

Evaluating Patients' Preferences for Parkinson's Disease Treatments

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ABSTRACT DESCRIPTION

Pretest interviews were conducted to inform a broader survey on patient preferences for key attributes of adjunctive Parkinson's disease medications. Most patients (10/15) reported they would add an adjunctive medication offering "1.5 to 2 hours of additional "ON" time regardless of potential side effects and complication of preexisting medication regimens.

INTRODUCTION

- Levodopa is considered the most effective treatment for managing Parkinson's disease (PD), yet patients still often experience motor fluctuations as the disease progresses¹
- Enhancing levodopa/carbidopa (LD/CD) regimens with certain drug classes can improve motor fluctuations and reduce "OFF" time
- As new treatments become available and patients have more options, their preferences for key attributes of various adjunctive medications that reduce "OFF" time should be considered
- Pretest interviews were conducted in patients with PD to refine a survey that elicits patient preferences for key attributes of adjunctive PD medications using a discrete-choice experiment





OBJECTIVES

- Highlight the importance of considering patient preference when choosing Parkinson's disease medications
- Demonstrate an understanding of the discrete-choice experiment used to elicit patient preferences
- Identify patient preferences for key attributes of adjunctive Parkinson's disease medications

METHODS

- Patients were recruited through the Michael J. Fox Foundation for Parkinson's Research and met the following criteria: living in the United States, aged 30 to 83 years, self-reported physician diagnosis of PD, current treatment with LD/CD, at least once-daily "OFF" episodes, ≥90 minutes of daily "OFF" time, and not taking a medicine for cognitive concerns
- A patient preference survey was developed based on published data and prescribing information for approved PD treatments, along with input from clinical experts and patient advisors for additional feedback and to ensure that the survey was patient-centered
- Semi-structured pretest interviews were conducted that presented a series of preference questions offering hypothetical adjunctive medications defined by attributes, such as the amount of "ON" time added by the medication and potential risks for dyskinesia and other side effects (**Figure 1**)
- All attributes were explained in patient-friendly language before the series of preference questions
- Options for no new treatment were also assessed, along with patients' current PD medications and "OFF" episode experiences
- All responses were analyzed descriptively
- Results from the interviews will be used to refine a final survey for an online patient preference study

Figure 1. Example Question from Pretest Interviews

Which additional medicine would you choose?			
Medicine Feature	Additional Medicine A	Additional Medicine B	No Additional Medicine
Increase in daily ON time	120 more minutes in ON time each day	95 more minutes in ON time each day	No increase in ON time each day
Additional minutes with troublesome dyskinesia each day (Medicine side effect)	No additional minutes with troublesome dyskinesia each day	5 additional minutes with troublesome dyskinesia each day	No additional minutes with troublesome dyskinesia each day
Risk of diarrhea (Medicine side effect)	 1 person out of 10 (10%)	 None	No additional risk of diarrhea
Risk of change in urine, sweat, or saliva color (Medicine side effect)	 4 people out of 10 (40%)	 1 person out of 10 (10%)	No risk of change in urine, sweat, or saliva color
How often you take the additional medicine each day	1 additional pill each time you take levodopa/carbidopa	1 additional pill at bedtime	No additional medicine
Which would you choose?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RESULTS

- Socio-demographic characteristics of the 15 patients who completed the interviews are presented in **Table 1**

Table 1. Patient Characteristics	
	All Patients (N=15)
Age, years, mean (SD)	61.9 (8.2)
Gender, n	
Male	9
Female	6
Race, n	
White	15
Ethnicity, n	
Hispanic or Latino	2
Not Hispanic or Latino	12
Prefer not to say	1
Employment status, n	
Retired	8
Disabled/unable to work	4
Employed full-time	3
Marital status, n	
Married ^a	15
Education level, n	
Associate's degree	1
College/undergraduate degree	4
Some graduate school but no degree	1
Graduate degree	9

^aIncludes patients who were married, living as married, or in a civil partnership. SD, standard deviation.

- In the interviews, participants reported having "OFF" episodes at least several times per week, with 55% (6/11) reporting "OFF" episodes several times per day (**Table 2**)
- All 15 participants experienced motor symptoms (e.g., slowness of movements, stiffness, tremors, trouble swallowing)
- Cognitive symptoms, pain, fatigue/tiredness, and mood symptoms were also common

Table 2. Disease Characteristics

	All Patients (N=15)
Time since PD diagnosis	
1 to 4 years	2
5 to 10 years	6
>10 years	7
Frequency of "OFF" episodes ^a	
Multiple times a day	6
Once a day	2
Every few days	3
"OFF" episodes in the past week ^b	
Every day	2
Not every day	2
Number of episodes last week, mean (SD) ^c	3.0 (2.8)
Number of episodes last week, range ^c	1 to 5
Daily "OFF" time, n ^d	
<60 min	1
60 to <90 min	2
90 to <120 min	3
≥120 min	2
"OFF" episode symptoms, n ^e	
Motor symptoms	15
Cognitive symptoms	9
Pain	7
Fatigue or tiredness	6
Mood symptoms	5

^aBased on available responses from 11 patients.
^bBased on available responses from 4 patients.
^cBased on responses from 2 patients who indicated *not* having "OFF" episodes every day.
^dBased on available responses from 8 patients. All patients reported ≥90 minutes of daily "OFF" time during prescreening; however, 3 patients reported <90 minutes during pretest interviews.
^ePatients were allowed to select ≥1 symptom. PD, Parkinson's disease; SD, standard deviation.

- A majority of patients were taking ≥1 adjunctive PD medication in addition to their LD/CD regimen (3-6 doses/day) and other current medications (5-30 pills/day) (**Table 3**)
- In addition, one-third (5/15) reported having used a rescue medication and one-fifth (3/15) had undergone deep brain stimulation

Table 3. Medication Use

	All Patients (N=15)
LD/CD dosing frequency	
Number of times per day, mean (SD)	4.4 (0.8)
Number of times per day, range	3 to 6
Adjunctive PD medication classes, n ^a	
Dopamine agonists	8
MAO-B inhibitors	6
COMT inhibitors ^b	2
Rescue PD medications ^c	5
Deep brain stimulation	3
Medications for any reason ^d	
Number of pills per day, mean (SD)	15.5 (7.8)
Number of pills per day, range	5 to 30

^aPatients were allowed to select ≥1 adjunctive medication.
^bCOMT inhibitors included levodopa/carbidopa/entacapone combination medication.
^cRescue medications included apomorphine injection or sublingual film and levodopa inhalation powder.
^dFor PD or any other condition.
 COMT, catechol-O-methyltransferase; LD/CD, levodopa/carbidopa; MAO-B, monoamine oxidase-B; PD, Parkinson's disease; SD, standard deviation.

- When presented with a series of choices among 2 hypothetical adjunctive medications and the option of no new medication (**Figure 1**), preferences varied by patient
- For example, some stated their preference for lower side-effect risks; others indicated their preference for a once-daily medication
- Some patients were willing to forgo 30-60 mins of additional "ON" time to avoid troublesome dyskinesia; diarrhea; or change in urine, sweat, or saliva color
- However, 67% (10/15) always chose adding medication that gave them 1-2 hours of additional "ON" time (versus no medication), regardless of side effects and complicated preexisting medication regimens

CONCLUSIONS

- This research highlights the importance of patient preference when choosing PD medications
- Preferences for adjunctive PD medication attributes varied by patient; however, two-thirds always chose adding a medication to their LD/CD regimen that gave them 1-2 hours of additional "ON" time regardless of side effects
- The pretest results will be used to refine a survey to elicit patient preferences for key attributes of adjunctive PD medications using a discrete-choice experiment

REFERENCES

1. Tambasco N, et al. *Curr Neuropharmacol*. 2018;16:1239-52.

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