

Stroke Program



↑ The Stroke Program at Barrow Neurological Institute is among the most experienced and respected in the Southwest.

EVERY 40 SECONDS, someone in the United States has a stroke. Every four minutes, someone dies of a stroke. In addition to being the fifth leading cause of death in the United States, stroke also is the leading cause of long-term disability. The most critical element in caring for people who have had a stroke is time – time is brain. Put into perspective, by the time you finish reading this, an American will have suffered a stroke!

A stroke needs to be recognized and treated as soon as possible to minimize brain damage. Quick treatment is the key to saving stroke victims; the likelihood of a good outcome falls 10% for every 30 minutes that blood flow to the brain is interrupted. Untreated for over an hour, your brain ages more than four years due to the loss of neurons.

Barrow has one of the most experienced programs in the country and cares for more stroke patients than any other care center in the southwest.



Annually,
795,000
people in the U.S.
have a stroke



**EVERY
4 MINUTES**
someone dies of a stroke



**EVERY
40 SECONDS**
an American has a stroke

BY THE NUMBERS



CLINICAL IMPACT

100,878

BNI Clinic Visits

77,000+

Patients Treated

5,000+

Brain & Spine Surgeries



GLOBAL IMPACT

47

Visiting Scholars from
Argentina, Austria, Brazil,
China, Chile, Colombia,
Germany, India, Italy, Ireland,
Israel, Mexico, Pakistan,
Philippines, Portugal,
Romania, Russia, Spain,
South Korea, Turkey,
United Kingdom

PROGRAM ACCOMPLISHMENTS

In recent years, Barrow's Stroke Program has expanded significantly and gained a national reputation for exceptional clinical care and innovative translational science and clinical research programs. Barrow believes every person who has a stroke or suspects they may be having a stroke deserves to be evaluated by a vascular neurologist. The Program earned the prestigious 2020 Get with the Guidelines – Stroke Gold Plus Quality Achievement Award. The Stroke Program also was awarded Target:Stroke Honor Roll and Target:Stroke Advanced Therapy Honor Roll. These designations recognize Barrow's commitment to and success in implementing high quality stroke care by ensuring that patients receive treatment that meets nationally accepted, evidence-based standards and recommendations.



Michael Waters, MD, PhD, director of the Stroke Program, is the driving force behind its growth and, in recognition of his expertise, was named the Dorrance Chair of Vascular Neurology. Dr. Waters is also building a research team to discover new, better treatments for stroke that can minimize damage and also help patients recover lost function. The team's scientists are also investigating ways to prevent stroke from happening in the first place.

The onset of the COVID-19 Crisis meant converting the majority of clinic appointment to telemedicine interactions. Telemedicine kept stroke patients safer at home as they received the care necessary as they recovered. Even neuro-rehabilitation appointments were conducted remotely. Additionally, Barrow neurosurgeon Felipe C. Albuquerque, MD, took part in a national campaign to encourage people experiencing stroke symptoms to go to the emergency room. The campaign was a reminder that hospitals take precautions to prevent the transmission of COVID-19 but delaying stroke treatment can have deadly consequences.

RESEARCH ADVANCES

Ischemic stroke, usually caused when a vessel supplying blood to the brain is blocked, is a major public health issue. Restoring blood flow in the brain after an acute ischemic stroke is critical. Dr. Waters hypothesizes that cell death at the location of the stroke further restricts blood flow to the brain causing additional difficulty clearing blocked

vessels. He and his team are investigating whether giving recombinant human DNase, currently given to people with cystic fibrosis, after a stroke can improve blood flow, help prevent further injury to the brain, and extend the window for treatment. The team has gathered preliminary data, published several papers, and is applying for an exploratory grant from the National Institutes of health.

The team's stroke research was also prominently featured at international stroke meetings including the International Stroke Conference and the American Academy of Neurology.

ON THE HORIZON

The Stroke Program is expanding Telestroke capabilities to connect Barrow vascular neurologists with community hospitals in real time to ensure stroke patients get the best treatment regardless of location. With this virtual presence, a Barrow specialist will be able to examine and evaluate patients in real time, review radiology images, and initiate treatment because when a patient is having a stroke, seconds matter. The Telestroke program will initially be implemented in all Dignity Health facilities in Arizona and will ultimately expand to additional hospitals in Phoenix and outlying communities.

The Barrow Emergency Stroke Treatment Unit is a state-of-the-art mobile emergency room focused on treating stroke victims. The unit delivers life-saving treatment and Telestroke expertise within 20 minutes. It's an innovative solution to closing the time gap to treatment. There are plans to purchase another mobile stroke unit to bring this expert care to twice as many patients in need.

The Barrow Emergency Stroke Treatment Unit is the only one of its kind in Phoenix and the state of Arizona.



BY THE NUMBERS



RESEARCH

1,377

Active Research
Studies

959

Patients Enrolled
in Clinical Trials

\$11.3 MILLION

Federal Research
Grant Support



DONOR IMPACT

\$2.4 MILLION

Basic & Translational
Research

\$5.28 MILLION

Strategic Initiatives

\$1.63 MILLION

Education and
Fellowship Programs

\$1.97 MILLION

Community
Outreach Programs



THANK YOU FOR YOUR SUPPORT

The generous support of donors like you allows the Barrow Stroke Program to treat more patients needing the expertise of a vascular neurologist. Philanthropy is essential to our ability to continue providing unsurpassed clinical care and conducting groundbreaking stroke research to the benefit of patients everywhere.

With Gratitude,
Michael F. Waters, MD, PhD
Dorrance Chair of Vascular Neurology
Chief, Division of Vascular Neurology and Stroke Program Director
Barrow Neurological Institute

↑ From left: Bennett Dorrance, Jacquie Dorrance, Alejandra Waters, and Dr. Michael Waters

Barrow Neurological Foundation's mission is simple: to be the catalyst of our donors' passion for transformation by providing the resources for Barrow Neurological Institute to achieve its mission of saving human lives through innovative treatment, groundbreaking, curative research and educating the next generation of the world's leading neuro clinicians.



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