NORTHEAST MEDICAL CENTER

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PRE-AUTHORIZATION REQUEST FOR DEEP BRAIN STIMULATION

Request Date: September 15, 2025

Requested Procedure: Bilateral STN Deep Brain Stimulation

CPT Code: 61863, 61868

PATIENT DEMOGRAPHICS

Patient Name: Robert Mitchell

Date of Birth: 03/22/1956 (Age 69)

Gender: Male

Member ID: XYZ987654321

Insurance: Medicare Advantage

DIAGNOSIS

Primary Diagnosis: G20 - Parkinson's Disease, Advanced Stage

Secondary Diagnoses: G25.81 - Medication-induced dyskinesias
F32.0 - Major depressive disorder, mild

CLINICAL HISTORY

Mr. Mitchell is a 69-year-old right-handed male with a 12-year history of idiopathic Parkinson's disease. Initial symptoms began in 2013 with right hand tremor and progressive bradykinesia. He was started on carbidopa-levodopa with good initial response. Over the past 4 years, he has developed significant motor fluctuations with unpredictable "off" periods lasting 2-3 hours daily, despite medication optimization.

Cardinal PD Features Present:

- Resting tremor - bilateral, right > left upper extremities
- Rigidity - cogwheel type, bilateral upper and lower extremities
- Bradykinesia - marked slowing of voluntary movements

Current Motor Complications: Patient experiences 4-5 "off" periods per day lasting 45-90 minutes each. During "off" periods, unable to perform ADLs independently. Peak-dose dyskinesias present but tolerable. Gait freezing episodes occurring 3-4 times daily with fall risk.

MEDICATION HISTORY

Medication	Dose	Frequency	Duration
Carbidopa-Levodopa 25/100	1.5 tablets	5x daily	12 years (dose escalated)
Entacapone	200 mg	with each L-dopa dose	4 years
Pramipexole ER	3 mg	Once daily	6 years
Rasagiline	1 mg	Once daily	5 years
Amantadine	100 mg	Three times daily	3 years

Response to Levodopa: Clear "on-off" phenomenon demonstrated. In "on" state, tremor reduced by 70%, bradykinesia improved significantly, able to ambulate independently. "On" periods reliably occur 30-45 minutes after medication intake and last approximately 2.5 hours.

CLINICAL EXAMINATION FINDINGS

Date of Examination: September 12, 2025

Mental Status: Alert and oriented x3. MOCA score: 27/30 (within normal limits). No evidence of dementia. Mood slightly anxious regarding procedure but appropriate. BDI-II score: 12 (mild depression, stable on sertraline 50mg daily).

UPDRS Part III Motor Score:

- OFF medication state: 47/132
- ON medication state: 18/132
- Improvement: 62% reduction in motor score

Hoehn & Yahr Stage: Stage 3 in OFF state (bilateral disease with postural instability)
Stage 2 in ON state (bilateral disease without balance impairment)

Cranial Nerves: Hypomimia noted. Otherwise intact. No evidence of supranuclear gaze palsy or significant dysarthria.

Motor Exam (OFF state):
- Rigidity: 2+ bilateral upper extremities, 1+ bilateral lower extremities
- Bradykinesia: Finger tapping shows decrement and slowing bilaterally
- Tremor: 3+ resting tremor right hand, 2+ left hand
- Gait: Reduced arm swing, mild festination, turn requires 4-5 steps

Cerebellar: No ataxia. Finger-to-nose intact when tremor suppressed.

DIAGNOSTIC STUDIES

MRI Brain with and without contrast (August 28, 2025):
No evidence of structural lesions, stroke, tumor, or vascular malformation. Normal basal ganglia signal intensity. Mild age-appropriate volume loss. No contraindications to stereotactic surgery. Images suitable for surgical planning and targeting.

DaTscan (June 15, 2024):
Reduced striatal dopamine transporter uptake bilaterally, right < left, consistent with idiopathic Parkinson's disease. Pattern excludes essential tremor and drug-induced parkinsonism.

Neuropsychological Testing (July 20, 2025):
Cognitive function within normal limits for age. No evidence of dementia. Executive function preserved. Patient demonstrates good understanding of DBS procedure, risks, and post-operative requirements. Deemed cognitively appropriate for DBS candidacy.

FUNCTIONAL IMPACT

Activities of Daily Living: During "off" periods, patient requires assistance with dressing, grooming, and eating. Unable to write legibly. Previously enjoyed woodworking but unable to participate for past 2 years due to tremor and bradykinesia. Currently on disability leave from work as accountant.

PDQ-39 Quality of Life Score: 112/156 (indicating significant impact on quality of life)

Schwab & England ADL Scale: 60% in OFF state, 80% in ON state

EXCLUSION CRITERIA ASSESSMENT

Atypical Parkinsonism: No features of MSA, PSP, or CBD. No autonomic dysfunction, no apraxia of eyelid opening, no alien limb phenomenon. Diagnosis confirmed as idiopathic PD.

Cognitive/Psychiatric: MOCA 27/30 - no dementia. Mild depression well-controlled on sertraline. No psychosis. Psychiatric evaluation cleared for surgery (Dr. Sarah Chen, 08/30/2025).

Substance Use: No history of alcohol or drug abuse. Social alcohol use only (1-2 drinks per month).

Structural Lesions: Recent MRI negative for stroke, tumor, or vascular malformations.

Prior Surgery: No previous brain surgery or movement disorder procedures.

Comorbidities: Hypertension (controlled), hyperlipidemia (controlled). No significant cardiac, pulmonary, or coagulopathy issues. Cardiology clearance obtained (Dr. James Park, 09/05/2025). No contraindications to surgery.

DEVICE INFORMATION

Proposed Device:	Medtronic Percept PC Neurostimulator
FDA Status:	FDA approved (PMA P960009/S219)
Target:	Bilateral Subthalamic Nucleus (STN)

FACILITY AND PROVIDER QUALIFICATIONS

Primary Neurosurgeon: Dr. Michael Chen, MD, PhD
- Board Certified Neurosurgery (2008)
- Fellowship: Functional and Stereotactic Neurosurgery, Toronto Western Hospital (2009-2010)
- Experience: 180+ DBS procedures over 15 years
- Active member: American Society for Stereotactic and Functional Neurosurgery

Movement Disorder Neurologist: Dr. Patricia Williams, MD
- Board Certified Neurology with subspecialty Movement Disorders (2012)
- Experience: Managing 200+ DBS patients
- Will provide pre-operative selection and post-operative programming

Facility: Northeast Medical Center is a tertiary academic medical center with:
- Dedicated stereotactic OR suite with Leksell frame system
- Intraoperative MRI capability (3T Siemens)
- Microelectrode recording equipment
- Neurophysiology team for intraoperative mapping
- ICU and neurocritical care services
- Accredited DBS center (>50 cases annually)

MULTIDISCIPLINARY TEAM EVALUATION

Patient presented at Movement Disorder Surgery Conference on September 8, 2025. Team consensus supports DBS candidacy. All team members agree patient meets criteria for bilateral STN DBS.

Team Members Present:
- Dr. Michael Chen (Neurosurgery)
- Dr. Patricia Williams (Movement Disorders Neurology)
- Dr. Sarah Chen (Neuropsychiatry)
- Jennifer Moore, RN, MSN (DBS Coordinator)
- Dr. Robert Taylor (Neuroanesthesia)

PATIENT COOPERATION AND CONSENT

Patient attended 90-minute DBS education session on August 25, 2025. Demonstrated excellent understanding of:

- Awake surgical procedure with local anesthesia
- Intraoperative testing requirements
- Post-operative programming sessions (minimum 4-6 visits)
- Continued need for medication management
- Risks including hemorrhage (1-2%), infection (3-5%), hardware complications

Patient expressed strong motivation and willingness to cooperate. Family support confirmed (wife will assist with post-operative care and transportation to programming appointments).

Informed consent discussion completed September 12, 2025. All questions answered. Patient and family demonstrate realistic expectations.

PHYSICIAN ASSESSMENT AND RECOMMENDATION

This 69-year-old male with 12-year history of idiopathic Parkinson's disease presents with advanced motor complications despite maximal medical management. He demonstrates clear levodopa responsiveness with documented "on-off" fluctuations causing significant disability. Clinical examination confirms advanced PD with UPDRS III motor score of 47 in OFF state improving to 18 in ON state (62% improvement). Hoehn & Yahr staging indicates Stage 3 disease.

Extensive medication optimization has been attempted including carbidopa-levodopa (7.5 tablets daily), COMT inhibitor, dopamine agonist, MAO-B inhibitor, and amantadine. Despite this regimen, patient experiences 4-5 disabling "off" periods daily with functional impairment requiring assistance with ADLs.

Comprehensive evaluation excludes atypical parkinsonism. Neuroimaging confirms absence of structural lesions. Cognitive testing demonstrates preserved function without dementia. Psychiatric assessment confirms only mild depression (well-controlled) without psychosis or substance abuse. No prior brain surgery or significant comorbidities contraindicating procedure.

Patient demonstrates excellent understanding of DBS procedure, realistic expectations, and strong commitment to post-operative care requirements. Family support structure in place.

Proposed bilateral STN DBS procedure will be performed at accredited center by experienced team using FDA-approved device.

REQUESTED SERVICE

Procedure: Bilateral STN DBS Lead Placement

Anticipated Date: Within 4-6 weeks of authorization

Location: Northeast Medical Center, New Haven, CT

PHYSICIAN SIGNATURE

I certify that the information provided above is accurate and complete to the best of my knowledge.

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Patricia Williams, MD
Movement Disorder Specialist
Date: September 15, 2025