

# Muhammad Ali Parkinson Center



↑ The Muhammad Ali Parkinson Center is a Parkinson's Foundation Center of Excellence, which is the most respected and sought-after designation in the movement disorders field.

**A**pproximately one million people in the United States, and ten million people worldwide, are living with Parkinson's disease.

The Muhammad Ali Parkinson Center at Barrow Neurological Institute, led by Holly Shill, MD, is the one of the largest Parkinson's centers in the country and the only Parkinson's Foundation Center of Excellence in the Southwest. They offer comprehensive care and support for individuals with Parkinson's disease and their families, in addition to conducting innovative research into the underlying causes and progression of the disease to identify new treatments.



**20+**

clinical  
research studies



**3,903**

outpatient  
clinic visits



**35,235**

individuals impacted through  
the Legacy Care Program

# BARROW NEUROLOGICAL INSTITUTE BY THE NUMBERS



## CLINICAL IMPACT

**77,600+**

total number of patients  
seen at Barrow annually

**22,200+**

telemedicine visits

**5,700+**

brain and spine surgeries



## GLOBAL IMPACT

**11**

research fellows and  
visiting scholars from  
Brazil, Columbia, India,  
Ireland, Pakistan, Russia,  
Thailand, and Turkey

## PROGRAM ACCOMPLISHMENTS

Last year, the movement disorders program was designated a Huntington's Disease Center of Excellence. Barrow is the only facility in Arizona to earn this distinction. In conjunction with the cognitive department, the movement disorders program has maintained its distinction as a Dementia with Lewy Bodies Research Center of Excellence. In February 2021, Dr. Shill testified to the Arizona House Health and Human Services Committee about telehealth services for Parkinson's disease, which resulted in approval of coverage at the state level.

The **Community Outreach Program** aims to help patients and their families navigate the everyday challenges of Parkinson's disease. Program components include:

- **Virtual recreation and exercise classes**, including music therapy, speech therapy, dance, yoga, and tai chi. The classes had an overall combined attendance of 5,777 individuals.
- **Support groups** for patients and caregivers, newly diagnosed Parkinson's, and young-onset Parkinson's. Last year, 299 individuals attended the virtual support groups.
- **Education workshops** covering topics such as communication, nutrition, financial considerations, the disability process, and more. Workshops reached 1,601 patients and families.
- **"Lunch and Learn" virtual series** featuring various physicians each month who discuss topics of interest in the Parkinson's community. The series reached 1,208 patients and caregivers, with participants from the U.S., Canada, and the U.K.
- **Hispanic Outreach Program** offers patient and caregiver support services in a culturally sensitive manner. Last year, the Paso-a-Paso (Step-by-Step) virtual series reached participants in 12 different countries.

The **Lonnie and Muhammad Ali Legacy Care Program** ensures world-class, personalized care for every patient that comes to the Muhammad Ali Parkinson Center. The team focuses on treating the patient as a "whole person," addressing the social and emotional aspects of their life, in addition to providing support for their family. Last year, the Legacy Care Program touched the lives of 35,235 individuals through a variety of services, including in-person appointments, home visits, telemedicine appointments, and remote outreach efforts.

## RESEARCH ADVANCES

Research at the Muhammad Ali Parkinson Center investigates the underlying causes of Parkinson's disease, works to identify new treatments to slow or lessen symptoms, and develops new protocols to track symptoms. There are over 20 clinical trials currently active. Holly Shill, MD, is leading a study that evaluates an eye movement tracking protocol that could potentially be used to identify Parkinson's disease and other movement disorders. Dr. Shill is also a collaborator



in the Parkinson's Progression Markers Initiative, which seeks to identify biomarkers of Parkinson's disease onset and progression to identify new treatments.

Frederic Manfredsson, PhD, is working on developing a gene therapy for the treatment of Parkinson's disease. Last year,

he completed several studies on novel gene therapy approaches and identified existing FDA-approved medications that have the potential to treat symptoms in advanced Parkinson's disease. He plans to conduct clinical trials with the FDA-approved medications.

David W. Coon, PhD, Med, an internationally recognized behavioral scientist working at Arizona State University, is working with Barrow neurologists to better understand caregiving needs associated with Parkinson's disease through focus groups. Last year, he implemented an early intervention program called EPIC (Early-Stage Partners in Care), which is designed to assist caregivers and their loved ones in the early stages of Parkinson's disease by providing education and skill-training sessions.

## ON THE HORIZON

The Muhammad Ali Parkinson Center will continue to expand its basic, clinical, and translational research efforts in order to continue expanding its funding at the state and federal level. They will utilize a multi-disciplinary approach to reveal the causes of Parkinson's disease and fast-track improvements in diagnosis and treatment for patients.

The Legacy Care Program plans to create Legacy Welcome Packets, which will include information on the team, contact information, the benefits of Legacy Care, and educational materials. The team also plans to provide iPads to patients who have difficulty coming into the clinic, host a Caregiver Q&A Panel Session, and implement monthly check-in emails.

## BARROW NEUROLOGICAL INSTITUTE BY THE NUMBERS



### RESEARCH

**320+**

active research  
studies

**791**

patients enrolled  
in clinical trials

**\$11.7 MILLION**

in federal research  
grant support



### DONOR IMPACT

**\$28 MILLION**

total distributed to Barrow  
Neurological Institute,  
including:

**\$21 MILLION**

designated to specific  
centers/programs

**\$5 MILLION**

for basic, clinical, and  
translational research

**\$1.7 MILLION**

for endowed research chairs





↑ The multidisciplinary team of movement disorder specialists in the Muhammad Ali Parkinson Center.

## THANK YOU FOR YOUR SUPPORT

Thank you for your support in helping the team at the Muhammad Ali Parkinson Center improve the lives of people living with Parkinson's disease and their caregivers through unsurpassed patient care and innovative research. We look forward to working side-by-side with you to improve the lives of even more patients with Parkinson's in the years to come.

With gratitude,  
Holly Shill, MD

Director, Lonnie and Muhammad Ali Movement Disorder Center

Bob and Renee Parsons Chair in Parkinson's Disease and Movement Disorders

Professor, Department of Neurology, University of Arizona College of Medicine - Phoenix

Professor, Department of Neurology, Creighton University School of Medicine

Barrow Neurological Institute

The mission of Barrow Neurological Foundation 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 research, and by educating the next generation of the world's leading neuroclinicians.