelines-Stroke has expanded dramatically since its inception in 2003, from an original pilot among 24 hospitals to its current use in over 2000 hospitals, collectively caring for >80% of ischemic stroke patients in the United States. Get With The Guidelines-Stroke and its sister program, Target: Stroke, which focuses on reducing delays in initiation of thrombolysis in participating hospitals, have demonstrated that quality improvement programs for stroke can reduce door-to-needle time and increase the proportion of patients who are treated within 60 minutes of symptom onset (the Golden Hour for stroke treatment) from 29% to 53%.¹² Although these programs are not specific to Stroke Month, the month of May does provide an opportunity to bring these programs to the attention of the public.

American Stroke Month includes getting the message out about these and a host of other activities that reduce the burden of stroke. Federal advocacy efforts, for example, have led to the enactment into law of the Furthering Access to Stroke Telemedicine Act (or FAST Act), which will expand Medicare coverage for stroke telemedicine by removing geographic restrictions and the removal of Medicare’s caps on outpatient therapy services. ASA stroke center certification programs now include Thrombectomy-Capable Stroke Centers, as well as Primary, Comprehensive, and Acute Stroke Ready Hospitals, ensuring that the best treatments can be made available to patients in a diversity of settings. The ASA has also consistently argued for increased National Institutes of Health funding for stroke-related research, and the ASA has provided funding of its own for stroke research, to the tune of \$366 million for nearly 2400 projects since 1998, including generous support from its largest backer of stroke research, the Henrietta B. and Frederick H. Bugher Foundation.

The month of May, American Stroke Month, is a highlight of the stroke calendar. First and foremost, it is a time to reach, in a focused way, the public and our patients with crucial information about stroke prevention, treatment, and recovery. It is also, of course, a time to celebrate the accomplishments of the dedicated stroke community, our colleagues, and peers. Finally, as scientists, we anticipate that Stroke Month will increasingly be a time when the professional community’s research efforts in public education, behavior change, implementation, and quality

assurance shine in the same way as its basic, translational, and clinical science. Demonstration of the value of these outreach efforts in a critical and unbiased fashion is essential to who we are and what we do. *Stroke* will continue to be part of that effort.

Disclosures

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