

Disease Burden and Treatment in Patients With Essential Tremor in the United States: Real-World Evidence From a Cross-Sectional Study of Physicians and Patients

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Introduction

- Essential tremor (ET) is one of the most common movement disorders and is characterized by involuntary shaking of the hands, head, voice, and/or legs, making activities of daily living more difficult¹⁻³
- ET is currently treated with medication classes including beta-blockers and barbiturates, which can have suboptimal efficacy and tolerability-related challenges⁴⁻⁷

Objective

- To characterize disease burden and medication treatment insights in patients with ET using data from the Adelphi Essential Tremor Disease Specific Programme (DSP)TM

Methods

- This was a retrospective analysis of data from the Adelphi ET DSPTM that included physician-reported data (patient record forms [PRFs]) and patient-reported data (patient self-completion records [PSCs]). The data were collected in the US between March and August 2021
- Primary care physicians and neurologists completed PRFs for consulting patients diagnosed with ET
- The same consulting patients and caregivers were then invited by their physician to fill out PSCs on a voluntary basis
- Descriptive analyses were performed for patient demographics, disease burden, medication treatment patterns, and treatment satisfaction

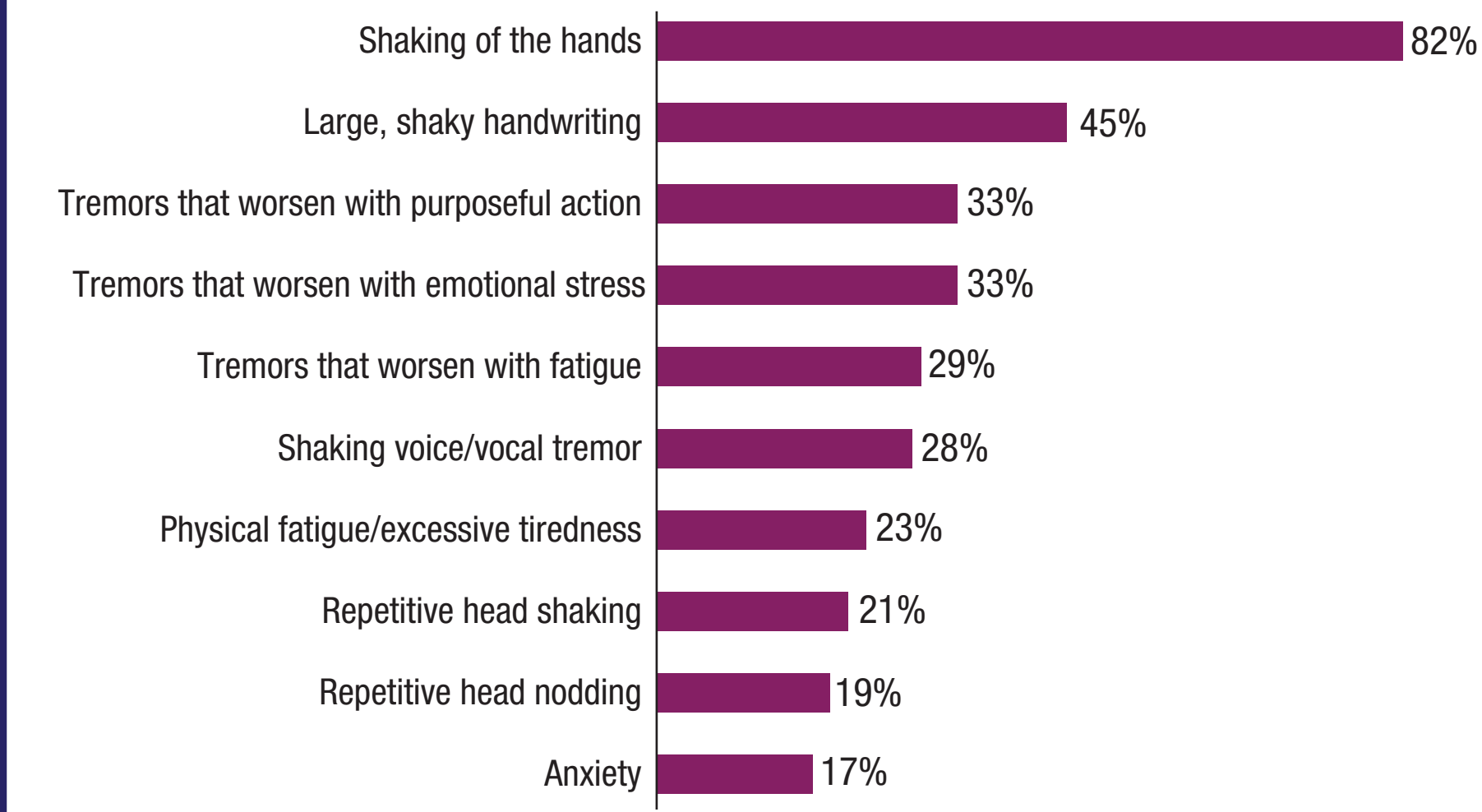
References: **1.** Louis ED, et al. *Tremor Other Hyperkinet Mov (NY)*. 2021;11:28. **2.** Ferreira JJ, et al. *Mov Disord*. 2019;34(7):950-8. **3.** Shanker V. *BMJ*. 2019;366:14485. **4.** Inderal [package insert]. Philadelphia, PA: Wyeth Pharmaceuticals Inc, a subsidiary of Pfizer Inc; 2017. **5.** Lenkathula N, et al. *StatPearls*. Treasure Island, FL: StatPearls Publishing; 2024. **6.** Vetterick C, et al. *Adv Ther*. 2022;39(12):5546-67. **7.** Zesiewicz T, et al. *Mov Disord Clin Pract*. 2022;9(6):728-34.

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Results

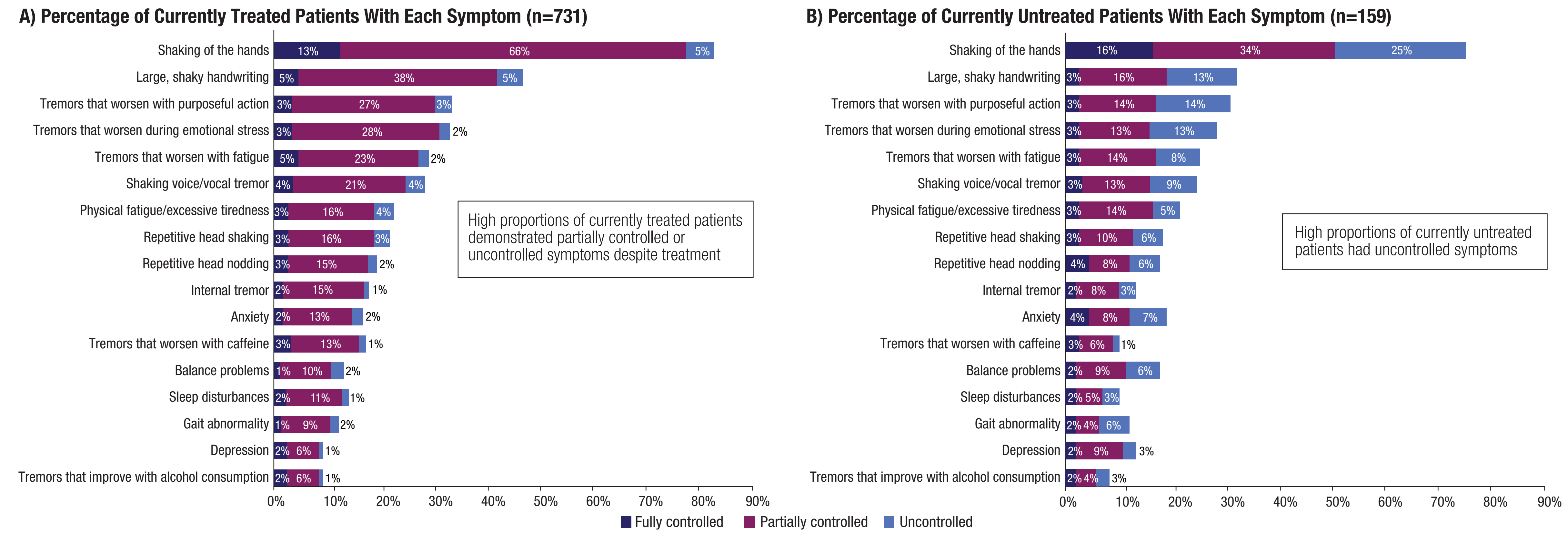
Figure 1. Most Common Physician-reported Symptoms in Patients With Essential Tremor^a



^aN=888 patients; n=2 patients with unknown symptom profile excluded.

- Common physician-reported symptoms included shaking of the hands (82%); large, shaky handwriting (45%); and tremors that worsen with purposeful action (33%) or during emotional stress (33%)
- Other symptoms included excessive tiredness (23%) and anxiety (17%)

Figure 2. Symptom Control Among Currently Treated and Untreated Patients With Essential Tremor



The data were reported by physicians for their patients. Symptoms with overall prevalence ≤9% are not displayed. The length of the bars represents data to full precision, whereas the percent labels on the bars are rounded to whole numbers; for this reason, bars with the same label may be different lengths.

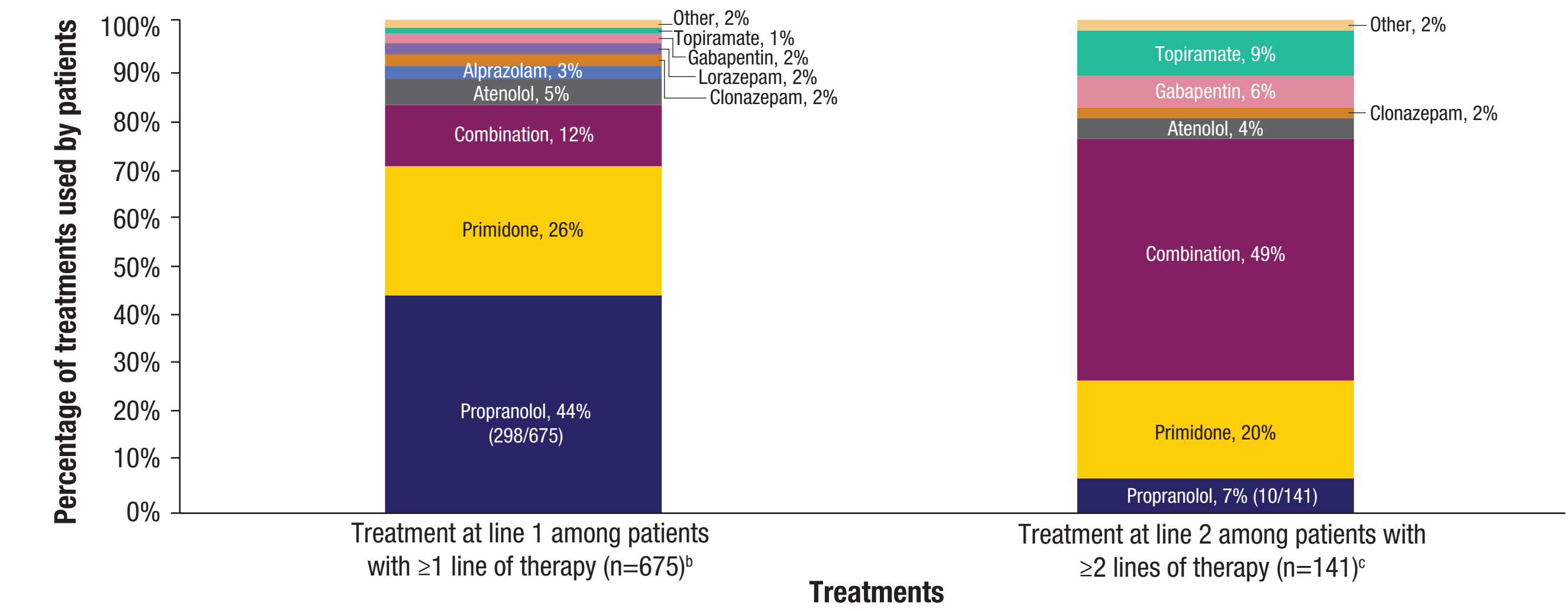
Table 1. Demographics of Patients With Essential Tremor

	Patients With Essential Tremor N=890
Age, years	
Median (IQR)	66 (57,74)
Sex, n (%)	
Male	459 (52)
Female	431 (48)
Ethnicity, n (%)	
White/Caucasian	678 (76)
African American	98 (11)
Hispanic/Latino	30 (3)
Mixed race	24 (3)
Other ^a	60 (7)
Current Treatment Status, n (%)	
Untreated	159 (18)
Treated	731 (82)
Caregiver Status^b, n (%)	
No	652 (77)
Yes	200 (24)
Employment Status, n (%)	
Working full-time	268 (30)
Working part-time	97 (11)
On long-term sick leave	11 (1)
Homemaker	61 (7)
Student	7 (1)
Retired	410 (46)
Unemployed	35 (4)
Furloughed/Government work scheme	1 (0.1)

^aThe "other" ethnicity category includes the following categories: Native American, Asian (Indian subcontinent), Asian (other), Middle Eastern, and Southeast Asian. ^bN=852 patients; n=38 patients with unknown caregiver status excluded. IQR, interquartile range.

- Physicians (primary care physicians, n=40; neurologists, n=60) provided data for 890 patients with an ET diagnosis
- The median (interquartile range [IQR]) patient age was 66 (57–74) years; most patients were male (52%) and White (76%)
- 18% of patients were not currently treated, 24% required a caregiver, and over half (51%) were not employed (on long-term sick leave, retired, or unemployed)

Figure 3. Treatment History in Patients With Essential Tremor^a



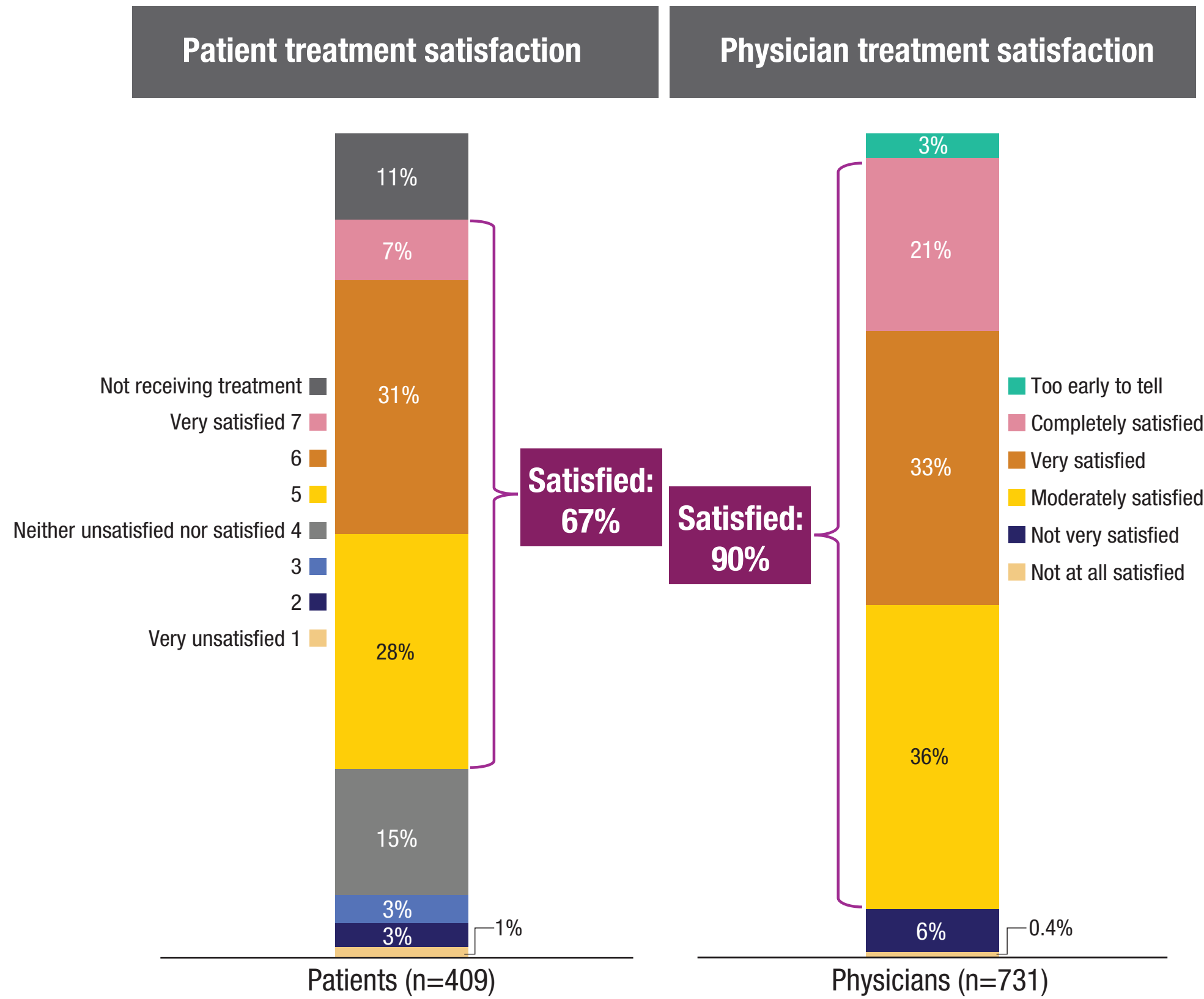
^aTreatment history includes both past and present medications. ^b"Other" line 1 monotherapy treatments included Cala Trio (0.3%), nadolol (0.3%), sotalol (0.3%), diazepam (0.1%), pregabalin (0.1%), and others (0.4%). Among patients taking combination therapy (n=84), components treatments included propranolol (54%), primidone (35%), atenolol (11%), clonazepam (21%), alprazolam (13%), topiramate (17%), lorazepam (7%), gabapentin (6%), Cala Trio (17%), diazepam (13%), "other" (4%), pregabalin (4%), and nadolol (1%). ^cBased on available responses. "Other" line 2 monotherapy treatments included diazepam (0.7%), pregabalin (0.7%), and zonisamide (0.7%). Among patients taking combination therapy (n=69), components treatments included primidone (45%), propranolol (62%), topiramate (14%), gabapentin (14%), clonazepam (22%), diazepam (16%), atenolol (4%), "other" (7%), botulinum toxin (6%), Cala Trio (4%), alprazolam (4%), pregabalin (1%), nadolol (1%), deep-brain stimulation (1%), and lorazepam (1%).

- Among the 890 patients, 675 (76%) had a complete treatment history
 - Of these 675, 534 (79%) had reported receiving only first-line treatment (42% [n=225/534] were prescribed monotherapy propranolol)
 - A further 141 of these 675 (21%) had reported progressing to subsequent lines (20% [n=28/141] of whom were prescribed monotherapy primidone as their second-line treatment)
- Of the 139 patients with documented reasons for first-line treatment discontinuation, 86% switched due to lack of efficacy and 42% due to tolerability concerns; reasons were not mutually exclusive

Conclusions

- ET has a high clinical burden, and current therapies offer limited symptom control
 - The ability to make comparisons is limited by the descriptive nature of this study
- Patients reported advancing lines of therapies due to poor efficacy and tolerability
- In addition, the observed discordance in treatment satisfaction between patients and physicians further underscores the significant unmet needs that exist with current ET therapies

Figure 4. Patient- and Physician-reported Treatment Satisfaction



- Differences were reported in patient- and physician-reported medication treatment satisfaction, with 90% of physicians (n=658/731) being at least moderately satisfied with current medication treatments versus only 67% of patients (n=272/409)

