

# Presence and Impact of Possible Tardive Dyskinesia in Patients Prescribed Antipsychotics: Results from the RE-KINECT Study

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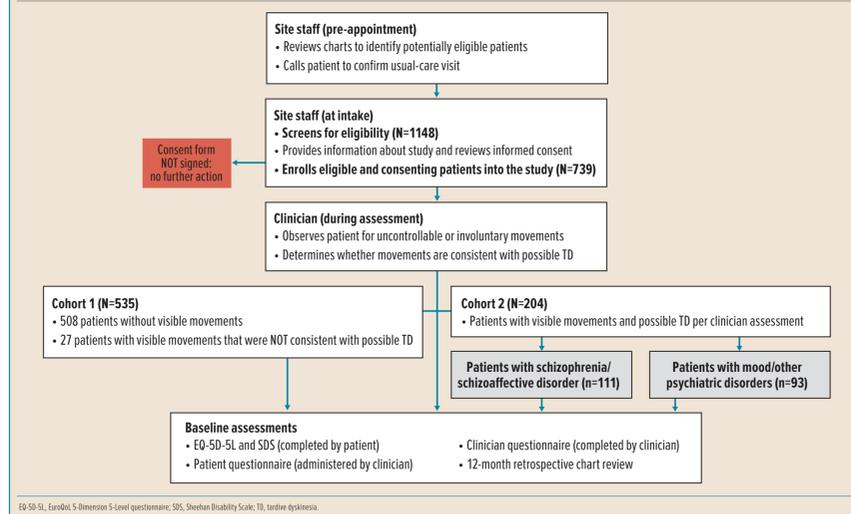
## INTRODUCTION

- Tardive dyskinesia (TD) is a persistent movement disorder that has been associated with the use of antipsychotic medications<sup>1,4</sup>
- Given the long-term use of antipsychotics in schizophrenia and schizoaffective disorder, along with the expanding use of atypical antipsychotics in mood disorders (e.g., bipolar disorder, major depressive disorder) and other conditions (e.g., hyperactivity, severe behavioral problems),<sup>5</sup> it is highly recommended that all patients taking an antipsychotic be screened for TD<sup>6</sup>
- Screening may be as frequent as every 3 to 6 months and can include structured or semi-structured clinician assessments<sup>7,8</sup>
- Previous studies on the awareness, distress, and impact on quality of life expressed by patients in association with TD have been inconsistent and confounded by impairments in insight, cognition, and psychotic symptoms associated with chronic schizophrenia<sup>9,10</sup>
- RE-KINECT is a prospective, real-world TD screening study of patients treated with antipsychotics; in this descriptive analysis, data from patients with possible TD were evaluated to assess the awareness and impact of abnormal movements, stratified by patient psychiatric diagnosis

## METHODS

- RE-KINECT included 37 outpatient psychiatry practices from across the United States
- Adults (aged ≥18 years) with ≥3 months of lifetime exposure to antipsychotic(s) and at least one clinician-confirmed psychiatric disorder who were willing and able to provide informed consent were eligible to participate
- Patients were assigned to one of two cohorts based on their clinician's assessment of visible movements, a screen for possible TD (Figure 1)

Figure 1. Overview of Possible TD Symptom Screen and Cohort Assignment



## ASSESSMENTS AND ANALYSES

- Data from Cohort 2 (i.e., 204 patients with visible movements and possible TD per clinician assessment) were analyzed by psychiatric diagnosis: schizophrenia/schizoaffective disorder (n=111) and mood/other psychiatric disorders (n=93)
- Other psychiatric disorders (not mutually exclusive) included attention-deficit hyperactivity disorder, post-traumatic stress disorder, personality disorder, substance use disorder, anxiety, and other depressive/mood/psychiatric disorders (unspecified)
- Assessments at baseline included:
  - Demographics and clinical characteristics (12-month retrospective chart review, clinician reported)
  - Presence, location, and severity of involuntary movements (clinician and patient reported)
  - Patient's awareness of involuntary movements (patient reported but administered by clinician)
  - Patient's self-consciousness or embarrassment about involuntary movements (patient reported but administered by clinician)
  - Impact of body movements on daily activities (patient reported but administered by clinician)
  - EuroQoL 5-Dimension 5-Level questionnaire (EQ-5D-5L)<sup>11</sup> and the Sheehan Disability Scale (SDS)<sup>12</sup> (patient reported)
- Significance between diagnosis subgroups was analyzed using chi-squared test for categorical variables and t-test for continuous variables

## RESULTS

- Compared to the schizophrenia/schizoaffective disorder subgroup, the mood/other psychiatric disorders subgroup had significantly more women, were older, and consisted of more Caucasian and fewer African-American patients (Table 1)
- Patients with mood/other psychiatric disorders were also more likely to be employed, be married, have a significantly shorter lifetime exposure to antipsychotics, and be receiving ≥2 psychotropic medications

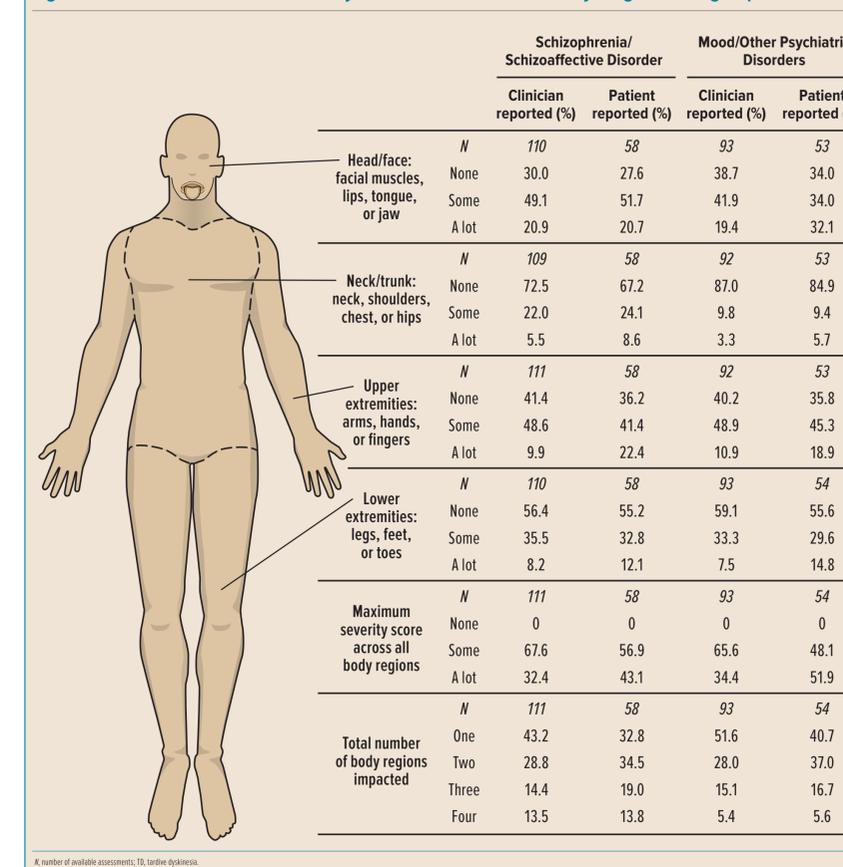
Table 1. Cohort 2 Baseline Characteristics by Diagnosis Subgroup

Characteristic	Schizophrenia/Schizoaffective Disorder (n=111)	Mood/Other Psychiatric Disorders (n=93)	P-Value*
<b>Gender, n (%)</b>			<b>&lt;0.0001</b>
Male	69 (62.2)	31 (33.3)	
Female	42 (37.8)	62 (66.7)	
<b>Age, mean (SD), years</b>	52.7 (12.4)	56.9 (14.7)	0.0263
<b>Race, n (%)</b>			
Caucasian	69 (62.2)	80 (86.0)	0.0001
African-American	29 (26.1)	7 (7.5)	0.0005
Asian	6 (5.4)	2 (2.2)	0.2329
Hawaiian/Pacific Islander	1 (0.9)	0	0.3588
Indian/Alaska Native	2 (1.8)	0	0.1933
Other	6 (5.4)	3 (3.2)	0.4502
Missing	1 (0.9)	1 (1.1)	--
<b>Marital status, n (%)</b>			<b>0.0271</b>
Single	65 (58.6)	32 (34.4)	
Married	19 (17.1)	24 (25.8)	
Divorced	19 (17.1)	27 (29.0)	
Widowed	3 (2.7)	3 (3.2)	
Separated	5 (4.5)	7 (7.5)	
<b>Current living/domestic situation, n (%)</b>			0.0521
Living alone	30 (27.0)	27 (29.0)	
Living with partner, spouse, family, or friends	51 (45.9)	54 (58.1)	
Other*	29 (26.1)	12 (12.9)	
Missing	1 (0.9)	0	
<b>Employment status, n (%)</b>			
Employed, full-time	1 (0.9)	13 (14.0)	0.0002
Employed, part-time	12 (10.8)	13 (14.0)	0.4920
Homemaker	1 (0.9)	2 (2.2)	0.4602
Student	1 (0.9)	0	0.3588
Unemployed	16 (14.4)	3 (3.2)	0.0062
Retired	12 (10.8)	20 (21.5)	0.0364
Disabled	69 (62.2)	42 (45.2)	0.0152
Other	1 (0.9)	2 (2.2)	0.4602
Missing	1 (0.9)	0	--
<b>Lifetime exposure to antipsychotic medication, mean (SD), years†</b>	19.5 (14.7)	9.5 (10.6)	<b>&lt;0.0001</b>
<b>Severity of psychiatric condition, n (%)‡</b>			<b>0.0336</b>
Normal	0	7 (7.5)	
Minimal	19 (17.1)	8 (8.6)	
Mild	36 (32.4)	32 (34.4)	
Moderate	36 (32.4)	31 (33.3)	
Marked	16 (14.4)	10 (10.8)	
Severe	4 (3.6)	5 (5.4)	
Among the most severe	0	0	
<b>Average overall health status, mean (SD)*</b>	4.5 (2.9)	5.1 (2.7)	0.1194
<b>Number of psychotropic medications (antipsychotics + others), n (%)</b>			<b>0.0093</b>
None	3 (2.7)	2 (2.2)	
One	20 (18.0)	4 (4.3)	
Two or more	88 (79.3)	87 (93.5)	
<b>Antipsychotic type (last 12 months), n (%)</b>			
Atypical	92 (82.9)	77 (82.8)	0.9869
Typical	23 (20.7)	4 (4.3)	0.0006
Both	105 (94.6)	81 (87.1)	0.0600

\*P-values are for the category if responses were mutually exclusive. For questions or items that allowed >1 response, P-values are provided for each response.  
 †Based on available data: schizophrenia/schizoaffective disorder, n=107; mood/other psychiatric disorders, n=93.  
 ‡Per clinician impression.  
 \*Per patient report. 0=No health problems to 10=health as bad as you can imagine.  
 SD, standard deviation.

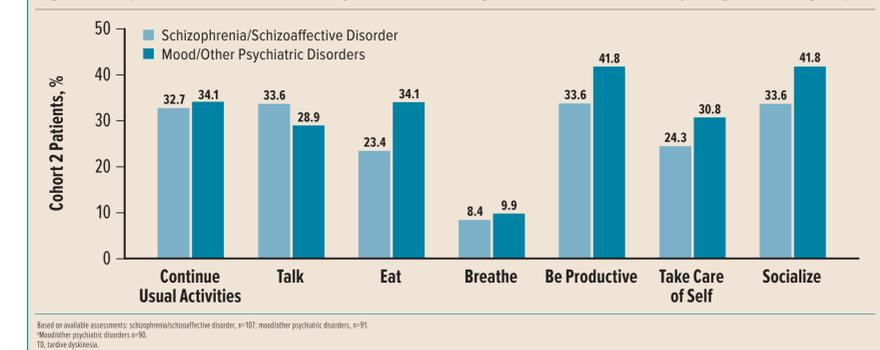
- Based on both clinician and patient reported outcomes, no statistically significant differences between diagnosis subgroups (P>0.05) were found for severity by body region (head/face, neck/trunk, upper extremities, lower extremities), maximum severity score across 4 regions, or total number of affected regions
- More patients with mood/psychiatric disorders rated their head/face movements as severe (rating of "a lot") (Figure 2), but the result was not statistically significant (32.1% vs 20.7%; P=0.1524)
- Patients in both diagnosis subgroups tended to rate their movements as more severe than did clinicians, with the exception of head/face movements in the schizophrenia/schizoaffective disorder subgroup (similar between patients and clinicians)

Figure 2. Cohort 2 Location and Severity of Possible TD Movements by Diagnosis Subgroup



- No significant differences between diagnosis subgroups were found for patient awareness of possible TD or self-consciousness/embarrassment about visible movements
- However, a greater percentage of patients with mood/other psychiatric disorders vs schizophrenia/schizoaffective disorder were aware of their possible TD symptoms (80.6% vs 71.2%)
- In contrast, a lower percentage of patients with mood/other psychiatric disorders vs schizophrenia/schizoaffective disorder felt self-conscious or embarrassed by their uncontrollable movements (59.7% vs 66.2%)
- The impact of possible TD on daily activities was not statistically significant between diagnosis subgroups, although noticeably more patients with mood/other psychiatric disorders reported "some" or "a lot" of impact on their ability to eat (34.1% vs 23.4%), be productive (41.8% vs 33.6%), take care of self (30.8% vs 24.3%), and socialize (41.8% vs 33.6%) (Figure 3)

Figure 3. Impact of Possible TD on Daily Activities: Ratings of "Some" or "A lot" by Diagnosis Subgroup



- No significant differences between diagnosis subgroups were found for SDS mean scores at baseline, although the self-reported impact of TD was generally worse (as indicated by higher scores) in patients with mood/other psychiatric disorders vs schizophrenia/schizoaffective disorder: total score (12.8 vs 10.8 [range, 0–30]), work/school (4.1 vs 4.2 [range, 0–10]), social life (4.3 vs 3.7 [range, 0–10]), and family life/home responsibilities (4.1 vs 3.5 [range, 0–10])
- No significant differences between diagnosis subgroups were found for the EQ-5D-5L utility score (0.68 vs 0.74 [range 0–1.00, higher scores indicate worse impairment]) or EQ-5D-5L health state visual analog scale (64.8 vs 68.5 [range 0–100, higher scores indicate worse impairment])

## CONCLUSIONS

- In this cohort of psychiatric outpatients with possible TD, patients diagnosed with mood/other psychiatric disorders were older and more likely to be women, white, married and employed, with reduced lifetime exposure to antipsychotics but more frequent polypharmacy
- The majority of patients in both diagnostic subgroups were aware of their movements, felt self-conscious or embarrassed by them, and generally rated them as more severe than clinicians
- Nearly a third of patients in both diagnostic groups reported "some" or "a lot" of impact from TD on social and occupational functions
- Patients with mood/other psychiatric disorders generally reported greater awareness and impairment from TD than patients with schizophrenia/schizoaffective disorder, but these differences did not reach statistical significance
- Earlier studies that found low levels of TD awareness in schizophrenia patients were largely based on chronically-ill or inpatient populations<sup>9,10</sup>; in contrast, this outpatient study found high levels of awareness and self-consciousness/embarrassment in both diagnostic groups
- The number of patients from this study who were aware of and bothered by abnormal, involuntary movements underscores that all patients exposed to antipsychotics should be screened for symptoms of TD and treated appropriately
- There is a continuing need for research on the psychological, social, and occupational impact of TD on quality of life

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