



The VA Parkinson Report

Department of Veterans Affairs

A Newsletter for the Parkinson's Disease Research, Education and Clinical Centers and The National VA Parkinson's Disease Consortium

Department of Veterans Affairs Volume 18 No. 1, Fall 2021

Inside this Issue:

PADRECCs Celebrate 20 Years.....	1
VA Interdisciplinary Movement Disorders Clinic: Ralph H Johnson VAMC.....	4
The Utility of VIM+GPi Dual Lead DBS for PD Patients with Significant Residual Tremor on Medication....	6
Philadelphia PADRECC Update.....	7
Houston PADRECC Update.....	9
Southeast/Richmond PADRECC Update.....	12
Southwest PADRECC Update.....	13
Northwest PADRECC Update.....	15
San Francisco PADRECC Update.....	17
National VA PD Consortium Center Updates.....	19

The PADRECCs are Celebrating 20 Years of Innovative Movement Disorders Care

By: John Duda, MD, Philadelphia PADRECC Director

In 2001, the Veterans Health Administration established the **Parkinson's Disease Research, Education & Clinical Centers (PADRECCs)** to care for Veteran's living with Parkinson's disease (PD) and related movement disorders. The six Centers of Excellence are located in Philadelphia, Richmond, Houston, West Los Angeles, San Francisco, and Portland/Seattle VA Medical Centers and are staffed by nationally and internationally renowned movement disorder specialists and researchers. The PADRECCs deliver state-of-the-art clinical care, perform innovative research and provide exceptional education opportunities for Veterans, caregivers and providers.

Many accomplishments to enhance the care and wellbeing of Veterans with PD have occurred since the PADRECCs' inception. Below is a list highlighting some of the most notable accomplishments:

National VA PD Consortium Centers — were established in 2006 as a hub and spoke model of care to help ensure that more Veterans with PD or related movement disorders have access to specialized care throughout the United States. The PADRECCs support the Consortium Centers through educational opportunities for both patient and provider.

Deep Brain Stimulation — As a group, with their university affiliates, the PADRECCs completed the largest randomized, double-blinded trial of best medical therapy vs. deep brain stimulation ever conducted, and have published the [findings](#) in the Journal of the American Medical Association and the New England Journal of Medicine. In addition, several PADRECC researchers, especially those from the San Francisco PADRECC, have been instrumental in the development

of many advancements in deep brain stimulation therapy including MRI guided targeting, allowing the procedure to be conducted while anesthetized throughout the procedure.

Quality Care Indicators for Parkinson's Disease — Health Services researchers from many of the PADRECCs worked together to develop and test a series of indicators of quality care for Parkinson's disease. This research showed that the quality of care can be assessed and that expert-level care, such as that provided by movement disorder specialists, is superior in meeting these standards compared to other providers. These quality care indicators have also been adopted by the American Academy of Neurology and other organizations.

The PADRECCs are Celebrating 20 Years (continued)

Telehealth — Telehealth allows providers and patients to interact in real-time through the use of video clinic visits. Telehealth has proven for many to be an effective and more convenient way to receive specialty care and stay connected with movement disorder providers. Patients can either go to the nearest VA outpatient center or VA medical center for their scheduled PADRECC visits or choose telehealth at home using a secure internet connection on a personal computer or tablet device. PADRECC researchers conducted one of the first large trials comparing telehealth vs. in-person visits for PD and showed that telehealth was just as effective in most cases with higher satisfaction and convenience for the Veterans. Telehealth has allowed the PADRECCs to continue to provide excellent clinical care during the COVID 19 pandemic by significantly increasing telehealth services into the Veteran's home which keeps everyone safe but still connected for care. The PADRECCs were one of the first clinical programs in VA to utilize telehealth broadly.

Psychiatric complications of Parkinson's Disease — Psychiatric symptoms in patients with PD have a large impact on quality of life and managing these symptoms can be difficult. The PADRECCs have been spearheading research into the prevalence, impact and management of these symptoms for years. They conducted what was the largest placebo-controlled trial of depression in PD, seminal studies regarding impulse control disorders in PD, and are preparing to start **Cooperative Study #2015, the CESAPP Study**, which will be the second cooperative study for the PADRECCs that will also include 17 Consortium Centers. The study is designed to establish if two existing medications for Parkinson's disease psychosis are equally efficacious, and determine their respective tolerability and safety. The results will provide immediately translatable evidence-based guidance for clinicians managing patients with Parkinson's disease psychosis.

In addition, Dr. Daniel Weintraub, in collaboration and funding from the National Telemental Health Center, developed a psychiatric consult service for patients with PD and psychiatric and cognitive symptoms.

Lifestyle Modifications — Researchers throughout the PADRECCs are investigating whether lifestyle

modifications like diet, yoga, meditation, social connection and exercise can affect Parkinson's symptoms and progression. Several journal articles have been published as a result of this research, and PADRECC clinicians have incorporated some of these modifications into their treatment plans.

Sleep Dysfunction — Sleep disorders are a "key" group of non-motor symptoms in PD. Researchers at the Houston PADRECC are studying various sleep disorders in veterans with PD using standardized measures (questionnaires, actigraphy) along with the distribution of different "chronotypes" and their association with various disease features. This information is being used for optimizing clinical evaluation and management of sleep disturbances in this group of patients. Various research abstracts have been presented and published in AAN and MDS meetings and journals.

Eye Movements — The Southeast PADRECC, in Richmond, has been conducting research on the eye movements of patients with various movement disorders. Utilizing a 5-minute-long data recording from an eye tracking device, the specific oculomotor parameters can be used to differentiate numerous neurological movement disorders. The research team who developed the eye tracker have won several awards such as Virginia Commonwealth University's Billy R. Martin Award for Innovation and CES (the world's largest technology conference) Innovation Award for "Technology that will create a better world".

Parkinson's and Dementia — Groups at the NW (Portland/Seattle) and Philadelphia PADRECCs have long-standing programs studying why some people with Parkinson's disease get dementia. The NW PADRECC has been involved with identifying genetic factors involved in the development of cognitive decline in Parkinson's, and both groups collaborated on a study of brain autopsy findings, which showed that the brain changes involving a substance called "tau" are critical to the development of dementia in Parkinson's disease. Efforts to use model systems to develop therapeutic treatments to interfere with these types of brain changes are currently under way at the Portland VA.



The PADRECCs are Celebrating 20 Years (continued)

Parkinson's and Traumatic Brain Injury — Basic science researchers in Philadelphia have been studying the relationship between traumatic brain injury and the brain changes seen in Parkinson's disease in animal models. In addition, Houston PADRECC investigators have been participating in a multi-center study of the chronic effects of TBI on cognition.

Parkinson's and Military Service Experiences — San Francisco PADRECC investigators are studying the relationship between Parkinson's disease and military-service-related experiences, such as traumatic brain injury, or exposure to toxicants including solvents (such as at Camp Lejeune) and Agent Orange. These studies are also looking at ways to identify Veterans at risk for Parkinson's disease, providing the first step for early intervention and, ultimately, prevention.

When the PADRECCs were established, PD was not considered a service connection condition. **In 2010**, PD was added to the list of 14 conditions presumed to be service connected for Veterans with military exposure to Agent Orange and other herbicides in Vietnam and these service connections have expanded over time. **In May 2021**, Parkinsonism was added to the list of presumed service connection conditions for Veterans exposed to Agent Orange.

Brain Wellness Clinic — The Brain Wellness Clinic was established at the Philadelphia PADRECC to provide an opportunity to focus in-depth on lifestyle changes in improving brain wellness and incorporates many aspects of VA Whole Health practices. A patient's current brain wellness risks are assessed by looking at different lifestyle factors including sleep, nutrition, exercise, mindfulness/spiritual, cognitive and social. The patient's wellness goals are discussed and an individualized plan is developed with realistic and

achievable goals, and follow-up visits help implement the plan and track progress.

Robust Patient and Provider Education Programs — All PADRECCs are involved in providing both local and national patient and provider education programs such as: in person and virtual patient education symposiums and support groups, distribution of PD publications and resources, fellowship training programs, and professional movement disorder webinars for both VA and Non-VA medical providers.

Establishing Partnership with The Parkinson's Foundation — In the spirit of national outreach and advocacy for our Veterans, VHA and the Parkinson's Foundation launched a formal partnership in March, 2020 to help improve the health, well-being and quality of life for Veterans living with PD. The Parkinson's Foundation is an international organization with a national reach, focused on educating and empowering the PD community, and advancing the understanding of Parkinson's disease through research. Together, we raise awareness among healthcare professionals who treat people with PD about available VA and Parkinson's Foundation resources.

West Los Angeles VA PADRECC Social Connection Initiative — Research and partnership with VA Whole Health and VA Volunteer Service to promote the **Compassionate Contact Corps** which is a novel form of Social Prescribing. Research continues investigating the detrimental effects of loneliness and social isolation. Current focus is on ways to screen for loneliness in Veterans with PD and strategies to increase social connection. Educational endeavors have included a VA TEDx Talk and Covid-in-20 talk on loneliness. During the pandemic, a weekly virtual support group and weekly blog have been created to keep patients connected.

These highlights are merely the tip of the iceberg of PADRECC accomplishments, and the PADRECCs are most proud of the level of care and service we provide to our nation's Veterans with PD and related disorders. To learn more about the PADRECCs and resources available visit: www.parkinsons.va.org



VA Interdisciplinary Movement Disorders Clinic: The perfect care setting for a comprehensive team approach

By: Christina Ketron, DNP, APRN, PMHNP-BC
Ralph Johnson VAMC Consortium Center

Patients with Parkinson's disease (PD) and other movement disorders have care needs that extend far beyond medication adjustment. Motor impairments affect activities of daily living, pose safety issues, and often require mobility equipment, and even home modifications. Non-motor symptoms such as depression, anxiety, dementia, hypophonia and dysphagia are commonly the major determinants of a patient's disability and cannot be addressed in a 30-minute appointment. In addition, travel to multiple appointments with individual care providers is difficult for Veterans with PD, especially in the more advanced stages.

The VA care system with specialists working "under one roof" and using the same EMR lends itself to bring about an interdisciplinary clinic (IDC) format for assessments by a team of specialists on the same day.

One year ago, the Ralph H Johnson VA Medical Center in Charleston, SC implemented such a VA based interdisciplinary movement disorders clinic on a once-a-month basis. The program has been hugely successful and lends itself as a model for other VA based clinics.

On the IDC day (8am-12:30pm), Veterans with PD are seen by the following specialists: Movement Disorders Neurologist, Geriatric Psychiatrist, Neuropsychologist, Physical Therapist (PT), Occupational Therapist (OT), Speech Pathologist (ST), Social Worker (SW), and, as a new addition to the program, a Palliative Care Provider. The clinic is coordinated by a Nurse Practitioner (NP) specializing in PD. Providers have undergone special training in PD interdisciplinary care by attending the Parkinson's Foundation PD Team Training, formerly known as ATTP.

For the assessments, the patient will stay in one assigned room, and the providers will rotate between four scheduled patients (figure 1). In order to prepare for the patient's individual needs, pre-clinic assessments are performed prior and will be reviewed before the IDC day (goals of care, ADLs, advanced care planning, financial need, mood/cognition/exercise questionnaires, swallow screen). Consults to each rotating specialist are generated by the NP Coordinator prior to clinic.

Comprehensive rehabilitation assessments from PT and OT often discover and precisely define equipment, rehab intervention needs, and lead to long lasting improvements in quality of life and safety. Geriatric Psychiatry will be able to diagnose mood disorders, suggest treatment interventions, and follow the patient in their clinic as needed. Neuropsychologists perform an abbreviated cognitive test battery (table 1) that aids in making a diagnosis of PD MCI or dementia. If cognitive rehab is indicated, the ST can initiate this form of treatment. For PD patients where pre-clinic assessments indicate a high risk for dysphagia, a modified barium swallow will be scheduled for the day of the IDC. For those with a low index of suspicion, a bedside ST screening will be performed and testing scheduled at a later date if clinically indicated. The SW is a key person of the team, will answer patient questions on VA and PD specific resources, and caregiver support programs. Finally, the palliative care specialist will provide an additional layer of support to PD patients with complex life long medical needs, address issues centered around comfort, quality of life, patient care priorities, advanced directives, and, can address medical issues such as constipation, and blood pressure fluctuations. The Movement Disorders Neurologist is the designated primary provider for the patient, overseeing the team recommendations and their implementation, as well as being in charge of PD specific medication adjustments.

VA Interdisciplinary Movement Disorders Clinic: The perfect care setting for a comprehensive team approach

(continued)

The team meeting is scheduled for one hour immediately following the clinic. Each team member will give input on the treatment plan and needs for each patient seen that day. The NP coordinator will compile the recommendations and send each patient the CPRS generated “After Visit Summary” with their detailed treatment plan.

In one year, 38 patients have gone through IDC. While most have a diagnosis of idiopathic PD, the Ralph H Johnson VA will also allow atypical parkinsonism patients and those with Huntington’s disease to benefit from this clinic environment. If you have questions about implementing this type of clinic at your VA, please email christina.ketron@va.gov, NP Coordinator, IDC-PD Clinic.

Table 1: IDC-PD Neuropsychological Testing: Abbreviated

Behavioral Dyscontrol Scale	Dementia Rating Scale – Revised
Digit Span	Hopkins Verbal Learning Test - Revised
Judgment of Line Orientation	Repeatable Battery for the Assessment of Neuro-psychological Status
Rey Osterrieth Complex Figure Test	Test of Memory Malingering
Trailmaking Test, Parts A/B	Wisconsin Card Sorting Test
Neuropsychological Assessment Battery	Executive Functions Module
Judgment subtest	

Figure 1: IDC-PD Same Schedule for patient 1

	0800	0830	0900	0930	1000	1030	1100	1130	1200
Patient 1 Room#	Neuro psych	Neuro psych	SW	PT	Physician 10:00-10:45	Physician 10:00-10:45	Geripsych 10:45-11:30	OT	ST

The Utility of VIM+GPI Dual Lead Deep Brain Stimulation for Parkinson's Disease Patients with Significant Residual Tremor on Medication

By: Dr. Kathryn Holloway, Director, Neurosurgical Services,
Hunter Holmes McGuire VA Medical Central Richmond, Virginia

Randomized controlled trials have demonstrated that both globus pallidus interna (GPI) and subthalamic nucleus (STN) deep brain stimulation (DBS) for Parkinson's Disease (PD) are superior to best medical therapy. Tremor is particularly responsive to DBS with reports of 70-80% improvement. However, there are a small number of patients who do not achieve the expected response with both STN and GPI targets. Our patient population had a similar 81.2% tremor reduction with a 9.6% failure rate. In an analysis of these failures, we identified patients with preoperative on-medication tremor who subsequently received GPI lead as a subpopulation at higher risk for inadequate tremor control. Subsequently, we recommended STN DBS for patients with on-medication tremor. However, for patients with symptoms and comorbidities that favor GPI as the target, we proposed dual GPI and VIM leads. This report details those patients' outcomes.

Methods: This is a retrospective review of patients with PD who met criteria and have undergone simultaneous GPI+VIM DBS surgery from 2015 to 2020 with available follow-up data. The preoperative Unified Parkinson Disease Rating Scale (UPDRS) scores were obtained with the study participants on and off their medication. Postoperatively, the GPI lead was kept on at baseline and scores were obtained with and without VIM stimulation.

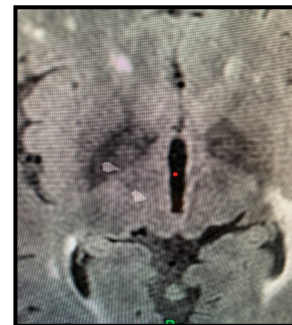
Results: There were 13 PD patients with significant residual preoperative tremor on medication who underwent simultaneous GPI+VIM DBS surgery (11 unilateral, 2 bilateral). We achieved a mean 90.6% (SD: 15.0) reduction in tremor scores with dual GPI+VIM stimulation compared to 21.8% (SD: 71.9) with GPI alone and 30.9% (SD: 37.8) with medication. Although rigidity and bradykinesia reduction were accomplished with just GPI stimulation, 13 of the 15 hemispheres required VIM stimulation to achieve excellent tremor control.

Conclusions: GPI+VIM stimulation was required to adequately control tremor in all but 2 patients in our series, substantiating our hypothesis that, in our population, medication resistant tremor does not completely respond to GPI stimulation. Dual stimulation of GPI and VIM proved to be an effective option for our patients who had symptoms and comorbidities which favor GPI as a target and had medication resistant tremor.

Adel Azghadi, BSc, Megan M. Rajagopal, MD, Kelsey A. Atkinson MD, **Kathryn L. Holloway, MD**. The Utility of VIM+GPI Dual Lead Deep Brain Stimulation for Parkinson's Disease Patients with Significant Residual Tremor on Medication, *In press* Journal of Neurosurgery, accepted for publication 4/30/21.



Post-operative CT with leads in right GPI and right VIM



Merged and blended MRI and CT demonstrating leads in the right GPI and right VIM

Philadelphia PADRECC Update

Clinical Update

Due to the COVID 19 pandemic the Philadelphia PADRECC shifted to telemedicine for patient care (except for urgent matters) offering either telephone or video visits. In person visits have resumed but Veterans are still offered the option of VVC visits which has been especially helpful for those with transportation limitations and/or live a far distance from Philadelphia.

Telehealth Update: Prior to the COVID 19 pandemic the Philadelphia PADRECC had a very active telehealth clinic. Since the COVID 19 pandemic VA Video Connect (VVC) services increased 1,065% in FY 20 (compared to FY19) and a 133% increase so far in FY21 (compared to FY20). In addition, telephone visits have been very helpful in keeping in touch with our less tech savvy Veterans who are not able to be seen for face to face visits-with 1110 telephone encounters as of August 2021.

Dr. Daniel Weintraub continues to provide initial psychiatric consult services for patients with PD and psychiatric-cognitive symptoms to the following VAMCs: Bronx, Northport, Albuquerque, San Diego, Redding (CA), Martinsburg, Tampa, Ann Arbor, Dallas, Flint, Toledo and Portland (OR). Psychiatric symptoms in patients with PD have a large impact on quality of life and managing these symptoms can be difficult and should be done by a subject matter expert. Please contact Dr. Weintraub at daniel.weintraub@va.gov if you think your PD patients could benefit from such a service.



Accolades

Dr. John Duda, Philadelphia PADRECC Director is celebrating 21 years of VA service!

Education Update

Patient & Caregiver Support Group Program: This program runs from April-December and meets once a month for one hour to provide support and education on topics related to Parkinson's Disease. Due to the COVID 19 pandemic groups are now held virtually in collaboration with the Southeast (Richmond) PADRECC. So far this format is working well and we look forward to continuing this collaborative effort.

The 12th PADRECC/MIRECC Symposium on Neurodegenerative Diseases: Recent Developments in Parkinson's Disease Neuropsychiatry: The Philadelphia PADRECC in collaboration with the Philadelphia MIRECC hosted this CME webinar program on **March 24, 2021** to continue the practice of delivering an informative symposium for clinicians and clinical researchers. This was the first time offering this symposium as a national webinar and approximately 200 VA and Non-VA healthcare professionals attended this symposium.

Virtual Art Workshop-The Philadelphia Museum of Art: A 6-week Virtual Art Workshop for Veterans with PD was held May-June 2021. The theme of the workshop was "*A Room with a View: Virtual Perspective Drawing Workshop.*" Seven Veterans participated in this workshop that included art lessons by a teaching artist as well as presentations by a local artist currently exhibiting at The Philadelphia Museum of Art. The exercises in this workshop were fun and created a camaraderie that encouraged people to go beyond self-imposed limitations



PHILADELPHIA
MUSEUM OF ART

Philadelphia PADRECC Update (continued)

Community Outreach: Prior to COVID 19 pandemic, clinical staff attended several local community health fairs and presented at local support groups and professional conferences providing information on topics related to PD. Clinicians have continued outreach efforts via video conferencing modalities and have presented at several virtual support groups.

Parkinson's Foundation (PF) Partnership: The PF/PADRECC partnership continues to be a success expanding awareness of PF and PADRECC resources to all Veterans and care partners ensuring access to the highest level of care and resources available to them. The Philadelphia PADRECC continues to coordinate partnership efforts.

Research Update

Ongoing Projects:

Neurorestoration in Parkinson's Disease

Dr. Duda and his colleagues Dr. Kacy Cullen and Isaac Chen from the Center for Neurotrauma Neurodegeneration, and Restoration (CNNR) at the Crescenz VA Medical Center, continue to investigate whether one of the main brain pathways affected in PD, the nigrostriatal pathway, can be generated in a petri dish and transplanted in animal models to reverse the motor symptoms in PD. The success of their efforts to date have led to several publications and special recognition at several different scientific meetings and additional research grants to continue these studies. The team has been successful in implanting these bioengineered pathways into a rat model of PD and are now funded to do the same in pigs, which more closely resemble what would need to be achieved to begin trying this approach in humans.

Behavioral or Solifenacin Therapy for Urinary Symptoms in Parkinson's Disease

The Philadelphia PADRECC (Morley, site PI) is collaborating with Dr. Camille Vaughn (Atlanta VA) on her VA RR&D Merit Award study for lower urinary tract symptoms in PD. Eligible patients will be randomized to either medication or behavioral treatment (pelvic floor muscle exercises) to determine if both are equally effective in controlling frequent urination.

Effect of Exercise in drug-induced Parkinsonism and Parkinson's Disease

Dr. Morley is completing his VA Rehab R&D-funded Career Development Award studying the effect of exercise on clinical outcomes and biomarkers of disease progression. Data analysis will begin in the second half of 2021.

Traumatic Brain Injury studies

Dr. Duda and his colleagues, Drs. Kacy Cullen, Isaac Chen and John Wolf, from the Dept. of Neurosurgery at the University of Pennsylvania, continue studies funded by the Rehabilitation Research and Development Service to study the relationship between brain trauma and neurodegeneration. The researchers have published several studies that have shown how the brain reacts to trauma and how that could possibly lead to chronic neurodegenerative disease development. It is hoped that these studies will lead to treatments to prevent the development of these neurodegenerative diseases in Veterans and others who have suffered head injuries.

Neurorestoration in Parkinson's Disease

Dr. Duda and his colleagues Dr. Kacy Cullen and Isaac Chen from the Center for Neurotrauma Neurodegeneration, and Restoration (CNNR) at the Crescenz VA Medical Center, continue to investigate whether one of the main brain pathways affected in PD, the nigrostriatal pathway, can be generated in a petri dish and transplanted in animal models to reverse the motor symptoms in PD. The success of their efforts to

Philadelphia PADRECC Update (continued)

date have led to several publications and special recognition at several different scientific meetings and additional research grants to continue these studies. The team has been successful in implanting these bioengineered pathways into a rat model of PD and are now funded to do the same in pigs, which more closely resemble what would need to be achieved to begin trying this approach in humans.

Upcoming Projects:

Summer 2021: Developing Personalized Medicine Strategies to Increase Physical Activity in Parkinson's Disease Through Digital Health Technology

Under a grant from the Department of Defense's PD program, Dr. Morley's study will develop new approaches that 1) use "gamification" – applying rules of games like point scoring, achieving silver, gold or platinum levels and competition-- to increase physical activity in PD; 2) identify individual characteristics of PD patients that limit or enhance response to gamification interventions; 3) use readily and commercially available (including Fitbits) digital health technologies to perform all recruitment, enrollment, intervention, assessment and analysis remotely, enabling a "touchless" study at a time where COVID19 has transformed the way in which clinical research can be done.

Fall 2021: VA Cooperative Study #2015 – "Multicenter, Randomized, Double-Blind Comparator Study of Antipsychotics Pimavanserin and Quetiapine for Parkinson's Disease Psychosis (C-SAPP Study)."

This is a nationwide, multicenter clinical trial comparing quetiapine and pimavanserin for the management of PD related psychosis. Drs. Duda and Weintraub will be the national co-PIs and Dr. Morley will be the Philadelphia site PI.

Spring/Summer 2021: A Multi-center, Randomized, Active-controlled, Double-blind, Double-dummy, Parallel Group Clinical Trial Investigating the Efficacy, Safety, and Tolerability of Continuous Subcutaneous ND0612 Infusion in Comparison to Oral IR-LD/CD in Subjects with Parkinson's Disease Experiencing Motor Fluctuations (BOUNDless)

Sponsor: NeuroDerm Ltd./Syneos Health The Philadelphia PADRECC will be the VA coordinating site in this trial of a novel subcutaneous delivery system for levodopa/carbidopa.

Publications and other research presentations:

Abstracts/Posters = 14 (accepted or presented) → 9 (2020) + 5 (2021)

Manuscripts = 50 publications → 32 (2020) + 18 (2021)

Houston PADRECC Update

Houston's Parkinson's Disease Research, Education and Clinical Center (PADRECC) housed in the Michael E DeBakey VA Medical Center provides state of the art medical and surgical services to Veterans with Parkinson's disease and related movement disorders who reside in the **South Central and Mid-Western** United States. The area served by the Houston PADRECC includes all or parts of the following states: **Texas, Louisiana, Mississippi, Oklahoma, Arkansas, Alabama, Florida, Kansas, Missouri, Indiana, Illinois, Wisconsin, and Kentucky** (Houston PADRECC Consortium).

Consortium Update:

Clement J. Zablocki VAMC, Milwaukee, WI, was added as a new consortium center site in April 2021 with Jackowiak, Eric M, MD as the site Director.

Houston PADRECC Update (continued)

We continued our outreach efforts and added, Roneil G. Malkani, MD a movement related sleep researcher and clinician at the **Jesse Brown VAMC**, Chicago, IL as a new consortium member

In FY 21, we upgraded our monthly educational meetings with all our consortium sites by using an audio-visual interface (Microsoft Teams) instead of a conference call format to enhance the educational experience. These meetings include clinical case discussion, and sharing of latest clinical, educational and research related information amongst the site participants.

Clinical Update:

Houston PADRECC has been functioning without any dedicated administrative support since early 2017. In FY 20, our last remaining administrative support position (Program Support Assistant, Office Automation Clerk) was vacated. This along with our Administrative officer's and Research Health Science Specialist's positions are unfilled to date. Our 4th movement disorders neurologist position (funded by the facility) also remains vacant.

Despite continued personnel shortage, and COVID 19 pandemic related challenges, Houston PADRECC maintained a very high patient encounter rate. We accelerated our tele-health service in FY20/21 in parallel with the needs of our patients and implemented various safety and efficiency standards that resulted in high patient satisfaction from our services.

Since Oct 2020, Houston PADRECC has allowed unrestricted face to face encounters in all clinics, while strictly following VA health and safety guidelines. At the same time, we are keeping our tele-health care option fully accessible for all patients.

Education Update:

Houston PADRECC 's Associate Director for Education position remains unfilled. However, we have continued our 16 educational programs geared towards patients/caregivers, medical trainees and practicing healthcare providers.

These include 1) Clinic based patient/caregiver education, 2) Patient's monthly educational support group, 3) Patient and Caregiver educational conference (Educational Forums), 4) Collaborative Patient Educational Programs with Community groups, 5) Patient and Caregiver based educational newsletter (PADRECC Pathways), 6) Medical Staff's weekly educational conference, 7) Medical staff's monthly journal club, 8) Physicians' Clinical Case Discussions, 9) Medical staff's monthly inter-disciplinary surgical case discussion series, 10) Monthly Consortium based tele- educational meeting, 11) PADRECC based BCM neurology residents monthly elective rotation, 12) PADRECC's joint educational venture with Pharmacy residency training program, 13) In-patient medical student and medical residents hands on educational experience, 14) PADRECC physicians' lectures (including grand rounds, invited lectures) at the VA, BCM, national and international locations, 15) Contribution to the transmitter (e-newsletter) 16) Nurse lecture series.

New Initiatives in FY 21:

- PADRECC rotation for **Behavioral Neurology and Neuropsychiatry (BNNP) Fellowship**, (Melissa B. Jones, MD, Director) 4-week training of fellows at Houston PADRECC (1-2 fellows/FY). October 2020
- In FY21, we initiated PADRECC rotation for **Geriatric Psychiatry Fellowship** (Ali Abbas Asghar-Ali, MD,

Houston PADRECC Update (continued)

Director) 4-week training of Neuropsychiatry fellows at Houston PADRECC (1-2 fellows/FY). March 2021

Research Update:

We currently have **10** active research projects. Active recruitment was suspended in March 2020 due to COVID 19 Pandemic related health precautions. Data analysis and publication/presentation has continued (of the previously collection data)

New Initiatives in FY21:

- **Rural Veterans with Depression and Parkinson's Disease: A Telehealth Psychotherapy Solution.** Collaborative project with MH, (PI: Interian, MD, Co-I: Sarwar, MD) ~ Grant- Federal (Office of Rural Health), 2020-2025
- **CSP #2015: Multicenter, Randomized, Double-Blind Comparator Study of Antipsychotics Pimavanserin and Quetiapine for Parkinson's Disease Psychosis (C-SAPP Study)** (PI: Daniel Weintraub, MD and John Duda, MD, 2021-2024 ~ Grant- Federally Funded Cooperative Study

Publications and other research presentations: (10/1/2020 – 07/30/2021)

- Abstracts/Posters = 6 (accepted or presented)
- Manuscripts = 9 (7 published, 1, accepted, 1 in development)

Accolades:

Dr. Fariha Jamal, MD received the following awards

- **Star Award** for Excellence in Patient Care, May 2021
- American Academy of Neurology AB Baker Teacher Recognition Award, April 2021

Dr. Aliya I. Sarwar, MD received the following awards:

- Norton Rose & Fulbright Faculty Excellence Award for Leadership in Education, September/October 2020
- **Star Award** for Excellence in Patient Care, Baylor College of Medicine, February 2021

Dr. Michele York, PhD, received the following honors

- American Congress of Rehabilitation Medicine Fellow Designation, FACRM, 2020
- NDNG Women in Neurodegenerative Disease Rehabilitation Research Award, American Congress of Rehabilitation Medicine Neurodegenerative Disease Networking Group, 2020
- Neurodegenerative Disorders Networking Group, Chair, 2020-present

Dr. George R. Jackson, MD, PhD, became a founding member of BCM Center for Alzheimer's and Neurodegenerative Diseases (CAND), Dr. Shulman, Director, and chaired scientific review panel for inaugural CAND Scholars Award (July 2021).

Southeast/Richmond PADRECC Update

Clinical Update

During fiscal year 2020, our clinic utilized Video to home as often as possible as an alternative to face to face visits during the height of the COVID-19 pandemic. We saw 556 patients via some form of telehealth, 317 of those visits were performed using Video to Home. So far with 3 months left in fiscal 2021, we have seen 574 telehealth patients, 460 of those visit were performed utilizing VVC to home, surpassing fiscal 2020. We are finding that some of our veterans wish to continue using VVC to home as their preferred visit method mainly due to travel distance, convenience and feeling more confident utilizing this technology to see their provider.

Accolades

Dr. **Jessica Lehosit** has been named the Southeast Regional PADRECC Director.

Education Update

PD support group news – Due to COVID 19, the in-person PD support group that was held monthly at the Richmond VA for veteran, non-veterans, caregivers and healthcare providers was discontinued. In April of this year, we partnered with the Philadelphia PADRECC and started offering the support group virtually. We felt that the added expertise from both centers of excellence would add more variety and be more meaningful for the participants. So far this new format is working well. We are looking forward to continuing this collaborative effort going forward.

Central Virginia VA Health Care System held a virtual caregiver resource fair in June. Debbie Dellinger, Nurse Practitioner from Southeast PADRECC, presented a segment on information and services available for caregivers of veterans with Parkinson's disease.

Upcoming Projects

- The U.S. Department of Veteran's Affairs, Office of Rural Health (ORH) offers programs and innovative projects aimed at improving access to health care to veterans living in rural areas (<https://www.ruralhealth.va.gov/aboutus/programs.asp>). The Richmond/Southeast PADRECC has partnered with ORH to provide expanded clinical video telehealth and tele-rehabilitation services to veterans with Parkinson's disease (PD) using a proven model of care delivery that is part of ORH's rural promising practices initiative (https://www.ruralhealth.va.gov/providers/promising_practices.asp). This three-year project, slated to start in October 2021, will offer interdisciplinary care including, but not limited to, physical, occupation and speech therapies, neurology, primary care, social work and nutrition with a nurse navigator to assist with care coordination and management.
- Richmond Southeast Region PADRECC currently has two new multidisciplinary integration initiatives in development.
 - ◆ The first includes the **integration of sleep medicine** in the PADRECC clinics through two sleep-certified neurologists, Dr. Elsa Mathew and Dr. Leslee Hudgins. Their primary focus is determining best methods to expedite evaluation and treatment of sleep apnea to minimize peri-operative risk and optimize post-operative outcomes within the DBS population. Additionally, the integration of sleep medicine allows for a more thorough patient-centric approach as they assist in addressing sleep disorders, such as RBD, sleep apnea, circadian rhythm disorders, within PADRECC. Dr. Mathew and Dr. Hudgins are primarily telehealth providers, supporting the national PADRECC virtual expansion goals.
 - ◆ The second initiative also in development is the creation of an embedded **Palliative Care Consultation** monthly clinic in the PADRECC department. Working with the Palliative care service, we hope to

Southeast/Richmond PADRECC Update (continued)

begin this monthly clinic for the Veteran's most in need of palliative services and increase over time to include palliative fellows and trainees in the program as well. The Palliative initiative also will increase PADRECC provider and staff training and comfort in early discussions and care planning with patients to optimize expectations, patient quality of life and caregiver support services.

Ongoing Research Update

While the COVID-19 global pandemic had put a temporary hold on in-person research over the last year; studies are ramping back up and expanding in the Southeast PADRECC.

- Dr's Mark Baron and George Gitchel are completing a \$1M grant from the Michael J Fox Foundation, investigating the **utility of eye movements to serve as a clinical and pre-clinical biomarker for Parkinson's disease**. This grant grew out of the long-standing study that started approximately 10 years ago with many thousands of subjects enrolled. The decade of data collection, pattern recognition and algorithm development was packaged into intellectual property and the technology was successfully licensed to RightEye LLC. Through development with Dr. Gitchel, it has resulted in a commercial product with active units in all 50 states and 20 countries, from which the VHA is regularly receiving annual royalty payments. The proposed indication is for a Parkinson's disease diagnostic aid, and approval for indications are expected in early 2022, with additional application and indication for other disorder to follow. This technology developed in the Southeast PADRECC now holds the largest database of eye movements in the world; with >61,000 subjects in the normative database, and over 3.3M total tests performed.
- In addition to these projects, Dr. Mark Baron's lab located at the Richmond VAMC, is dedicated to investigating the pathophysiology of movement disorders in rodent models. This lab is funded through the VA's Biomedical Lab Research & Development (BLR & D) Merit Review Award Program. The investigators have recently discovered that they can induce pure parkinsonism with a high focused lesion in the dorsal motor territory of globus pallidus externa (GPe) and can induce dystonia via a highly focused more ventral lesion. Using transsynaptic viral tracers, they have traced the parkinsonian territory to a highly focused premotor cortical region and have traced the dystonia locus to the primary motor cortex suggesting that parkinsonism and dystonia originate along distinct premotor and primary motor sub-circuits. The investigators intend to investigate the potential for therapeutically targeting these specific cortical territories.
- In addition to the above, the Southeast PADRECC is an active site for a Merit funded study out of the Atlanta VA on **urinary incontinence in Parkinson's disease** (BOSS-PD), as well as a locally funded study examining the gut-microbiome. Dr. George Gitchel has just completed a funded study utilizing transcranial magnetic stimulation aiming improve cognition and attention, with multiple manuscripts pending publication.

Southwest PADRECC Update

Clinical Update

Integrative Medicine: Dr. Indira Subramanian, Director of the Southwest PADRECC, has collaborated with the Integrative Medicine group at the VA Greater Los Angeles (VA GLA). Dr. Subramanian is incorporating Integrative Medicine techniques that considers the whole person, to include all aspects of lifestyle.

Southwest PADRECC Update (continued)

It emphasizes the partnership between provider and patient and meeting the patients where they are especially from a cultural context. She is working on further solidifying the concept of wellness- where patients proactively make lifestyle choices to help them thrive. From a loneliness perspective, Dr. Subramanian is working on identifying screening questions to identify lonely PWP and clarify what social prescribing strategies can help them with their quality of life. She has been hosting a weekly virtual support group since the March 2020 and has been coediting a blog under <http://parkinsonsecrets.com/>

Whole Health Coach: Patricia Pittman, RN, MBA, Clinical Nurse Coordinator was selected to receive training as a Whole Health Coach, within the VA system, June, and July 2020. Due to COVID-19, the training was cancelled, pending rescheduling.

The Whole Health Coach provides care to Veterans seeking self-directed, lasting changes aligned with their values. The Coach provides care to Veterans seeking services that promote health, and wellness, enhance well-being, improve health related outcomes, reduce likelihood of inpatient admissions, and improve quality of life. The PADRECC team is excited about incorporating Integrative Medicine and Whole Health Coaching to show Veterans how to support their own self-care and self-management, which aligns with the mission of the National PADRECC.; “to support quality of life by providing comprehensive medical and surgical care to Veteran patients with Parkinson’s Disease and other Movement Disorders...”.

The team envisions the Clinical Coordinator facilitating a group of Veterans with weekly topics related to the “Circle of Health”, which is from the VA Office of Patient Centered Care and Cultural Transformation.

The future goal would be to integrate Whole Health throughout the National PADRECC Centers of Excellence.

Neuro-Pharmacy Program: In collaboration with **Sunita Dergalust, Neurology PharmD**, specialized pharmacy care was integrated in the PADRECC clinic. Patient records are reviewed to determine if a patient is compliant in refilling Movement Disorders related medications. If compliance is not met, a pharmacy resident will call the patient to review dosing and assess for any barriers or concerns. Pharmacy residents also meet with patients during clinic to provide education and ensure they are taking their medication as prescribed.

Education Update

Living Well with PD Symposium (previously known as PD 101): Patricia Pittman, RN, MBA, Clinical Nurse Coordinator, organizes a yearly 2-hour event held at the medical center. The symposium is for patients and caregivers to provide information about PD and how they can better care for themselves utilizing resources within the VA and outside community. In collaboration with VA staff members and the community, diverse topics related to PD are presented. Some of the topics were mindfulness, yoga, physical therapy, exercise, dancing through Parkinson’s, medications, mood, cognition, and psychosis. Patients participated in a range of fun and beneficial activities including yoga, mindfulness, and boxing. Due to COVID-19, the symposium has been placed on hold, pending assessing other means to provide this valuable service to the Veterans (i.e. Microsoft Teams).

Southwest PADRECC Update (continued)

PD at Home: VA GLA PADRECC hosts the PD at Home teleconference that is held the 2nd Tuesday of the month from 10:00 – 11:00 am PST, via toll free number 1.800.767.1750 code 54321#. The teleconference is facilitated by **Patricia Pittman**, RN, MBA, Clinical Nurse Coordinator. Ms. Pittman utilizes the resources from various community groups, the PADRECC Education Committee, and VA Greater Los Angeles staff to seek out speakers who present diverse topics on PD. The VA has decommissioned the VANTS line and replaced with Cisco Webex and Microsoft Teams. Patricia is researching which avenue would be easily accessible for the Veterans.

Research Update

Parkinson's Environment and Gene (PEG) Study: **Dr. Adrienne Keener**, is a study physician on this NIH-funded study of over 800 patients and 800 matched controls recruited to date. They have continued to recruit new subjects and controls through a recently funded grant from the NIEHS using the California Registry to identify new subjects. Dr. Keener was the recipient of a pilot grant from the American Parkinson Disease Association to examine PD onset and progression phenotype in Hispanic participants of the PEG study. She conducts the assessments of new and follow-up study subjects and assists in data analysis.

National Consortium Cooperative Studies Program clinical trial, VA CSP#2015, "Multicenter, Randomized, Double-Blind, Placebo-Controlled Comparator Effectiveness Study of Antipsychotics Pimavanserin and Quetiapine for Parkinson's Disease Psychosis: **Denise Feil MD, MPH, PADRECC Neuropsychiatrist**, is the Site Investigator.

Northwest PADRECC Update

The Northwest PADRECC is comprised of the VA Portland Health Care System and the Puget Sound VAMC and consortium sites

Staff Update

Dr Amie Hiller now Co-Director for the NW PADRECC



Dr Amie Hiller has been with the Portland PADRECC since 2012 after completing her Movement Disorder Fellowship (3 years) with us. She has had the role of fellowship director and moved into the Co-Director role March 2021.

Dr. Hiller has a particular interest in stress and its effects on movement disorders, an interest in palliative care in movement disorders, and has been working closely with the Huntington's population in recent years. She has completed research looking at the effects of vitamin D on gait and balance in PD, has done a small pilot study of the use of mindfulness in PD, and has ongoing studies examining cortisol levels in persons with PD and HD. She is the physician provider for movement disorders palliative clinics at both OHSU and the Portland VA. She has recently published a review article related to gait in HD and a publication on the use of directional DBS to treat essential tremor that was completed with a past fellow was recently accepted for publication. Dr. Hiller has served as the fellowship director for the last four years and particularly enjoys mentoring fellows and junior faculty.

Northwest PADRECC Update

Dr Marian Dale becomes Associate Director of Research for NWPADRECC



Dr Dale completed her fellowship with NWPADRECC in 2015. She then stayed on for one year as staff neurologist at OHSU Parkinson's Center. From 2016-2019 Dr Dale was an Assistant professor in the Department of neurology at the Medical Center of South Carolina in Charleston. Her love of the Pacific Northwest brought her back to us in PADRECC 2019.

Dr. Dale's research focuses on atypical parkinsonism and progressive supranuclear palsy (PSP). Her research seeks to understand the causes of balance dysfunction in PSP and to use non-invasive neuromodulation techniques for symptom control in movement disorders. She is supported by a KL2 Career Development Award at Oregon Health & Science University and a National Center of Neuromodulation for Rehabilitation (NC-NM4R) Pilot Project Grant for a project focused on cerebellar transcranial magnetic stimulation for balance dysfunction and postural instability in PSP. She established and directs the CurePSP Center of Care at OHSU and serves as the Associate Director of Research at the VA Portland Parkinson's Disease Research, Education and Clinical Center (PADRECC). In collaboration with the CurePSP Centers of Care, she recently published a Consensus Statement for Best Practices in PSP clinical care. She is also an active member of the International Parkinson and Movement Disorders Society's working group for postural abnormalities in parkinsonism.

Research

Selected Publications/Abstracts FY21:

Lawren VandeVrede¹, Marian L Dale², Scott Fields³, Megan Frank¹, Emma Hare¹, Hilary W Heuer¹, Kellie Keith², Mary Koestler¹, Peter A Ljubenkov¹, Dana McDermott¹, Noelle Ohanesian¹, Jennifer Richards¹, Julio C Rojas¹, Elisabeth H Thijssen^{1,4}, Christine Walsh¹, Ping Wang¹, Amy Wolf¹, Joseph F Quinn², Richard Tsai¹, Adam L Boxer: **Open-Label Phase 1 Futility Studies of Salsalate and Young Plasma in Progressive Nuclear Palsy**. 2020 Apr 10;7(4):440-447.doi: 10.1002/mdc3.12940. eCollection 2020 May.

Marian L Dale¹, Barbara H Brumbach², Adam L Boxer³, Amie L Hiller¹: **Associations Between Amantadine Usage, Gait, and Cognition in PSP: A *post-hoc* Analysis of the Davunetide Trial**. 2020 Dec 21;11:606925.doi: 10.3389/fneur.2020.606925. eCollection 2020.

John G Nutt¹, Carolin Curtze², Amie Hiller¹, Shannon Anderson¹, Paul S Larson³, Amber D Van Laar⁴, R Mark Richardson^{5,6}, Marin E Thompson³, Alexander Sedkov⁷, Mika Leinonen⁸, Bernard Ravina⁷, Krystof S Bankiewicz^{3,9,10}, Chadwick W Christine⁹: **Aromatic L-Amino Acid Decarboxylase Gene Therapy Enhances Levodopa Response in Parkinson's Disease**. 2020 May;35(5):851-858.
doi: 10.1002/mds.27993. Epub 2020 Mar 9.

Active Research Projects:

STAT-PD: Preventing Levodopa Induced Dyskinesia in Parkinson's Disease with HMG-CoA Reductase Inhibitors (OHSU eIRB #17302; VA MIRB # 3869). *VA CSR&D Merit Review Grant*. Dr. Kathryn Chung is conducting a research study looking at involuntary abnormal movements in Parkinson's disease. In this study, the association of statin use in relate to initiation of levodopa-therapy will be examined.

Northwest PADRECC Update *(continued)*

Measuring Cortisol Levels in Persons with Parkinson's Disease (CORT-PD/HD; OHSU eIRB # 15183; VA MIRB: 3794). *Huntington's Disease Society of America Grant.* Dr. Amie Hiller is conducting a research study looking at cortisol levels in Parkinson's Disease (PD), Huntington's Disease (HD), and Healthy Controls (HC).

Pacific Northwest Udall Center (PaNuC): Clinical Core and Specimen Collection (VA IRB # 2332; OHSU eIRB # 6154). Dr. Joseph Quinn/Dr Kathryn Chung is conducting this research study to examine the genetics of PD and changes in thinking and memory of Parkinson's disease patients over time

San Francisco PADRECC Update

Staff Update

PADRECC San Francisco welcomes a new Director of Surgery, Chief of Neurosurgery



Daniel Lim, MD, PhD is now the new Chief of Neurosurgery at VA San Francisco and the new Director of Surgery for San Francisco's PADRECC. He is also a Professor of Neurological Surgery at the University of California, San Francisco (UCSF); Director of Restorative Neurosurgery and a head of laboratory in the Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research at UCSF. Dr. Lim obtained an MD from Cornell University, a PhD in Neuroscience from Rockefeller University and completed his neurosurgical training at the University of California, San Francisco. He performs deep brain stimulation surgery for patients with Parkinson's disease as well as other movement disorders. Dr. Lim's research interests focus on the epigenetic control of neural stem cell fate with the long-term goal of developing cell and gene therapies for the treatment of neurological disease, including Parkinson's Disease. We welcome Dr. Lim!

Ellen Bradley, MD becomes the embedded Psychiatrist at the SF PADRECC



Ellen Bradley, MD is an assistant professor in the Dept. of Psychiatry and Behavioral Sciences at UCSF and a staff physician at SFVAMC who serves as the embedded psychiatrist in the PADRECC. She completed medical training at Yale and UCSF, followed by a research fellowship at SFVAMC focused on cognitive and expressive deficits in schizophrenia. In collaboration with neurology colleagues at UCSF/SFVAMC, she is currently conducting a pilot study to assess the feasibility of psilocybin therapy for depression and anxiety in people living with PD. Ellen is committed to providing integrated care to veterans living with serious neuropsychiatric disorders and is thrilled to be part of the PADRECC team.



Paul Larson, MD relocating to VA Tucson, AZ



Dr. Paul Larson, the former SF-PADRECC Director of Surgery and SFVA's Chief of Neurosurgery, will be relocating to his home state of Arizona. He will be helping the University of Arizona and VA Tucson to translate new therapies to their new neurogenerative research center.

Dr. Larson was one of three researchers at VA San Francisco and university-partner, UCSF, that started the field of iMRI-guided stereotactic surgery for DBS placement and drug delivery. This work has been the most rapidly adopted stereotactic platform in the modern era of functional neurosurgery. The group has also been at the forefront of gene therapy for Parkinson's disease. Their 5th gene therapy trial for PD was the 1st performed in the VA system. Dr. Larson's interest in neurobiology includes the underlying brain circuitry of phantom auditory disorders including tinnitus. His work discovered a brain region involved with auditory perception and a new proposed model of the basal ganglia for chronic tinnitus. His NIH grant to study the use of DBS in patients with severe, medically refractory tinnitus were the first in-human trial using DBS for tinnitus at the San Francisco VA. We wish Dr. Paul Larson the best of luck in his endeavors.

San Francisco PADRECC Recent Publications

The Neurophysiology of Sleep in Parkinson's Disease.

Zahed H, Zuzuarregui JRP, Gilron R, Denison T, Starr PA, Little S. *Mov Disord.* **2021 Jul**;36(7):1526-1542. doi: 10.1002/mds.28562. Epub 2021 Apr 7. PMID: 33826171 <https://pubmed.ncbi.nlm.nih.gov/33826171/>

Caregiver-Reported Burden in RE-KINECT: Data from a Prospective Real-World Tardive Dyskinesia Screening Study. Cutler AJ, Caroff SN, Tanner CM, Shalhoub H, Lenderking WR, Pagé V, Franey E, Yonan C. *J Am Psychiatr Nurses Assoc.* **2021 Jun 22**:10783903211023565. doi: 10.1177/10783903211023565. Online ahead of print. PMID: 34154444 <https://pubmed.ncbi.nlm.nih.gov/34154444/>

Identification of a personalized intracranial biomarker of depression and response to DBS therapy.

Frank AC, Scangos KW, Larson PS, Norbu T, Lee AT, Lee AM. *Brain Stimul.* **2021 Jun 23**;14(4):1002-1004. doi: 10.1016/j.brs.2021.06.009. Online ahead of print. PMID: 34175247 <https://pubmed.ncbi.nlm.nih.gov/34175247/>

Effects of Gocovri (Amantadine) Extended Release Capsules on Non-Motor Symptoms in Patients with Parkinson's Disease and Dyskinesia. Mehta SH, Pahwa R, Tanner CM, Hauser RA, Johnson R. *Neurol Ther.* **2021 Jun**;10(1):307-320. doi: 10.1007/s40120-021-00246-3. Epub 2021 Apr 17. PMID: 33864229 <https://pubmed.ncbi.nlm.nih.gov/33864229/>

Long-term wireless streaming of neural recordings for circuit discovery and adaptive stimulation in individuals with Parkinson's disease. Gilron R, Little S, Perrone R, Wilt R, de Hemptinne C, Yaroshinsky MS, Racine CA, Wang SS, Ostrem JL, Larson PS, Wang DD, Galifianakis NB, Bledsoe IO, San Luciano M, Dawes HE, Worrell GA, Kremen V, Borton DA, Denison T, Starr PA. *Nat Biotechnol.* **2021 May 3**. doi: 10.1038/s41587-021-00897-5. Online ahead of print. PMID: 33941932

San Francisco PADRECC Update (continued)

The TOPAZ study: a home-based trial of zoledronic acid to prevent fractures in neurodegenerative parkinsonism. Tanner CM, Cummings SR, Schwarzschild MA, Brown EG, Dorsey ER, Espay AJ, Galifianakis NB, Goldman SM, Litvan I, Luthra N, McFarland NR, Mitchell KT, Standaert DG, Bauer DC, Greenspan SL, Beck JC, Lyles KW. *NPJ Parkinsons Dis.* **2021 Mar** 1;7(1):16. doi: 10.1038/s41531-021-00162-1. PMID: 33649343 <https://pubmed.ncbi.nlm.nih.gov/33649343/>

Amantadine Associated Myoclonus: Case Report and Review of the Literature.

Poon LH, Lee AJ, Vuong M, Zuzarregui JR. *J Pharm Pract.* **2021 Feb** 24:897190021997003. doi: 10.1177/0897190021997003. Online ahead of print. PMID: 33622074 <https://pubmed.ncbi.nlm.nih.gov/33622074/>

Therapeutic Advances in Movement Disorders. Tanner CM, Ostrem JL. *Neurotherapeutics.* **2020 Oct**;17(4):1325-1330. doi: 10.1007/s13311-020-00988-2. Epub 2021 Jan 15. PMID: 33452629 <https://pubmed.ncbi.nlm.nih.gov/33452629/>

National VA PD Consortium Center Updates

Philadelphia PADRECC

VA Boston Healthcare System

Director: Ornella M. Dubaz, MD

Ornella M. Dubaz, M.D. joined the VA Boston Healthcare System in September 2020 as the Director of Movement Disorders. Dr. Dubaz comes to the Veterans Administration with expertise in Parkinson's disease and other movement disorders, botulinum toxin treatments, and Deep Brain Stimulation. She also has a special interest in Neuropalliative care and is a committee member for the International Neuropalliative Care Society (INPCS). She is Instructor of Neurology at Harvard Medical School/Brigham and Women's Hospital and Clerkship Director for the Harvard South Shore Psychiatry Residency Neurology Clerkship.

Newly Diagnosed Parkinson's Disease Interdisciplinary Clinic

VA Boston Healthcare System is proud to announce a new clinical initiative, the Newly Diagnosed Parkinson's Disease Virtual Interdisciplinary Clinic, co-led by Dr. Ornella Dubaz (Movement Disorders) and Bethany McEleney (Physical Therapy). Patients recently diagnosed with Parkinson's Disease are referred for a virtual interdisciplinary consultative clinic experience in which they meet with providers from Movement Disorders, Physical Therapy, Occupational Therapy, Speech and Language Pathology, Neuropsychology, Physical Medicine and Rehabilitation, and Social Work. After each patient and family meets with the various providers via VA Video Connect (VVC), there is a discussion amongst the providers during which an interdisciplinary action plan is created. This is provided to the patient, along with information regarding resources to help them along on their Parkinson's Disease journey. The first clinic was in May 2021 and is set to occur quarterly.

Southeast PADRECC

Ralph Johnson VAMC

Director: Vanessa Hinson, MD

On Saturday, **March 20, 2021**, the Ralph H. Johnson VA Medical Center in Charleston, South Carolina and the **Parkinson's Foundation** hosted the first ever collaborative conference between the two entities. The interactive virtual symposium titled "Veterans and Parkinson's: What You Need to Know" had over 1,100 RSVP's from all 50 states and several countries. Veterans from each branch of the military and their care partners were represented.

National VA PD Consortium Center Updates

We had a total of 232 survey responses, largely positive and with 97% reporting they would participate in similar programs in the future. You can view the symposium in its entirety via the following link: <https://www.youtube.com/watch?v=mhp8rfBNLHU>

Southwest PADRECC

VA Loma Linda Health Care System

Dr. Dorothee Cole manages the Movement Disorders clinic, which provides specialty care for patients with PD, including DBS programming, Duopa pump programming and botulinum toxin therapy. In addition, she treats other movement disorders such as myoclonus, tremor, Huntington's disease, and ataxia. She provides teaching to medical students, neurology residents, and clinical pharmacy residents.

VA San Diego Health Care System

Dr. Stephanie Lessig and Dr. Caitlin Mulligan, serve as attending neurologists in weekly Movement Disorders and Botulinum Toxin clinics.

Dr. Lessig is the Co-Principal Investigator at UCSD for the nationally recognized PPMI study by the Michael J Fox Foundation that targets newly diagnosed Parkinson's patients throughout the community and the VA. Dr. Lessig collaborates extensively with the Neuropsychology department at VA San Diego and participates in many protocols analyzing cognition in Parkinson's. She is Co-Investigator on the protocol "Investigating Exercise-Induced Neuroplasticity and its Mechanisms in Parkinson's Disease: Targeting Executive Function and Brain Circuitry".

New Mexico (Albuquerque) VA Health Care System

Dr. Sarah Pirio-Richardson and JoAnn Harnar, RN, run the PADRECC clinic in Albuquerque, New Mexico. Clinical activities include specialty care for patients with tremor, ataxia, PD and dystonia. botulinum toxin injections and deep brain stimulation programming are done for patients in VISN 18 from Eastern Arizona, Southern Colorado, New Mexico and Western Texas. Teleneurology and nurse education sessions are important parts of these services.

Las Vegas VA Health Care System

Dr. Selina Parveen provides movement disorder, DBS and botulinum toxin management to a large catchment area in Nevada, Arizona and Utah in VISN 22. She is often a guest speaker at the community support group, Friends of Parkinson's, in which many Veterans attend. She teaches medical students at UNLV school of medicine and has academic affiliation at Touro Medical College.

Southern Arizona (Tucson) VA Health Care System

Scott Sherman, MD, PhD and his research laboratory, focus on developing novel therapies for PD and have several translational research projects. His research led to the discovery that neurotrophic factors, Vascular Endothelial Growth Factor-B and a PEDF, a factor derived from the retina, are neuro-protective. Basic laboratory studies in these areas are continuing.

National VA PD Consortium Center Updates

Dr. Sherman has been working to repurpose the anesthetic drug, ketamine, as a treatment for dyskinesia and non-motor symptoms of PD. They originally reported the clinical observations that low dose infusions of ketamine for a period of 72 hours led to sustained benefits in reducing levodopa-induced dyskinesia (LID). The doses used did not cause any significant side effects or sedation and had effects lasting several months. The next goal is to design a prospective, randomized, placebo-controlled Phase 2 clinical trial to further confirm this result. To properly design this trial, they have developed a pre-clinical rodent model of LID to predict the dose response, duration of response and mechanism of action of ketamine. They have found shorter infusions (10 hrs. or less) in the sub-anesthetic range are still effective in the rodent model. If this translates to humans, then it may be feasible to use an abbreviated outpatient treatment regimen. In addition, they have made significant progress in understanding the mechanism of action of ketamine in this model system. They have found that ketamine acts to alter long-term oscillatory behavior of corticostriatal circuits in manner analogous to Deep Brain Stimulation. They are also investigating the role of the neurochemical BDNF that is likely up-regulated by ketamine treatment. In 2019, they were successful in obtaining funding from the Arizona Biomedical Research Council (750,000 over 3 years to conduct this research).

Dr. Scott Sherman's research laboratory is a major collaborator on an NIH funded project to develop neuroprotective molecules in rodent models of PD. NINDS (1 R01 NS 091238-01A1, 09/30/15 to 06/30/20, PACAP/VIPV).

VA Long Beach Health Care System

Dr. Steven Schreiber is Chief of Neurology at the VA Long Beach and oversees the PADRECC clinic. He was instrumental in developing the first Teleneurology program in the VA system. **Dr. An Tran**, Movement Disorders Specialist, runs the botulinum toxin, Movement Disorders and DBS clinics. Megan Gomez, PhD, a licensed clinical psychologist in the Primary Care Mental Health Integration Clinic, specializes in neuropsychology and neurodegenerative diseases and facilitates a monthly Parkinson's Support Group at the VA Long Beach.

Due to COVID-19 pandemic, the VA Long Beach has converted some of the PADRECC appointments to VA Video Connect (VVC) and the rest to the telephone clinic. This has enabled the facility to continue providing care to Parkinson/Movement Disorders patients while keeping the Veterans safe at home. The VA Long Beach is also a participant in the Parkinson's Disease National TeleMental Health Center consultation (PD NTMHC) service. This service provides neuropsychiatry consultation to Parkinson patients. Dr. Weintraub assists in managing Parkinson's Disease patients with complex diagnostic or psychopharmacological questions. The program brings experts in Parkinson's Disease psychiatry to Veterans throughout the country, regardless of how remote their location.

Consortium Coordinating Center
John Duda, MD, Chairperson
 215-823-5934
Dawn McHale, Coordinator
 215-823-5800 x 2238

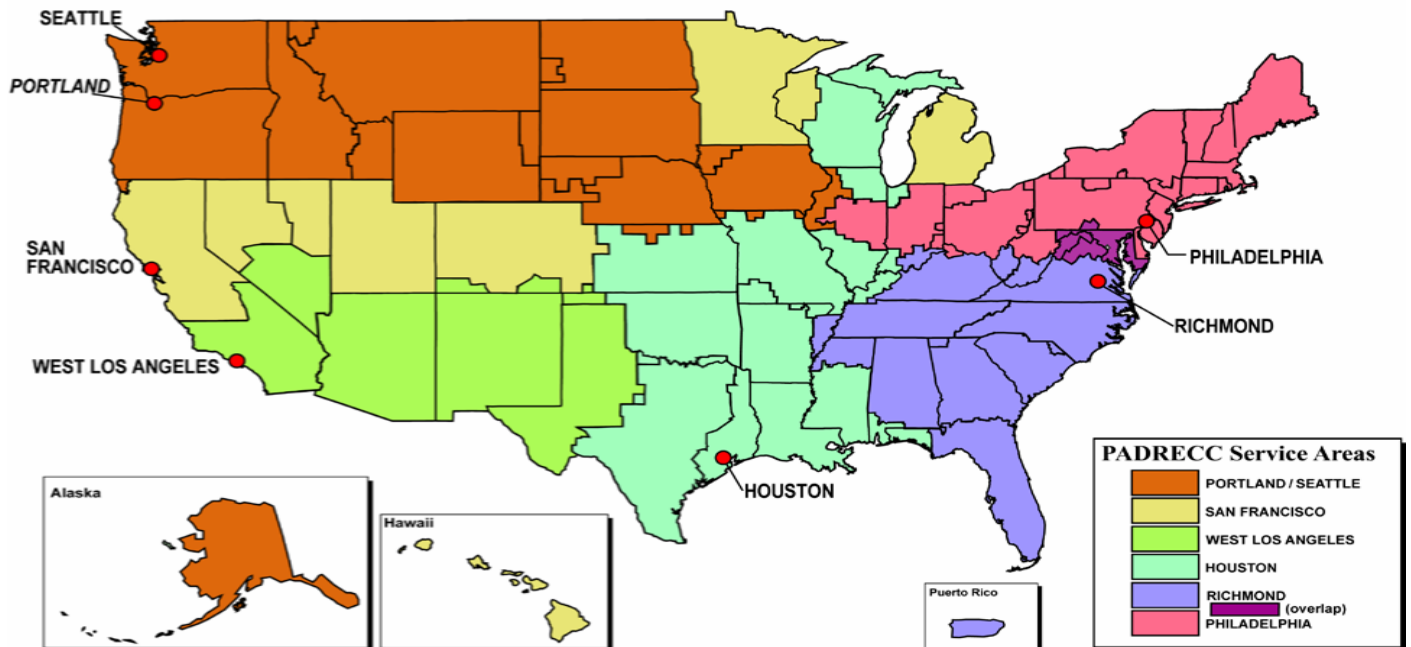
Consortium Center Referral Line
Tonya Belton
 1-800-949-1001x5769

Newsletter Editors
Gretchen Glenn
 National VA PD Consortium Education Subcommittee Chair
Dawn McHale
 Consortium Coordinator
Lorraine Anzaldo
 National Coordinator for Operations

PADRECC National Directory

Center	Medical Center	City, State	Director	Telephone
Houston	Michael E. DeBakey VAMC	Houston, TX	Aliya I. Sarwar, MD	713-794-7841
Southwest	VA Greater Los Angeles Health Care System	Los Angeles, CA	Indu Subramanian, MD	310-478-3711 ext. 48001
Northwest	Portland VAMC VA Puget Sound Health Care System	Portland, OR Seattle, WA	Joe Quinn, MD	Portland: 503-721-1091 Seattle: 206-277-4560
Philadelphia	Corporal Michael J. Crescenz VAMC	Philadelphia, PA	John Duda, MD	215-823-5934 or toll free 888-959-2323
Southeast	Hunter Holmes McGuire VAMC	Richmond, VA	Jessica B. Lehosit, DO	804-675-5931 or toll free 800-784-8381 ext 5931
San Francisco	San Francisco VAMC	San Francisco, CA	J. Rafael P. Zuzuárregui, MD	415-379-5530

Service Areas for PADRECCs



Veterans Health Administration