

PARKINSON'S DISEASE RESEARCH,
EDUCATION, AND CLINICAL CENTERS
(PADRECC)

PARKINSON'S DISEASE
Program and Clinical Guide



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1. PURPOSE

This program guide describes the essential components and procedures of the Parkinson's disease (PD) program that are to be implemented nationally to ensure that all enrolled Veterans, wherever they live, have access to PD care. This program guide is an addendum to VHA Directive PADRECC.

2. BACKGROUND

In 2001, the Department of Veterans Affairs (VA) established the Parkinson's Disease Research, Education and Clinical Centers (PADRECCs) to care for the approximately 80,000 (this number has grown to 110,000) Veterans afflicted by Parkinson disease. The six Centers of Excellence were founded at the Philadelphia, Richmond, Houston, West Los Angeles, San Francisco, and the Portland/Seattle VA Medical Centers. Each PADRECC is designed to deliver state-of-the-art clinical care, research, and educational programs to an expansive geographic region or "service area" (see Figure 1). These Centers are staffed by movement disorders specialists and researchers.

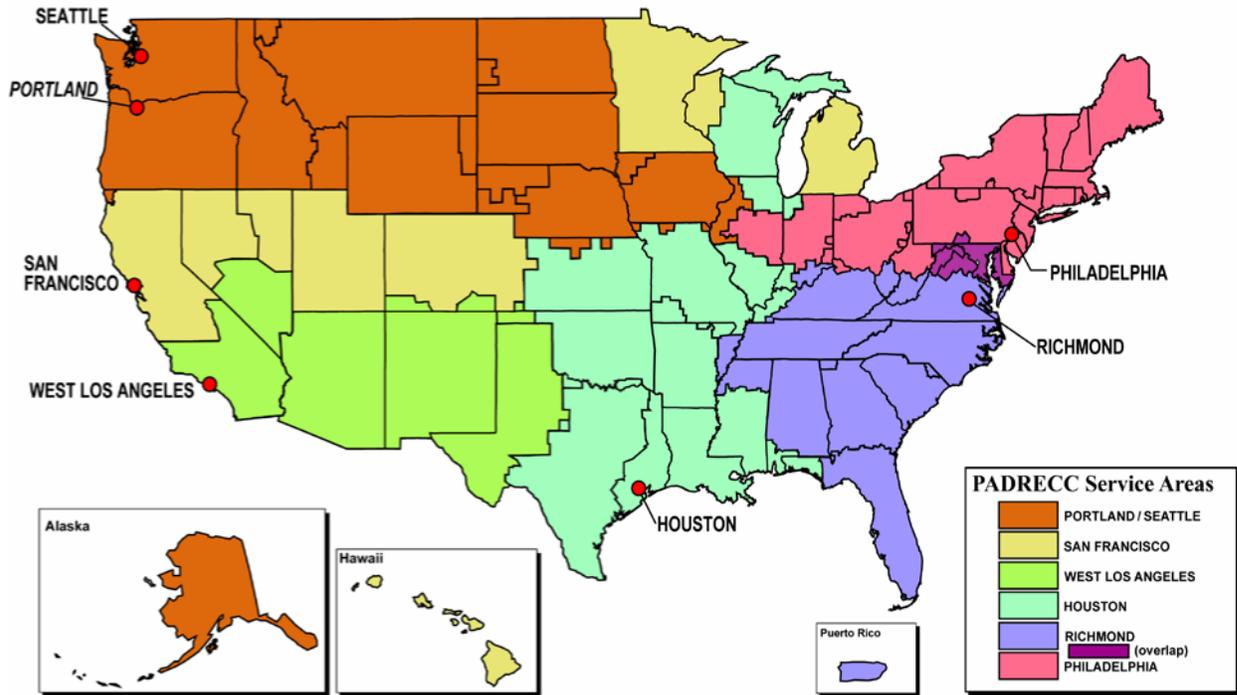
In 2003, the PADRECCs introduced the National VA Parkinson's Disease Consortium to promote Parkinson's disease awareness across the VA Healthcare System. This initiative has focused on professional networking, mentorship, and training. The Consortium is currently comprised of VA physicians, nurses, pharmacists, social workers, physical and occupational therapists, and other allied health professionals. The Consortium Center Network was subsequently launched in 2006 to broaden the reach of the PADRECC mission. These designated Centers offer Veterans convenient access to specialized movement disorders services within all Veterans Integrated Service Networks (VISNs). The PADRECCs and Consortium Centers create a hub and spoke model of care that is highly innovative and effective. The PADRECCs were made permanent by H.R.6342, Section 7329, Veterans Benefits, Health Care and Information Act of 2006.

Parkinson's Disease Research, Education & Clinical Center (PADRECC) Directors

The PADRECC Directors are responsible for supporting the National Director of Neurology, and the Chief Officer for Specialty Care Services, in developing and maintaining policies and procedures to ensure that all Veterans with Parkinson's disease (PD), who are enrolled and receive care through the VA system, have access to high quality subspecialty PD care. The PADRECC Directors are responsible for identifying advances in PD care, gaps in care, and making recommendations to appropriate VA Central Office program offices. In collaboration with the Assistant Deputy Under Secretary for Health for Policy and Services (10P), and Specialty Care Services, the PADRECC Directors make recommendations to the National Director of Neurology Services regarding VA medical facility based care and the coordination of PD care, as well as providing expertise and education for providers, Veterans, and caregivers. PADRECC Directors are responsible for promoting the use of virtual care modalities (telehealth, e-consults, etc.) to improve PD specialty access. PADRECC Directors are also responsible for designating VA Parkinson's Disease Consortium Centers.

Figure 1: Map of PADRECC Service Areas

Recommended Service Areas for PADRECCs



Veterans Health Administration

Contact List for the six PADRECC Centers of Excellence,
and complete list of the VA Parkinson's Disease Consortium Centers,
can be found on the PADRECC website <https://www.parkinsons.va.gov/Care.asp>

3. DEFINITIONS

A. Parkinson's disease

PD is the second most common neurodegenerative disorder. It was first described in 1817 by Dr. James Parkinson in An Essay on the Shaking Palsy.

B. Epidemiology

PD has an estimated prevalence of around 200/100,000 with some studies quoting up to 329/100,000. The number of people living with the disease in the US is up to one million and worldwide more than five million. The likelihood of developing Parkinson's disease increases with age. It typically begins in the age range of 50-60 years with the average age of onset 62.4 years. Onset before age 30 is rare but up to 10% of cases begin by age 40. Some studies suggest that men have a slightly higher risk of developing PD.

C. Etiology

The cause of Parkinson's disease remains unknown. There is a loss of dopaminergic neurons in the substantia nigra as well as other dopaminergic and non-dopaminergic areas of the brain. Research indicates that there are genetic and environmental factors that contribute to the development of PD.

D. Diagnosis

The diagnosis of PD is largely clinical, requiring careful integration of the history and physical examination. Response to dopaminergic medication is also useful in the diagnosis. Early in the disease, up to 5-10% of patients with PD are misdiagnosed. Up to 20% of patients diagnosed with PD have other diagnosis at autopsy such as the atypical Parkinson syndromes, Alzheimer disease, or cerebrovascular disease. Diagnostic criteria such as the United Kingdom (UK) Brain Bank Criteria have been proposed, which increase the accuracy of diagnosis to 90%. The accuracy of diagnosis increases significantly when the examination is performed by specialists with movement disorders training.

E. Symptoms

PD is characterized by the classic motor symptoms of bradykinesia, rigidity, and rest tremor. Non-motor symptoms are increasingly highlighted as a major cause of disability and poor quality of life. These symptoms include cognitive and sleep dysfunction, depression, constipation, hyposmia, speech and swallowing dysfunction, and orthostatic hypotension.

F. Clinical Course

PD is a chronic neurodegenerative disease with a slow progression of symptoms over years; however, the course is highly variable. Early in the disease, patients present with symptoms of stiffness, slowness, or tremor. Later, patients develop postural instability. Over time, dyskinesias and motor fluctuations often develop. As the disease progresses, cognitive dysfunction and non-motor symptoms can become a major issue.

G. Disease Modifying Therapies (DMTs)

At the present time, the medications that we offer patients are symptomatic only and are not neuroprotective. The potential for a medication to have a disease modifying effect is an area of active study.

H. Hub and Spoke Care Model

In addition to the six regional PADRECCs, each VISN will have at least one Consortium Center that will serve as a local source for PD specialty consultation and education. The primary care for individuals with PD will occur at their local VA medical facility.

4. SCOPE

The mission of the PADRECC is to support quality of life by providing comprehensive medical and surgical care to Veteran patients with Parkinson's disease and other movement disorders, advancing investigation into the cause and cure for Parkinson's disease, and enhancing understanding of the disorder through education and research.

PD is a unique disease due to its presentation with both disabling motor and non-motor symptoms that can affect areas ranging from mood, sleep to swallowing and falls. The diagnosis of this disease is also different than many neurological diseases given it is a clinical diagnosis, requiring the skill of an expert movement disorders physician to confirm and treat. Due to an evolving symptom profile, Parkinson's disease requires close follow-up and adjustment of the treatment plan of the PD patient. Additionally, the medications used in PD add a unique profile of other issues to be considered, including dyskinesias, impulse control disorders, hallucinations, and hypotension. Medication administration requires a high level of compliance and complex schedules and regimens, and is a unique and crucial part of the treatment plan in Parkinson's disease.

This guide defines services that can be provided at VA medical facilities. It is not the purpose of this Guide to describe all aspects of PD treatment and programming that could be appropriate and effective. VISNs and facilities are encouraged to engage in clinical consultation and educational opportunities with their regional PADRECC to advance services for their local Veterans.

The PADRECC structure and core functions include expert care initiatives and guidelines, education for providers and patients, and other clinical programs directed at enhancing the quality of PD care (refer to: <http://www.parkinsons.va.gov/>).

5. PD SYSTEM OF CARE CONTINUUM

A. PD Specialty Care

The goal of the VHA system of care is to provide Veterans with Parkinson's disease and movement disorders appropriate care, in the appropriate location, time and capacity as dictated by the natural progression of disease. This not only includes access to state of the art diagnostic and treatment modalities through the course of the disease, but also access to social work services, spiritual care services and interdisciplinary care involving access to speech therapy, occupational therapy, physical therapy, and other physician specialist to care for the specific needs of Parkinson's disease and movement disorder patients in an integrated fashion (see Figure 2).

B. Telehealth Services

Telehealth is defined as providing the right care in the right place at the right time through the effective and appropriate use of health information and telecommunications technology. Most PADRECCs provide various telehealth services to improve access and enhance the quality of care provided to patients.

1. Effective Telehealth services include:
 - a. New patient consultation
 - b. Routine follow up care
 - c. Deep Brain Stimulation adjustments
 - d. SCAN-ECHO (*Specialty Care Access Network-Extension for Community Healthcare Outcomes*) consults/education for VA providers
 - e. Patient education programs

2. Telehealth services are provided by utilizing VA Video Connect to other VA facilities (both inside and out of PADRECC VISN), CBOCs (Community Based Outpatient Clinics), some VA State Nursing Homes, into the patient's home, or anywhere the patient is located. To arrange services please contact your local medical center's Facility Telehealth Coordinator.

C. Emergency Care

Emergency services vary from center to center, however each PADRECC has a neurologist on site that may assist the Emergency Department physician in the care of the Parkinson's patient as necessary. This is often relevant in emergencies, even when not related to PD, as many questions arise about medication management during hospitalization.

D. Primary Care

Each PADRECC has a movement disorders specialist on site that may assist the Primary Care physician in the care of the Parkinson's patient as necessary. Further, Parkinson's patients cared for within the PADRECC network benefit from having frequent communication between primary care providers (PCPs) and PD specialists. Because PD affects many systems of the body, changes to medications, such as blood pressure medications, often require input from both the PCP and the PD specialist to ensure that these changes don't result in fainting.

E. Rehabilitation

Patients with PD often have significant rehabilitation needs. Access to a physical therapist with specialty training in Neurology is very important to the care of PD patients. This is important for maintenance of balance and prevention of falls, by providing walkers and other assistive devices at the appropriate stage of disease progression. Further, there is some evidence that exercise may improve how patients do over the long run and should be emphasized. Speech and swallowing evaluations and therapies are imperative. The most common cause of death in Parkinson's is aspiration pneumonia, and thus speech therapy is very important for assessing how patients handle food and secretions.

F. Palliative Care

Although there are many treatments to help with the symptoms of PD, the disease is progressive and almost all patients eventually arrive at a stage of disease where "symptom management" becomes paramount. Palliative care demonstrates compassion, commitment, and hopefulness that suffering can be relieved. Palliative care services may include a team whose focus is on the needs of the patient as they lose independence and often develop concerns about being a burden on their families and loved ones. Palliative care specialists in the VHA should communicate with providers, patients, and families to determine the goals of care, wishes for advanced directives, which include resuscitation status and the use of potentially life-prolonging care, as well as ensuring that the patient's family is not suffering from caregiver burden.

1. **When to Refer for Palliative Care**

The following signals a need to relieve suffering and address the patient's well-being by use of palliative care specialists:

- a. Physical deterioration evidenced by regular falls and/or markedly limited mobility (i.e. bed-bound)
- b. Onset of clinically significant cognitive disability
- c. Visual hallucinations unrelated to medications

- d. Need for residential care
- e. Lack of medication responsiveness
- f. Overwhelming disability from non-motor symptoms
- g. Pain

2. **Palliative Care Setting**

Patients with Parkinson’s disease can be provided palliative care in multiple settings:

- a. Home
- b. Outpatient Clinic
- c. Long-term-care facility
- d. Hospital or intensive care units
- e. Palliative care clinics. Several centers have multidisciplinary clinics called “Palliative care clinics” that focus on palliation and a realization that patients may benefit from services such as social work and chaplaincy. These services may happen independently.

G. **Respite Care**

Respite care provides caregivers temporary relief from the responsibilities of caring for individuals with Parkinson’s disease. Respite literally means “a period of rest” and is recognized as an important consideration for families and caregivers of physically dependent Veterans. Respite care need not be limited to a long-term care unit, but rather in an age and diagnosis-appropriate setting with trained staff. Each Veteran requiring attendant care should be offered respite care at a facility approved by the referring VA medical center. The duration of any respite care admission, absent complicating medical factors for patient or caregiver, should not exceed 14 days. The total of all respite care for a Veteran in a year, absent complicating medical factors, is not to exceed 30 days. Any individual who has been hospitalized is not eligible for respite care until 1 month after discharge from an inpatient stay. Veteran’s may be subject to a copay for respite care depending on service connection status and income.

H. **Home Care**

Medical, rehabilitation, and preventive services determined necessary to sustain the Veteran with PD in the community should be provided. This will require collaboration between Social Work Service (SWS), primary care, and specialty care.

I. **Long-term Care**

The VHA system of care is committed to supporting a full continuum of care for Veterans with Parkinson’s disease including long-term care. The goal of long-term care is to assist Veterans with PD to attain or maintain a community level of adjustment and maximal independence, despite the loss of functional ability due to the aging process, loss of a primary caregiver, medical complications or progression of their disease. Connected Care/Telehealth Services, Home Telehealth (CCHT) monitors patients at home using home telehealth technologies to prevent or delay Veterans needing to leave their home for the management of chronic conditions and to provide non-institutional care. The continuum of extended care services for Veterans with PD is a mix of services designed to meet eligibility requirements, individual needs, family needs, personal preference (choice), and the promotion of independent community living whenever possible. Depending on eligibility options within VHA, include:

1. Care at a designated VA long-term care facility
2. VA nursing home care unit
3. Home care services
4. Homemaker or home health aide services
5. Adult day health care
6. Contract home health care
7. Home-based primary care
8. Community residential care
9. Sub-acute intermediate care
10. Geriatric Evaluation and Management Unit (GEMU)
11. Geriatric Research and Education Clinical Center (GRECC)
12. Assisted living
13. State nursing homes
14. Domiciliary care
15. Respite care
16. Hospice care

NOTE: The preceding list is not all-inclusive and not all services are available in all VA health care settings.

NOTE: Nursing home referrals should include a summary of the interdisciplinary team's recommendations on the specific services and resources that the Veteran requires to maintain functional status, achieve maximal independence, reduce social role limitation, and enhance quality of life.

NOTE: It is expected that the Veteran with Parkinson's disease, who resides in a long-term care facility, will continue to have access to the PADRECC network.

J. Mental Health Care

Mental health issues, particularly anxiety and depression, are common in individuals with Parkinson's disease and are frequently overshadowed by their physical problems. All providers caring for persons with PD should screen for mental health issues as well as cognitive decline, offer treatment, and make appropriate referrals. Mood disorders should be assessed regularly, including suicide risk assessment if significant depression is identified. All Veterans with Parkinson's disease should have access to mental health and neuropsychological services.

K. Social Work Services

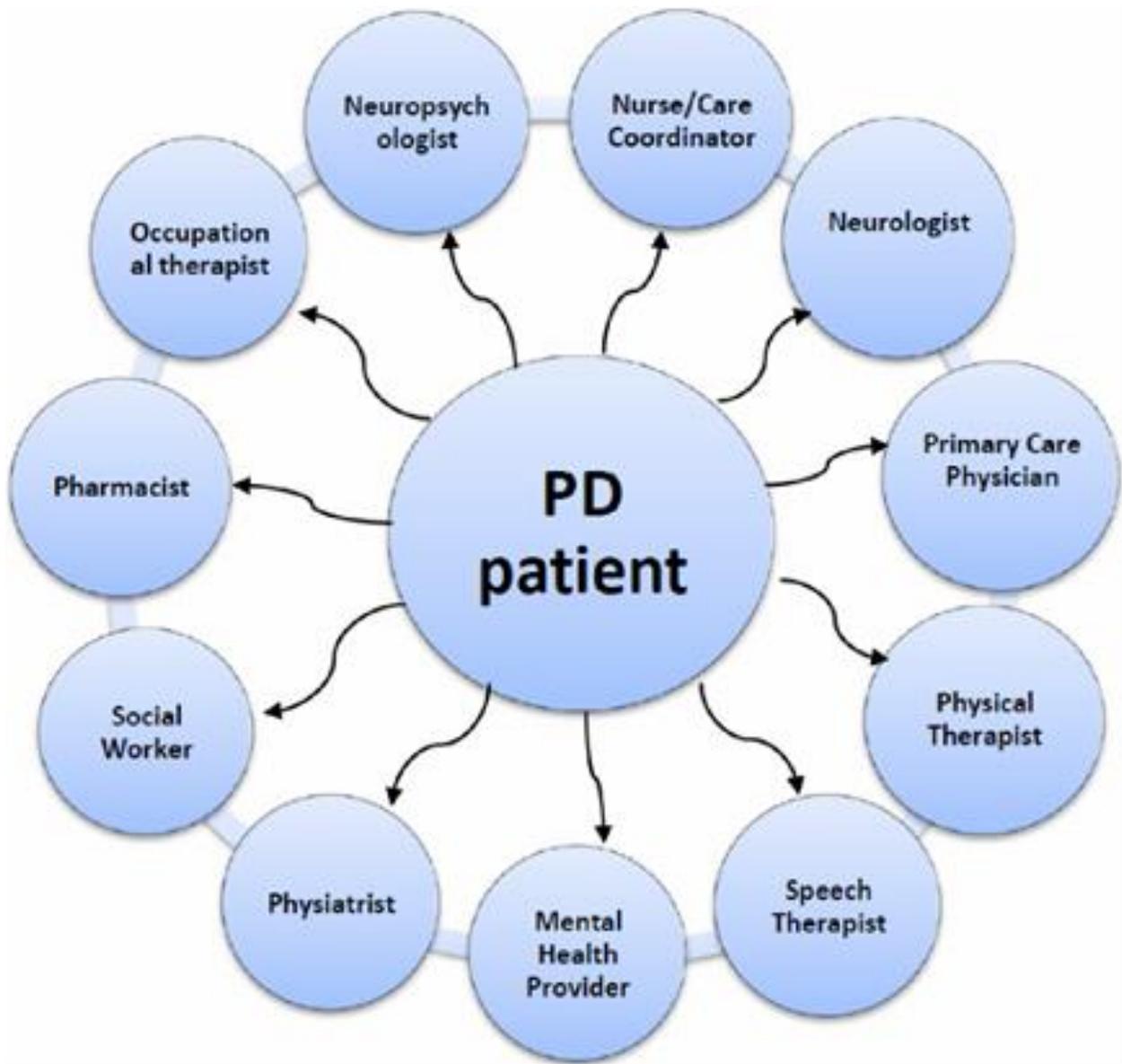
Veterans with PD should have access to comprehensive social work services throughout the course of their illness. Social workers participate in the planning, implementation, and evaluation of

treatment programs for PD patients. Social workers participate in the initial assessment of the patient, placing special emphasis on the psychosocial aspects of the problem(s) and formulate a social work component of the overall treatment plan.

Social workers' functional responsibilities are directed toward:

1. Promoting mental, vocational, and social rehabilitation
2. Facilitating the individual's return to the community at the highest level of functioning possible
3. Advocating for health care services both within and outside of VHA (e.g., VA prosthetic items, Medicare, Medicaid, and Social Security Disability, skilled homecare)
4. Providing care management to Veterans and their caregivers within the VA and the community
5. Providing linkages and referrals to access community supportive services for PD
6. Assisting with alternative living arrangements when necessary
7. Assisting in advance care planning, specifically discussion of Advance Directives
8. Advising patients regarding Veteran's benefits and compensation programs (e.g., PD service-connection, VA Aid and Attendance funding, and VA Vocational Rehabilitation) and Assisting with travel benefits.

Figure 2: Multidisciplinary Model of Care



6. POPULATION SERVED

The PADRECCs serve all Veterans with a diagnosis of PD, those with suspected PD, and those being evaluated for a diagnosis of PD and other movement disorders. In addition, Veterans, family members, caregivers, health care providers, and administrative staff who seek information about PD are included in the target population served by the PADRECCs.

7. HEALTH MANAGEMENT ISSUES THROUGH THE CONTINUUM OF CARE

Parkinson's disease has both acute and chronic features; therefore, care should be tailored to an individual patient's needs. The goal of PD management is to slow disease progression, prevent complications, and maximize quality of life.

A. Diagnosis of PD

The diagnosis of PD is largely a clinical one and as such requires a detailed history and physical exam of the patient and continued long term follow up. Even in the hands of an expert with movement disorders training and using specific criteria for diagnosis such as the UK Brain Bank criteria, the accuracy of diagnosis of PD may not exceed 90% when post-mortem pathology is used as the gold-standard. There are a number of atypical Parkinson syndromes that can be misdiagnosed, especially early in the course of PD.

Clinical indicators of a Parkinson-plus syndrome instead of PD include poor response to levodopa, autonomic dysfunction (such symptomatic postural hypotension, urinary retention requiring catheterization or fecal incontinence, persistent erectile dysfunction), lack of tremor, speech or bulbar dysfunction, absence of levodopa-induced confusion (for Multiple system atrophy) and early falls or falls at presentation of the disease. Lack of asymmetry at onset of the disease and rapid progression (to Hoehn and Yahr stage 3 in 3 years) are also concerning for a Parkinson-plus syndrome. There are also secondary causes of Parkinsonism, such as stroke, structural causes, medication-induced Parkinsonism and numerous other toxic/metabolic conditions that can cause Parkinsonism.

B. Clinical Evaluations and Documentation

The above symptoms should be carefully screened for, and a general examination performed including mental status and general neurological examination. Focus on the motor examination of the Unified Parkinson Disease Rating Scale ([UPDRS](#)) can be included [downloadable forms available at <http://www.mdvu.org/library/ratingscales/pd/default.htm>]

A detailed review of the current and past medication lists should be performed to rule out drug-induced Parkinsonism. If agents such as neuroleptics (antipsychotics or antiemetics) are being administered to a patient with Parkinsonism, these agents should be tapered off and observation of the patient for at least 6 months off the agent should be performed before the diagnosis of idiopathic Parkinson's disease can be made.

The in-office dopaminergic challenge has remained controversial and is not routinely performed in making the diagnosis of PD. More importance is placed on the response to chronic dopaminergic therapy and the response and progression of the patient's signs and symptoms to medications over time. Routine use of other tests such as olfaction testing and

neurophysiological testing is not indicated due to low specificity and sensitivity. Routine imaging with magnetic resonance imaging (MRI), sonography, and functional imaging such as positron emission tomography (PET) or single-photon emission computed tomography (SPECT) scans (e.g., DaTSCAN) are also not indicated, but can be used in diagnostically challenging cases with some utility, but do not replace the clinical approach to diagnosis. (see “Clinical Indications for the use of Dopaminergic Functional Imaging ([Clinical Indications to us DFI](#)) MRI of the brain is especially helpful in patients with vascular risk factors or history of neoplasm or atypical presentations to rule out strokes, cancer, normal pressure hydrocephalus, subdural hematomas or infections. *LINK:* <https://www.parkinsons.va.gov/PARKINSONS/resources/DFI.asp>

Documentation of non-motor symptoms such as rapid eye movement (REM) sleep behavior disorder, anosmia, constipation, and depression should also be performed. Current research is examining the role of these non-motor symptoms in combination with family history of PD in predicting risk of developing PD. A template has been developed that includes the key historical motor and non-motor questions, UPDRS, the general and focused movement disorders examination. This can be obtained from the PADRECCs and installed with the assistance of the local VA Medical Center Information Resource Management Services.

C. Annual Exam

Every Veteran with a diagnosis of PD needs to have an annual general and neurological examination. The following five points should be considered when planning for annual exams. This evaluation includes elements of preventive health care defined for the general Veteran population, provided there are no contraindications for doing so. (For new patient template examples, please see Appendix B)

1. The evaluation may need to be accomplished in one inpatient visit, one outpatient visit, several outpatient visits, or via telehealth.
2. The PADRECCs help facilitate the goal of ensuring PD patients in their region are evaluated annually either at PD support programs (spoke facilities) or at the PADRECC site. This is accomplished by continuing education and raising awareness of spoke facility providers, as well as through extended clinical care such as Telemedicine.
3. If an influenza or a pneumococcal vaccination are not offered in primary care, Veterans with PD need to be encouraged to have a yearly influenza vaccination and a pneumococcal vaccination per the Center for Disease Control and Prevention (CDC) recommendations (refer to links below)

<https://www.cdc.gov/vaccines/vpd/pneumo/hcp/PCV13-adults.html>

<https://www.cdc.gov/flu/professionals/acip/2017-18summary.htm>

4. The recommended annual neurological evaluation should include:
 - a. A comprehensive history and neurological exam documenting Laboratory evaluation as clinically appropriate especially if dementia is an issue. Lab studies screening for treatable causes of dementia including CBC, TSH, B12, Chemistry panel as well as syphilis testing in an at-risk population;
 - b. Assessment of drug regimen should be performed including a review of specific times that medications are taken and reinforcing compliance; NOTE: Timing of medications should be reviewed with respect to dietary amino acids as well, as this can affect

efficacy of levodopa. Pill timers, pill boxes and alarms may also help with compliance.

- c. Screening for cognition, dementia, hallucinations, impulse control disorders, sleep, bowel, bladder, speech and swallowing dysfunction as well as fall risks.

NOTE: A number of screening tools may assist in the objective measurement of these complaints that are common in PD.

1. Depression. Inventories such as the Beck Depression Inventory (BDI), Hamilton Depression Scale or Montgomery-Asberg Depression Rating Scale (MADRS) were suggested by the American Academy of Neurology (AAN). The Geriatric Depression Scale ([GDS- Short](#)) is also used as a screening measure for depression in older adults.

LINK: http://geriatrictoolkit.missouri.edu/cog/GDS_SHORT_FORM.PDF

2. Mental State. The Montreal Cognitive Assessment ([MoCA](#)) was recently recommended by the PADRECCs. The Mini Mental State Exam ([MMSE](#)) and the Cambridge Cognitive Examination were recommended by the AAN.

LINK: <https://www.parkinsons.va.gov/Consortium/MoCA.asp>

LINK: https://www.uml.edu/docs/Mini%20Mental%20State%20Exam_tcm18-169319.pdf

3. Sleep and excess daytime somnolence. The Epworth Sleepiness Scale ([ESS](#)) is often used to measure the level of daytime sleepiness. A sleep history is used to detect rapid eye movement sleep behavior disorder (RBD), restless leg syndrome (RLS), vivid dreams and excessive daytime sleepiness.

LINK: <http://healthysleep.med.harvard.edu/narcolepsy/diagnosing-narcolepsy/epworth-sleepiness-scale>

4. Impulse Control Disorders (ICD). ICDs may be detected with a screener such as the Questionnaire Impulsive-Compulsive Disorders in Parkinson's Disease ([QUIP](#)) and followed by a comprehensive clinical interview/history to determine range and severity of symptoms as well as the need for clinical management.

LINK:

[http://www.toolkit.parkinson.org/sites/toolkit.parkinson.org/files/resources/Parkinson's%20Disease%20Impulsive-Compulsive%20Disorder%20Questionnaire%20\(QUIP\).pdf](http://www.toolkit.parkinson.org/sites/toolkit.parkinson.org/files/resources/Parkinson's%20Disease%20Impulsive-Compulsive%20Disorder%20Questionnaire%20(QUIP).pdf)

5. Assessment of mobility, safety including swallowing, driving and fall risk, self-care including activities of daily living, vocational, and social support needs;
6. Encouragement of regular exercise, medication compliance, smoking and alcohol cessation, as well as maintenance of general health follow-up/screening;
7. An opportunity for discussion of end-of-life issues provided at least yearly, if appropriate, and
8. Multidisciplinary referrals, which may include physical therapy, occupational therapy, speech therapy, psychiatry, social work, sleep medicine, geriatrics or primary care clinic, palliative care and home health care.

D. Treatment of Early Parkinson's Disease Symptoms

Veterans with PD who are appropriate candidates for medications should have access to these as soon as the need arises. The algorithm for treatment is attached and is available in a laminated pocket card to any health care providers in the VA system. (see Appendix A "Parkinson's Disease Quick Reference Guide for Initiating Therapy").

The decision to treat is largely based on the presence of disability and the age and co-existing medical issues of the patient. Additional consideration is given to the potential for induction of complications over the long term. There is controversy regarding truly neuroprotective or disease modifying therapies in PD. Hence the algorithm alludes to the role of MAO-B inhibitors as potentially disease modifying therapies and their role in the early mildly- symptomatic PD patient.

NOTE: Refer to VA Pharmacy Benefits Management (PBM) Intranet site for guidance on medications used for the treatment of patients with PD <https://www.pbm.va.gov>. This is an internal VA Web site, not available to the public. (See Appendix A "PADRECC Medication Availability").

1. Federal Drug Administration (FDA)-Approved Medications for PD Motor Symptoms. The medications are listed below.
 - a. Levodopa Preparations

Levodopa is most potent compound used in treating the motor features and activities of daily living (ADLs) of PD. Carbidopa prevents *peripheral* conversion of levodopa into dopamine (more is then available to the brain) and prevents nausea that would likely occur if using levodopa alone.

 1. Levodopa/Carbidopa (Sinemet®) is available in immediate release and controlled release preparations in various dosage strengths; most common of which is 25/100 IR and 25/100 CR and 50/200 CR (CR is also known as SA in the VA system).
 2. Parcopa® is an orally disintegrating tablet (ODT) containing carbidopa/levodopa. Its advantage is that melting of the tablet on the tongue does not require water for swallowing.
 3. Levodopa/Carbidopa/Entacapone (Stalevo®) is a combined formulation of levodopa/carbidopa with the COMT inhibitor entacapone.
 4. Levodopa/Carbidopa (Rytary®) capsules contain a combination of immediate release and sustained release beads.
 5. Levodopa/Carbidopa-intestinal gel formulation (Duopa®) is continually pumped for up to 16 hours per day into a percutaneous G-tube and provides sustained responses over conventional preparations.
 - b. COMT inhibitors
 1. Entacapone (Comtan®) improves levodopa bioavailability by inhibiting peripheral conversion into metabolites. Only works in presence of exogenously administered levodopa. Indicated for end of dose wearing off on standard levodopa preparations. Diarrhea may be a side effect that limits its use for some.

2. Tolcapone (Tasmar®) is more potent than entacapone but rarely used due to need for liver enzyme monitoring due to rare complication of fatal hepatic necrosis.
- c. Dopamine Agonists
 Treatment with dopamine agonists may result in fewer motor complications (wearing off, dyskinesia, on-off motor fluctuations) than levodopa at 4-year follow-up. Dopamine agonist treatment of PD patients requiring dopaminergic therapy is associated with more frequent adverse events including nausea, hallucinations, somnolence, impulse control disorders and edema than levodopa therapy. Agonists can be used as monotherapy in early PD or as a symptomatic adjunct to levodopa.
1. Ropinerole (Requip®) is available in standard immediate release (IR) formulation that must be given at least three times per day (TID); and also available in extended release (XL) formulation that can be given once a day.
 2. Pramipexole (Mirapex®) is available in IR formulation given TID and also available in extended release (ER) formulation that can be given once per day but not always available at VA.
 3. Rotigotine (Neupro®) is available as 24-hour transdermal application (patch). Application site reactions are common, and may be reduced by applying patches to different skin sites.
 4. Bromocriptine is not preferred due to ergot side-effects.
 5. Apomorphine (Apokyne®) is delivered as an intermittent subcutaneous injection and can provide rapid onset of relief from Parkinsonian symptoms with a magnitude akin to levodopa, however with a shorter duration of action.
- d. MAO-B Inhibitors (selective) extend levodopa's duration of action by reducing the rate of breakdown.
1. Rasagiline (Azilect®) has a mild symptomatic benefit and enhances levodopa preparations to improve wearing off similar to entacapone in adjunctive studies. There is no clear evidence of neuroprotection, although some studies indicate some possible role.
 2. Selegiline (Eldepryl®) has a mild symptomatic benefit but no clear evidence of neuroprotection.
- e. Amantadine is mainly used to help dyskinesias as disease advances but sometimes used in early disease for tremor or other mild symptoms.
- f. Anticholinergics
 Trihexyphenidyl may be used as monotherapy or as a levodopa adjunct. It can be good for tremor and dystonia but often not well tolerated due to (anticholinergic) cognitive and other side effects.

2. Treatment of Parkinson's Disease with Motor Fluctuations and Dyskinesia.
 - a. Medications for Off- Time Reduction:
 1. Entacapone and Rasagline are effective for reducing off time.
 2. Dopamine agonists and Tolcapone are probably effective in reducing off time.
 - b. Medications to Reduce Dyskinesia:
 1. Amantadine is possibly effective in reducing dyskinesia in PD.
 - c. Deep Brain Stimulation (DBS) of the Subthalamic Nucleus (STN)
 DBS of the STN is effective in improving motor function and reducing motor fluctuations, dyskinesia, and antiparkinsonian medication usage or in improving motor function. Adverse events may limit application of this therapy. Data on globus pallidum interna (GPi) DBS has not been updated by the AAN and at their last review which did not include the VA Cooperative Study, they did not feel this location, nor the thalamic location, had sufficient evidence to determine efficacy. The preoperative response to levodopa is probably predictive of postsurgical improvement from STN DBS. The position of the PADRECC is that GPi and STN should be equally considered with final determination made based on the clinical profile of the patient and comfort of the surgeon.
 - d. Deep Brain Stimulation of the Globus Pallidus internus (GPi)
 Also, efficacious for motor symptom control to reduce motor fluctuations and dyskinesia. Studies suggest motor improvements are equivalent with GPi or STN targets.
 - e. Unilateral Thalamotomy or Thalamic DBS
 Less commonly used surgery for Parkinson Disease, considered to be likely efficacious as a symptomatic adjunct to levodopa by the Movement Disorder Society. Used mainly for control of drug-resistant tremor.
 - f. Exercise Therapy and Speech Therapy
 These therapies are likely efficacious in helping with motor function and speech in Parkinson's disease.
 - g. Neuroprotective Therapies
 At this time, there are no definitive therapies that are neuroprotective or slow down the progression of the disease in PD. Agents that have been studied to date include Vitamin E, Riluzole, CoEnzyme Q10, Levodopa, Pramipexole, Rasagline, Selegiline and Ropinirole.
3. Pharmaceutical Treatment of Non-Motor Symptoms.
 - a. Depression
 The Movement Disorders Society considers pramipexole (dopamine agonist) efficacious for the treatment of depressive symptoms. Nortriptyline and desipramine are tricyclic antidepressants (TCA) considered likely efficacious as well. As with all TCAs, caution is advised in patients with a history of urinary retention, angle-closure glaucoma or increased intraocular pressure, and cardiovascular disease. SSRI's are most commonly used, and specifically it has

been deemed that citalopram, sertraline, fluoxetine and paroxetine have insufficient evidence to support its use in PD. At the same time, given the favorable side effect and safety profile in this group of patients, they are widely chosen and used successfully.

b. Psychosis

Clozapine is effective however safety monitoring to detect the rare incidence of agranulocytosis (0.38%) makes use of this drug usually infeasible. Studies of olanzapine showed conflicting results against psychosis, but consistently showed motor worsening. Therefore, the MDS has deemed olanzapine unlikely efficacious and not useful. Quetiapine is possibly effective in the treatment of psychosis in the PD population, however methodologic problems and conflicting results amongst the studies evaluated led the MDS to deem quetiapine lacking in sufficient evidence to recommend.

More recently pimavanserin (Nuplazid®), a selective 5-HT_{2A} inverse agonist became the first FDA approved drug for the treatment of psychosis in PD. Its benefits as measured by Parkinson's disease-adapted scales accrued over a 6 week period, with improvements in positive symptoms of psychosis as well as caregiver burden.

c. Dementia

Rivastigmine (Exelon®) is considered efficacious for treatment of PD dementia and while donepezil (Aricept®) and galantamine (Razadyne®) are also acetylcholinesterase inhibitors, the latter two have insufficient evidence to recommend them. Worsening of tremor may be seen in some with use of this class. EKG monitoring for cholinergic effects is recommended, but not mandatory. Memantine (Namenda®) is not routinely used, given conflicting efficacy evidence in the literature.

d. Anxiety

Data regarding the treatment of anxiety in PD is insufficient.

e. Autonomic Dysfunction.

- Sexual Dysfunction: Sildenafil citrate is possibly effective in treatment of erectile dysfunction in PD.
- Orthostatic Hypotension (OH): There is insufficient evidence to recommend the use of indomethacin, fludrocortisone, pyridostigmine and domperidone in OH but in clinical practice use of fludrocortisone and/or midodrine in some patients has shown benefit. Droxidopa (Northera®) is FDA approved for the treatment of orthostatic dizziness, or lightheadedness in patients with neurogenic OH. It is a precursor of the neurotransmitter/hormone norepinephrine.
- Urinary Incontinence: There is no good evidence for pharmaceutical treatment of urinary symptoms in PD.
- Gastrointestinal issues: Polyethylene glycol (miralax®) is considered likely efficacious for constipation in PD. Metoclopramide is considered unacceptable to PD patients due to motor worsening.

- Drooling: Consideration of botulinum toxin should be made in patients with PD and sialorrhea. Myobloc® or botulinum toxin type B, as well as type A (Botox®) has consistently shown benefit in studies to reduce drooling. Glycopyrrolate (1 mg bid) has been shown to significantly benefit sialorrhea over a one-week period
-

f. Sleep dysfunction

1. Excess Daytime Somnolence (EDS): Conflicting results using modafinil (Provigil®) to improve EDS have prompted the MDS to conclude there is insufficient evidence to recommend it. Careful evaluation should be undertaken to exclude other treatable causes of EDS such as sleep apnea.
2. Insomnia: Levodopa/carbidopa improves sleep-associated motor symptoms that may contribute to insomnia but there is insufficient data regarding improvement of objective tests of sleep. Melatonin is effective in improving a patients' perception of sleep quality but there is no clear evidence to recommend it from data of polysomnography. DBS may improve sleep quality in advanced PD patients but there is insufficient evidence to recommend it for treatment of sleep.
3. Restless Leg Syndrome/Periodic Limb Movements of Sleep. Levodopa/carbidopa should be considered to treat these disorders but there is insufficient evidence of usage of non-ergot dopamine agonists for these disorders in PD although clinically they are used with efficacy at the PADRECCs.
4. REM Behavior Disorder (RBD). Data for treatment of RBD in PD is insufficient according to the AAN but clinically the usage of clonazepam for RBD in PD is helpful. Other options include the use of higher dose melatonin (5-10 mg) and possibly acetylcholinesterase inhibitors in appropriate patients.
5. Fatigue. Consideration of methylphenidate or modafinil, however the evidence for both was considered insufficient by the Movement Disorders Society.

g. Impulse Dyscontrol and Abnormal Repetitive Behaviors

Dosage decrease or elimination of dopamine agonists are a first line intervention. A small controlled study of amantadine to treat patients with impulse control disorder that did not improve with agonist reduction or behavioral strategies showed significant improvements. Due to lack of other evidence, the MDS considers this insufficient evidence to recommend amantadine.

8. NATIONAL VA PARKINSON'S DISEASE CONSORTIUM & THE CONSORTIUM CENTER NETWORK

In 2003, the PADRECCs introduced the National VA Parkinson's Disease Consortium to promote Parkinson's disease awareness and advocacy in the VA System. This initiative serves as a professional society to encourage training, mentorship, and networking. The Consortium is comprised of nationally dispersed VA physicians, nurses, pharmacists, social workers, physical and occupational therapists, and other allied health professionals. Members are provided with Parkinson's disease educational offerings that include biannual national conferences, annual newsletters, bi-monthly electronic updates, monthly clinical conference calls and the bi-monthly Movement Disorders Series audioconference.

In 2006, the philosophy of the Consortium was broadened with the creation of the Consortium Center Network. These designated Centers are staffed by fellow VA movement disorders specialists or neurology clinicians with interest and experience in the field. The purpose of the Consortium Center Network is to ensure convenient specialty care to all Veterans, regardless of locality. There is a minimum of one Consortium Center in each VISN. The PADRECCs oversee this program through administrative oversight, national education offerings and outreach, and professional mentorship and collaboration.

The Consortium adds a grassroots tier to the PADRECC mission, thereby forming a "hub and spoke" model of national healthcare. The significance of this initiative was acknowledged in Public Law 109-461s6 (a)(1), Dec. 21, 2006 (Section 7329 38 USC) *Veterans Benefits, Health Care, and Information Technology Act of 2006*, which states that the PADRECCs must "jointly develop a consortium of providers with interest in treating neurodegenerative diseases, including Parkinson's disease and other movement disorders, at facilities without such centers in order to ensure better access to state-of-the-art diagnosis, care, and education for neurodegenerative disorders throughout the health care system of the Department."

A. Designation of Consortium Centers

Consortium Center designation are dependent on several factors, the most important being the interest and availability of the Consortium Director. Other factors of consideration include the extent of movement disorders experience and current practice, support from the local VA administration, and the geographic needs of the Consortium network.

1. Complete application from www.parkinson.va.gov/Consortium/MembershipandConsortiumCenterDesignationForm.asp and send to the address listed on the webpage.
2. Application is reviewed by regional PADRECC and voted on by the National PADRECC Directors

B. Scope of Services at Consortium Centers

Consortium Centers offer specialty clinics for Veterans with Parkinson's disease and related movement disorders in a regional capacity. Clinical services include evaluation and diagnosis, pharmacological treatment, non-pharmacological management, and multidisciplinary referrals. Additional specialty services are available at some sites, including administration of botulinum toxin injections and DBS stimulator programming. These clinics consult and collaborate with the PADRECCs to ensure modern and appropriate care for all affected Veterans.

C. Veteran Referral to a Consortium Center

When a Veteran with PD or movement disorder cannot access direct care at a PADRECC facility, the VA primary care provider or general neurologist is encouraged to refer the patient to a local Consortium Center, following the outlined steps below:

3. The Veteran must be eligible and enrolled in the VA Healthcare System to receive care.
4. The Veteran, caregiver, and/or VA primary care provider or neurologist should choose the preferred Consortium Center to consult.
5. The VA primary care provider or neurologist makes the referral to the Consortium Center
6. The Veteran or caregiver should receive a call from the Consortium Center to schedule an appointment within 72 hours after the IFC has been received.
7. The Veteran, caregiver, or VA provider can seek assistance with this process by contacting the PADRECC/Consortium Hotline at 1-800-949-1001 x5769.

9. PD EDUCATION

The goal of PD education is to increase patient and provider knowledge, self-efficacy, and access to resources. Patient and provider education are essential to the delivery of health care, early intervention, and patient compliance to treatment and rehabilitation. While the median age of Veterans in the United States is about 60 years of age and most are male, the VA is now faced with providing care to a more diverse generation, many of whom will be seriously ill and/ or injured. As the demand for health care services increases, education for Veterans, their health care providers, families, and caregivers is an important and empowering resource.

Each PADRECC has either an Associate Director or Co-Associate Directors of Education. These individuals are responsible for patient and professional education at their respective PADRECCs. Educational programs are planned based on the needs of Veterans, their care providers and health care professionals.

There are many opportunities to learn about PD etiology, pathology, disease management, and multidisciplinary care team approach through the VA System. The PADRECC and Consortium website (<https://www.parkinsons.va.gov/>) offers education materials and resources to health care professionals, Veterans, and families regarding PD management, care recommendations, and services unique to VHA. These educational resources are available for on-site training, mentoring, and consultation.

A. Professional education opportunities within the PADRECC network.

1. PD Consortium Meetings

The PADRECCs offer bi-annual conferences for Consortium participants with three main purposes:

- a. To provide an educational update on PD research and state-of the art PD care
- b. Present opportunities for Consortium members to network and discuss collaborative education and research projects; and
- c. To offer information about the national non-profit Parkinson's disease community

organizations.

2. Movement Disorder Series

In partnership with the Employee Education Service (EES), each year the PADRECCs sponsor five one-hour professional continuing education units (CEU) programs via audio-conference. These presentations are broadcasted twice on the designated date to accommodate schedules in all time zones. [The speakers are either PADRECC Directors, or selected researchers, or clinicians with expertise in Parkinson's disease.](#)

LINK: <https://www.parkinsons.va.gov/Care.asp>

3. Tele-Case Conferences

Each PADRECC conducts a regularly scheduled tele-case conference with geographical Consortium members. This serves as a platform for an educational exchange amongst the providers regarding clinical aspects of PD, research topics, and VHA patient care standards.

4. Clinic Based Education and Training

Clinical education and training is routinely provided at the PADRECCs to various local health care professionals. These include nurses, allied health professionals, medical students, and physicians in training (Fellows, Residents) from various disciplines including Neurology, Psychiatry, Geriatrics, and Rehabilitation Medicine. Physician and nurse day training programs are in place to meet the needs of Consortium members.

5. Formal Educational Programs

(Lectures and Seminars) Each PADRECC sponsors educational programs including journal clubs, lectures, and seminars from local and guest faculty on PD and related movement disorders. Topics include information on diagnosis, medical and surgical treatments, epidemiology, rehabilitation (gait, motor control, exercise, balance, and innovative treatment interventions), quality of life issues, and non-motor symptoms of PD. Certificates of attendance and continuing education credits are provided as appropriate

6. Collaboration with the Community

The PADRECCs collaborate with local nonprofit organizations (NPO) such as NPO PD-specific organizations in their community. This may include co-sponsoring conferences, providing speakers for their educational programs, and serving on the Board of Directors and/or educational committees.

7. Educational Publications

The Transmitter. This bi-monthly electronic publication includes a synopsis of PD research articles edited from leading neurology journals and other valuable information pertinent to PD. It also provides an update on PADRECC Committee projects, dates of upcoming movement disorders events, and highlights of Consortium Center clinics.

([Transmitter](#)) *LINK: <https://www.parkinsons.va.gov/Consortium/Transmitter.asp>*

a. **The VA Parkinson Report.** This annual newsletter for the PADRECCs and Consortium provides educational articles, news of the latest research, information for movement disorders specialists, and updates on PADRECC activities

([The VA Parkinson Report](#)) *LINK: <https://www.parkinsons.va.gov/Consortium/Newsletter.asp>*

B. Patient education opportunities within the PADRECC network

1. One-on-one patient/provider education

Parkinson's disease specific education is well integrated in the PADRECC operational structure and is routinely provided during all patient visits by educators, nurses, and physicians. Education covers all aspects of PD care and management including medications, diet, exercise, sleep, driving safety, and overall patient safety issues. In addition to face-to-face educational sessions, written materials developed within the PADRECC, ([Patient Education Brochures](#)) or from well-respected sources (e.g., Parkinson's Foundation) are also provided as additional resources for the patients, their families, and care providers, ([Patient Resources](#)).

LINK: <https://www.parkinsons.va.gov/patients.asp>

2. Education/Support Groups

Each PADRECC sponsors a monthly education/support group as well as a monthly PD at Home telephone education group for Veterans and their families

3. Formal Educational Events.

Each PADRECC schedules formal educational programs for Veterans with PD and the community at large. These programs may include health fairs, formal conferences, and presentations by PADRECC neurologists and staff. Topics for these programs and presentation are typically based on medical and surgical aspects of PD management, including but not limited to: Deep Brain Stimulation, exercise, safety, research advances, and care giving challenges.

4. Educational Publications

- a) **PADRECC Local Newsletters-** PADRECCs publish local newsletters one to two times a year that provide PD education and resource information for veterans/families/and supporters
- b) **Patient Education Brochures-** developed by the PADRECCs to provide patients and families with information on the most common topics concerning PD. Topics include: **Exercise and Physical Activity, Fall Prevention, Parkinson's Disease Medications, Motor Symptoms of Parkinson's Disease, Non-Motor Symptoms of Parkinson's Disease, Agent Orange and Toxic Exposures & Parkinson's Disease.** Brochures can be found on the National PADRECC website: www.parkinsons.va.gov/patients.asp
- c) **Suggested Education Essentials-** is a document that has been reviewed by the PADRECC Education Committee and includes useful website links for topics such as: Overview of PD, Exercise, Medications, Nutrition, and National/Regional Organizations: <https://www.parkinsons.va.gov/patients.asp>

10. REFERRAL GUIDELINES

The goal of the PADRECC is to provide competent and convenient care to all Veterans with PD. For many patients, some care can be provided by their primary care provider in a local facility. Situations that may require transfer of care, either temporarily (for a consultation) or permanently to a PADRECC or Consortium Center include, but are not limited to, the following:

- A. Confirming a new diagnosis of PD;
- B. Counseling a newly diagnosed patient on treatment options;
- C. Managing complications of therapy such as dyskinesia;
- D. Managing side effects or intolerance of medications;
- E. Managing non-motor issues in PD;
- F. Expanding the formulary options for PD patients;
- G. Evaluating treatment failure and expanding the differential diagnosis to Parkinson-plus diagnoses;
- H. Evaluating potential surgical treatment of PD; and
- I. Managing/Evaluating of implanted DBS patients for programming.

Referral Procedure/Protocol.

For a Veteran to be evaluated by a PADRECC or Consortium Center clinician, please follow the steps below:

1. The Veteran, caregiver, and/or VA primary care provider or neurologist should choose the preferred PADRECC to consult.
2. The VA primary care provider or neurologist makes the referral to the PADRECC using an inter-facility consult (IFC).
3. The Veteran or caregiver should receive a call from the PADRECC to schedule an appointment within 72 hours after the IFC has been received.

The Veteran, caregiver, or VA provider can seek assistance with this process by contacting the PADRECC/Consortium Hotline at 1-800-949-1001 x5769

Appendix A: 10 AAN Quality Measures for Parkinson's Disease

Please note the 10 AAN Quality Measures should be included in your template and reviewed annually. PDF of the 2015 update can be found here: https://www.aan.com/siteassets/home-page/policy-and-guidelines/quality/quality-measures/16pdmeasureset_pg.pdf

Appendix B: PADRECC New Patient Templates

In the next few pages, the patient care templates from Philadelphia, San Francisco, and Northwest PADRECCs are examples for your use.

PARKINSON'S DISEASE PROGRAM GUIDE

Example Template from Philadelphia PADRECC

EXAMPLE: PHILA-PADRECC pt template, page-1

COMPUTERIZED PATIENT RECORDS SYSTEM (CPRS)

PD INITIAL NOTE TEMPLATE CPRS- Includes 10 AAN PD Quality Improvement Measures

Presenting Problem:

REASON FOR CONSULTATION/CHIEF COMPLAINT:

HISTORY OF PRESENT ILLNESS:

MOTOR SYMPTOMS: -

Tremor:

- Stiffness: -

Slowness: -

Gait:

- Balance:

- Falls:

- Freezing:

- Speech/Swallow:

- Wearing off:

- Dyskinesias:

- ADLs:

- Exercise:

NON-MOTOR SYMPTOMS: -

Cognition/Compulsions:

- Vision:

- Sleep/Dreams:

- Urination/Constipation:

- Orthostasis/Syncope: - Depression/Anxiety: - Hallucinations:

PAST MEDICAL HISTORY:

REVIEW OF SYSTEMS:

MEDICATIONS:

FAMILY HISTORY:

SOCIAL HISTORY:

NEUROLOGICAL EXAM: -

General Exam:

- Mini Mental Status Examination Score: -

Cranial Nerves:

- Motor Strength Exam:

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: PHILA-PADRECC pt template, page-2

- Sensory Exam:

- Reflexes:

- Coordination Exam:

- Gait Exam:

EXTRAPYRAMIDAL EXAM: -

Tremor:

- Dyskinesias:

- Tone:

- Bradykinesia of upper and lower extremity movements:

- Gait:

- Postural Reflexes:

VITALS:

UPDRS MOTOR SECTION:

- Speech:

- Facial Expression:

- Tremor at rest (face, lips, chin):

- Hands resting tremor:

- Right:

- Left:

- Feet resting tremor:

- Right:

- Left:

- Action tremor:

- Right:

- Left:

- Rigidity (neck):

- Rigidity: upper extremity:

- Right:

- Left:

- Rigidity: lower extremity:

- Right:

- Left:

- Finger taps:

- Right:

- Left:

- Hand grips:

- Right:

- Left:

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: PHILA-PADRECC pt template, page-3

- Hand pronate/supinate:

- Right:

- Left:

- Leg agility:

- Right:

- Left:

- Arise from a chair:

- Posture:

- Gait:

- Postural stability:

- Body bradykinesia:

AAN PD quality measures:

Diagnostic review:

Avoidance of Dopamine-Blocking Medications:

Psychiatric Symptoms Assessment:

Cognitive Impairment or Dysfunction:

Symptoms of Autonomic Dysfunction:

Sleep Disturbances:

Fall Rate:

Rehabilitative Therapy Options:

Regular Exercise Regimen:

Motor Complications:

Advanced Care Planning:

LABS/STUDIES:

IMPRESSION AND PLAN:

COUNSELING:

-UNDERSTANDING OF TREATMENT OPTIONS -
COMPLIANCE

-SAFETY: driving/dysphagia/falls precautions -
PT/OT REFERRAL

END: example PHILA-PADRECC

PARKINSON'S DISEASE PROGRAM GUIDE

Example Template from San Francisco PADRECC

EXAMPLE: SF-PADRECC pt template, page-1

The attending physician of record for this patient care encounter is: Dr. _____

PROBLEM: This is n) _____, a _____ year-old MALE with Parkinson's disease.

HPI or INTERVAL HISTORY:

Top complaints / symptoms today:

- 1.
- 2.
- 3.

_____ Motor symptom ROS _____

****Tremor**** (rest/action/posture; hands/face/chin/legs):

****Slowed**** movement (bradykinesia):

****Stiffness**** (rigidity):

****Swallowing dysfunction:**

****Speech difficulty** (hypophonia/dysarthria):

****Motor complications****

--Present or not present:

--Wearing-off _____ hours after each dose

--Feels OFF ___% of the day

--Has bothersome dyskinesia ___% of day

--Has bothersome dystonia affecting _____

****Gait****

--Freezing of gait:

--Falls or near-falls:

--Using assistive device:

--Last PT/OT:

_____ Non-motor ROS _____

****Cognitive symptoms****

--Cognitive problems (impairment of memory, visuospatial function, attention):

--Language symptoms:

****Psychiatric/behavioral issues****

--Depression:

--Anxiety:

--Visual hallucinations/illusions:

--Behavioral issues (apathy, agitation, impulsivity):

****Autonomic symptoms****

--Constipation:

--Urinary frequency/urgency/incontinence:

--Orthostasis:

--Sialorrhea:

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: SF-PADRECC pt template, page-2

****Sleep****

--Sleep onset/maintenance:
--RBD (dream enactment):
--RLS:
--"Off symptoms" overnight:

****Pain****

--Location/severity/type:
--Correlation with meds:
--Painful dystonia in feet:

****ADL's, social support****

--Ability to perform ADL's:
--Support at home:
--Devices/services requested:

****Anosmia**** (is there loss of smell sensation)

****Adverse effects from PD medications****:

PD MEDICATIONS:

7AM	11AM	2PM	5PM	8PM
carbidopa/levodopa IR 25/100				
carbidopa/levodopa CR 50/200				
entacapone 200 mg				
ropinirole				
pramipexole				
others				

PAST MEDICAL HISTORY:

FAMILY HISTORY:

SOCIAL HISTORY:

Agent orange exposure in Vietnam:

EXAM FINDINGS:

VS:No data found
No data found
No data found
No data found
No data found

GEN:

NEURO:

MS: A&Ox3, language fluent, no ideomotor apraxia, no hemisensory neglect

CN: PERRL, eye movements _____, VFFTC, face symmetric in strength and sensation, facial expression is _____, hearing symmetric, tongue/palate midline, speech is _____, shoulder shrug symmetric

MOTOR:

Tone:

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: SF-PADRECC pt template, page-3

Tremor (presence/type):

Motor Speed & Amplitude (bradykinesia):

--Finger-taps and hand open-close:

--Pronation/supination:

--Heel tapping:

Strength:

UE (R/L): delt 5/5, triceps 5/5, WE 5/5, FE 5/5

LE (R/L): IP 5/5, quads 5/5, hams 5/5, TA 5/5

REFLEXES: 2+ at biceps, triceps, BR bilaterally. 2+ at patella, ankle bilaterally.

COORD: FTN and toe-point intact bilaterally.

SENSORY: Intact to light touch perception throughout.

POSTURE/GAIT/BALANCE:

Posture is _____.

Stance is _____.

Stride is _____.

Arm swing is _____.

Balance/postural stability is _____.

LABS: (this is extracted from chart.)

950 PLASMA

IMAGING:

ASSESSMENT & WORKING DIAGNOSES

This is a ___ year-old man/woman with _____

PLAN: (motor symptoms, neuropsych symptoms, autonomic symptoms, social support)

STUDIES ORDERED

None

MEDS / TREATMENTS PRESCRIBED

None

RECOMMENDATIONS FOR REFERRING PROVIDER

None

FOLLOW-UP ARRANGED

None

END: example SF-PADRECC

PARKINSON'S DISEASE PROGRAM GUIDE

Example Template from Northwest PADRECC

EXAMPLE: NW-PADRECC pt template, page-1

MOVEMENT DISORDER CLINIC NEW PATIENT EVALUATION CPRS NOTE TEMPLATE

TEST-PATIENT ZZTEST is a 67 year old veteran referred to the Movement Disorder clinic for evaluation. History obtained today from review of electronic chart and patient, family, outside medical records.

HPI:

PARKINSON'S DISEASE REVIEW OF SYSTEMS:

Motor

Balance:

Gait/Falls:

Speech/swallowing:

ADL's:

Cognition/Behavior/Mood

Complications of PD Therapy

Sleep

Restless legs:

Sleep fragmentation:

REM Sleep behaviors:

Autonomic

Orthostatic hypotension:

Bowels:

Bladder:

Sexual:

MEDICATIONS - Active Medications:

- 1) Acetaminophen 325mg tab take one tablet by mouth every 4 hours as needed *do not take more than 4,000mg a day of acetaminophen from all sources due to risk of liver damage.
- 2) Docusate na 100mg cap take one capsule by mouth twice a day *hold for loose stool
- 3) Furosemide 20mg tab take one-half tablet by mouth every morning
- 4) Glipizide 10mg tab take one tablet by mouth every day for diabetes. take 30 minutes before a meal.
- 5) Glipizide 5mg tab take one tablet by mouth every day with food
- 6) Nicotine 4mg gum chew 1 piece in mouth every hour as needed as directed on package. chew slowly until tingle felt, then park between cheek and gum. when tingle fades, repeat until tingle gone. do not use more than 24 pieces/day. for breakthrough cravings.
- 7) Simvastatin 20mg tab take one tablet by mouth at Bedtime

Active non-VA medications status

- 1) Non-va aspirin 81mg (baby chewable) 81mg mouth every day
 - 2) Non-va barrier, ostomy, new image h#15603 barrier item as needed
 - 3) Non-va fluticasone/salmeterol inhl, oral by mouth twice a day
 - 4) Non-va hydrophilic (eqv aquaphor) top oint thin film topically to affected area at noon as needed
- 11 total medications)

PMH:

FAMILY HISTORY: _____

No known Parkinson's disease.

No known neurological disease.

Father:

Mother:

Siblings:

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: NW-PADRECC pt template, page-2

Children:

SOCIAL HISTORY:

Work:

Interests:

Living situation/support:

Habits:

Exercise:

GENERAL EXAMINATION: _____

Weight: 184 lb [83.6 kg] (07/25/2017 11:07)

BP seated: 162/100 (12/27/2017 13:23) Pulse: 66 (12/26/2017 15:05)

Supine BP: / and pulse .

Standing BP: / and pulse .

Musculoskeletal:

Peripheral edema:

GENERAL NEUROLOGIC EXAMINATION: _____

Mental Status:

Cranial nerves:

Strength and bulk:

Coordination:

DTR's:

Sensation:

FOCUSED PARKINSONISM-SPECIFIC NEUROLOGIC EXAMINATION: _____

Subjective sense of whether on (0-5): .

Hours since last meds: .

25 foot timed walk: seconds.

Drug-induced Dyskinesia:

Face and neck: 3 = moderate

Trunk: 3 = moderate

RUE: 3 = moderate

LUE: 3 = moderate

RLE: 3 = moderate

LLE: 3 = moderate

IMAGING AND LABORATORY DATA:

Brain imaging:

Labs:

DIAGNOSIS: _____

Idiopathic Parkinson's Disease (IPD)

Essential Tremor

Drug-induced Parkinsonism

Multiple Systems Atrophy

Progressive Supranuclear Palsy

Parkinsonism with Dementia

Diffuse Lewy Body Disease

Cortico Basal Ganglionic Degeneration

Gait Disorder

Lacunar Syndrome

Tremor

DISCUSSION: _____

Diagnostic Evidence

Clinical history typical for IPD:

No evidence for secondary parkinsonism, with no known toxic industrial exposure, use of dopamine-depleting medications, history of CNS infection or ischemic disease of basal ganglia.

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: NW-PADRECC pt template, page-3

Neurologic exam typical for IPD: No atypical exam findings, such as supranuclear gaze palsies, stridor, urinary retention, wide-based gait, or significant pyramidal or cerebellar deficits.

History and exam c/w essential tremor (ET):

History, exam suggests atypical parkinsonism:

Functional Problems _____

None. Patient functioning well in all IADL's and ADL's.

Mobility:

Personal care:

Mood:

Dementia:

Hallucinations:

Autonomic:

Sleep:

Placement/caregiver:

Other:

Medication Management

Symptoms well controlled without medication toxicity or disabling dyskinesia.

Motor fluctuations:

Significant adverse drug reactions:

PLAN: _____

Staffing:

Laboratory:

Imaging:

MEDICATIONS:

PATIENT TEACHING:

Reviewed IPD basics: natural history, prognosis, use of symptomatic meds.

Discussed distinguishing tremor from dyskinesia.

Discussed distinguishing on-state from off-state.

Exercise:

Falls:

Nutrition:

Dietary protein restriction recommendations discussed.

Constipation:

Urinary urgency:

Sleep:

Depression:

Cognitive slowing:

Driving:

Social support:

Placement:

Advanced directives:

Handouts provided:

Caregiver support:

Clinical research participation:

CONSULTS:

Clinical Pharmacist

Physical Therapy

Occupational Therapy

Kinesiotherapy

Speech Pathology

Prosthetics

Mental Health - Mood Disorder Evaluation

PARKINSON'S DISEASE PROGRAM GUIDE

EXAMPLE: NW-PADRECC pt template, page-4

Mental Health - Memory Improvement Strategy Class
Social Work
Community Home Safety Evaluation
Follow up Movement Disorder Clinic visit:
Movement Disorder Clinic RN to contact patient:
Discharged from clinic.

END: example NW-PADRECC