

Barriers to Referral to Appropriate Specialists in the Management of Patients with Parkinson's Disease

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INTRODUCTION

Parkinson's disease (PD) is often first detected by a patient's primary care provider. As the disease progresses, research has shown that, compared with nonspecialist care, multidisciplinary care led by a specialist is associated with superior outcomes. Reported benefits of specialist PD care include better quality of life; reduced risks of hip fracture, hospitalizations, and placement in a skilled nursing facility; and longer survival.^{1,2} In addition, specialist care for patients with PD is associated with providers' better adherence to quality measures and greater patient satisfaction.³⁻⁵ However, many patients with PD are not referred to a specialist for consultation or care at appropriate points in disease progression. Among Medicare beneficiaries, for example, one study showed that 42% of patients diagnosed with PD did not receive care from a neurologist up to 4 years after diagnosis.¹

Using a case-based survey and post-control design, we assessed the influence of a continuing medical education (CME) program on attitudes and barriers regarding PD specialist referral among primary care and neurology clinicians.

METHODS

Participants (Table 1)

- Educational intervention group: 39 primary care or neurology clinicians who completed two 1-hour CME activities on the treatment and management of PD
- Control group: 39 demographically matched clinicians who did not participate in the educational activities

Continuing Medical Education Activities

- Two 1-hour online videos with an interactive multimedia design
 - Video 1: *Current and Novel Treatment Approaches for Dyskinesias and Increased Off-Time*
 - Video 2: *Managing Treatment-Related Complications and Interdisciplinary Considerations*
- Panel format with three leading physician-researchers in PD
- Topics:
 - Patient-specific approaches to PD therapy selection
 - Best practices for referring patients with PD symptoms to specialists
 - Challenges and strategies for integrating care coordination to improve patient outcomes
 - Use of telemedicine to address barriers to access

Interactive elements:

- Case-based learning
- Polling questions about treatment and referral options
- Feedback from expert faculty presenters

Table 1. Demographics of Educational Intervention and Control Groups

	Intervention (n = 39)	Control (n = 39)
Patients with PD seen/week, mean (SD)	8.2 (6.5)	11.4 (11.0)
Years since graduation, mean (SD)	12.9 (10.2)	13.7 (7.21)
Specialty		
Neurology	23%	20%
Family Practice	51%	51%
Psychiatry	10%	8%
Internal Medicine	13%	21%
Other	3%	0%
Degree		
MD/DO	23%	21%
NP	64%	59%
PA	13%	20%

Note: Members of the two groups were matched on patients seen per week, years since graduation, specialty, and degree. T-tests or chi-square analyses were performed for all demographic characteristics. None of the variables were significantly different between the intervention and control samples.

POST-EDUCATION SURVEY

- Included patient case vignettes, presented in a progressive disclosure format
- Each case was divided into segments, each followed by a question asking participants what step(s) they would take next in the patient's treatment or management
- Designed to assess (1) the extent to which clinicians' practice patterns were consistent with the evidence-based content of the educational videos and (2) attitudes and barriers regarding practices of referring patients with PD to neurologists or movement disorder specialists

STATISTICAL ANALYSIS

- For the case-vignette questions, chi-square tests were conducted to analyze differences between the responses of the intervention and control groups
- Level of statistical significance: $P \leq .10$



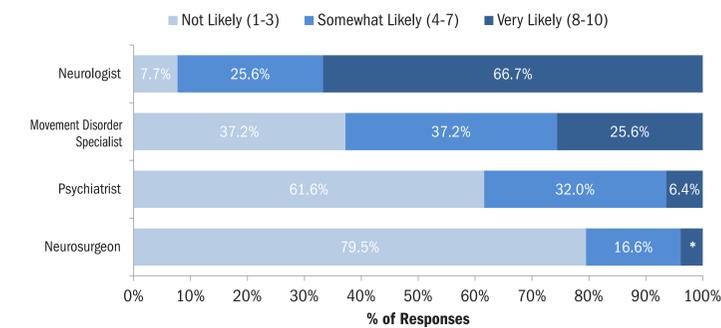
RESULTS

For the case vignettes, there were no significant differences in frequencies of responses between the educational intervention and control groups. Thus, in the following presentation of results, the responses are pooled.

Attitudes Toward Referrals to PD Specialists

Case 1.1 53-year-old teacher with complaints of right hand shaking for past 6 months. Review of systems is significant for soft speech for > 1 year, constipation for 5 years, and anxiety for 2 years. Findings of unilateral resting tremor, bradykinesia, and rigidity confirm diagnosis of PD. The patient expresses uncertainty about the diagnosis because he is only 53.

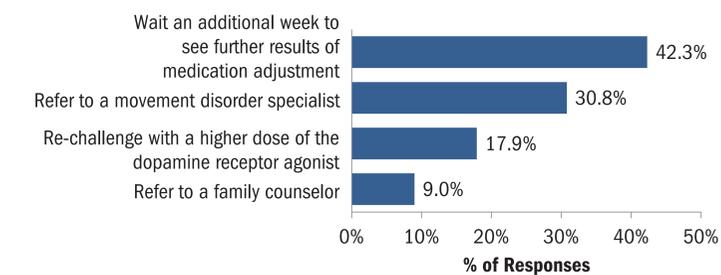
Question: How likely are you to refer this patient to the following healthcare professionals at this point? (Scale: 1 to 10; Select 1 for each)



* = ≤ 5%

Case 1.2 The patient begins treatment with an MAO inhibitor. His tremor, slowness, and soft speech all improve for > 1 year. He then returns complaining of increased tremor on both sides, slowed movements and walking, and a feeling of instability. The patient refuses treatment with levodopa because he has heard that it can be "toxic," so an extended-release dopamine receptor agonist is prescribed. The patient's motor functioning improves; however, 9 months later, his wife reports that he has signs of impulse control disorder (ICD) including pathological gambling.

Question: Which of the following actions would you take next? (Select only 1)

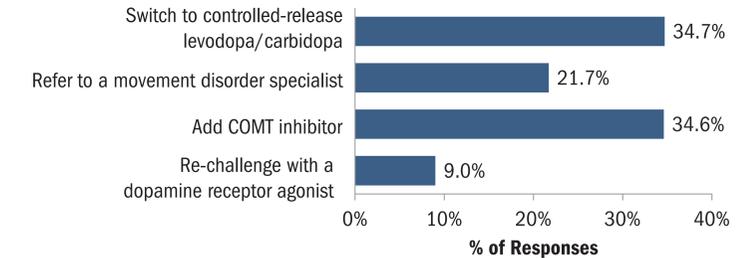


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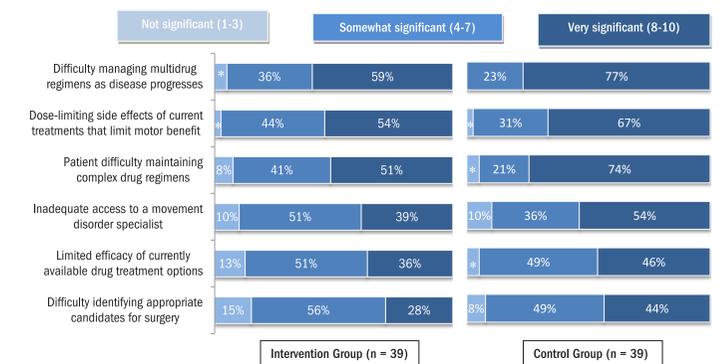
Case 1.3 The patient ceases treatment with the dopamine receptor agonist and starts therapy with levodopa/carbidopa. The patient's motor function improves, and he no longer has signs of ICD. Two years later, the patient experiences involuntary twisting movements of his limbs, facial grimacing, and tongue protrusion after every dose of levodopa/carbidopa. The neurologic exam is significant for generalized mild-to-moderate dyskinesia and mild parkinsonian signs.

Question: Which of the following actions would you take next? (Select only 1)



Management of Motor Complications

Respondents were asked to identify the significance (on a 10-point scale) of designated barriers to the optimal management of motor complications in patients with PD.



* = ≤ 5%

CONCLUSIONS

- Rates of intention to refer a patient with PD to a movement disorder specialist did not differ significantly between the education and control groups.
- A relatively small proportion of clinicians indicated that they would refer a patient with PD to a movement disorder specialist, despite advanced disease symptoms and inadequate treatment response.
- Barriers to referral may include lack of access, ineffective communication among healthcare providers, and a lack of awareness about specialists and their roles.
- Top barriers to managing motor complications associated with PD were difficulty managing multidrug regimens and dose-limiting side effects of current treatments.
- Compared with the control group, participants in the educational activities rated all barriers as less significant.
- Additional education is needed to promote referrals of PD patients to movement disorder specialists.