Tardive Dyskinesia: Epidemiological Trends in US Populations Based on Cross-Sectional Analysis of Retrospective Claims Data

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Poster 102

Q Introduction

- Tardive dyskinesia (TD) is a predominantly irreversible movement disorder characterized by involuntary, repetitive movements, typically involving the orobuccal-lingual area¹
- TD is associated with long-term treatment with dopamine receptor antagonists, including typical and atypical antipsychotic medications (APs)^{1,2}, and age is a known risk factor for TD²
- A meta-analysis of 41 studies published from 2000–2015 found an overall mean TD prevalence of 25.3% in patients exposed to APs³
- Based on epidemiologic modeling data, TD incidence and prevalence are projected to increase in coming years⁴, driven by aging of the population and expanded use of APs¹; however, real-world data are lacking

Objective

 To examine the associations between payer type, AP treatments, and underlying conditions with TD in a real-world dataset

⟨☼⟩ Methods

Data Source

 The All Payers Claims Database (APCD) is a large national database that has captured ~80% of claims made in the United States (US) since 2014 across multiple payer types, including commercial, Medicaid, and Medicare

Analysis

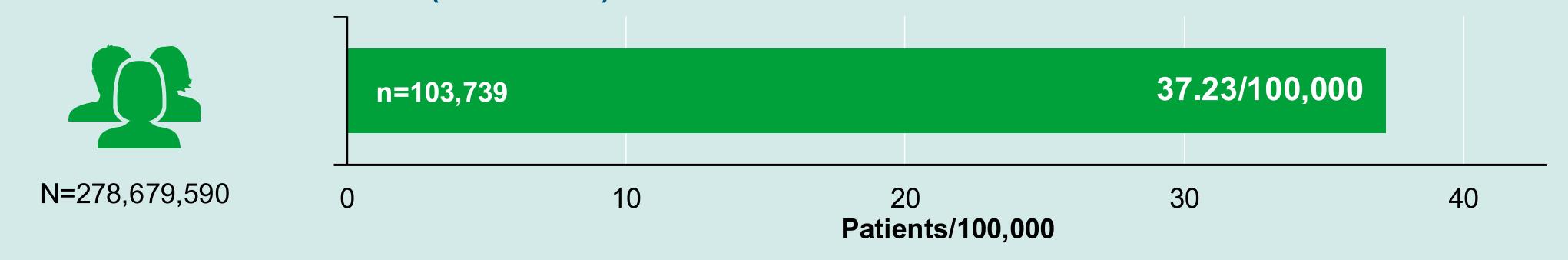
- The following were assessed using APCD claims data available from 2016 through 2020
- TD prevalence by year and payer type
- Numerator: patients with a TD diagnosis present in the database (overall and by year) and using that payer type (overall, Medicaid, Medicare, commercial, government/other), respectively
- Denominator: patients in the APCD population
- Demographics (age, sex, race, payer type) were calculated for the population with a TD diagnosis overall and by year
- TD prevalence by AP use
- Numerator: patients with a TD diagnosis and ≥2 AP claims (any, typical, atypical, or both typical and atypical [≥1 claim each])
- Denominator: patients with ≥2 AP claims
- TD prevalence by underlying psychiatric condition
 - Numerator: patients with an underlying psychiatric condition (schizophrenia, bipolar disorder, or mood disorder), a TD diagnosis, and ≥2 AP claims
 - Denominator: patients with one of the psychiatric conditions listed above and ≥2 AP claims
 - For patients with multiple psychiatric conditions, the following hierarchy was used: schizophrenia 1st, bipolar disorder 2nd, mood disorders 3rd

Results

TD Prevalence

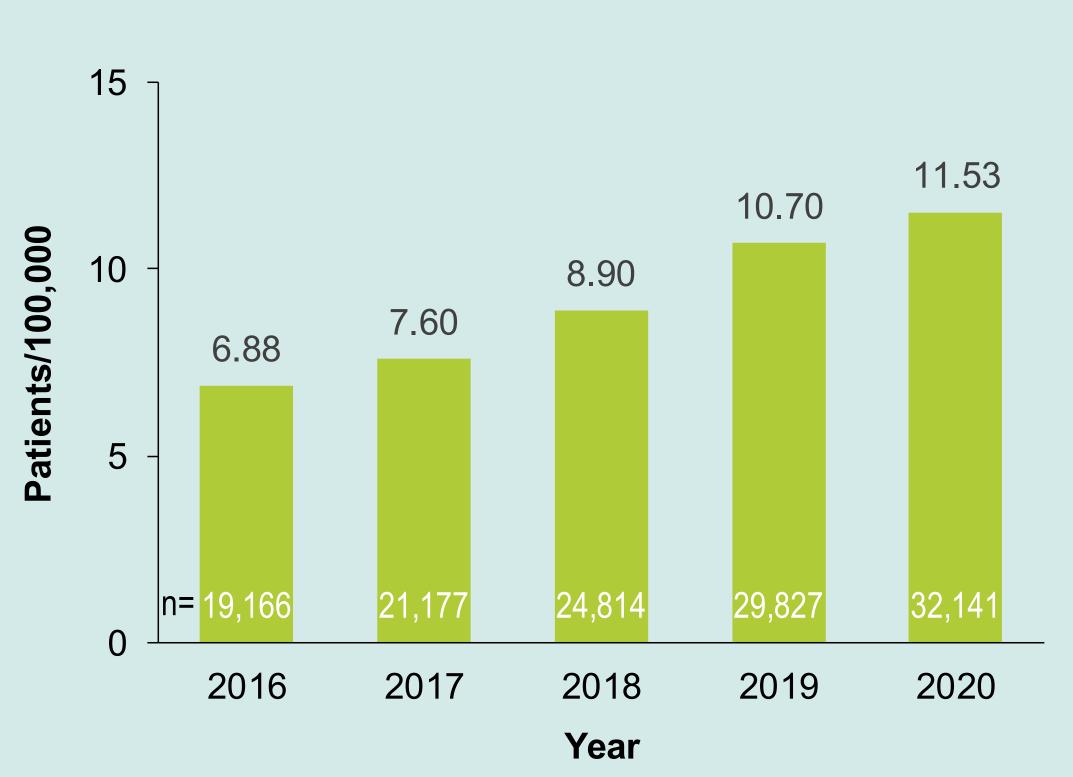
- Of 278,679,590 people in the APCD, 103,739 had a TD diagnosis, with overall prevalence 37.23/100,000 (Figure 1) and increasing prevalence by year from 2016 to 2020 (Figure 2)
- Prevalence of TD was highest among patients with Medicare (78.79/100,000) or Medicaid (38.27/100,000) insurance (Figure 3)
- Among patients with ≥2 AP claims, TD prevalence was highest for those with claims for both typical and atypical APs (2690.7/100,000), followed by those with only typical APs (1576.1/100,000) and only atypical APs (619.0/100,000) (Figure 4)
- TD prevalence was highest among patients with a recorded diagnosis of underlying schizophrenia (2899.3/100,000), followed by bipolar disorder (883.9/100,000) and mood disorders (453.7/100,000) (Figure 5)

Figure 1. TD Prevalence Overall (2016–2020)



TD = tardive dyskinesia

Figure 2. TD Prevalence by Year



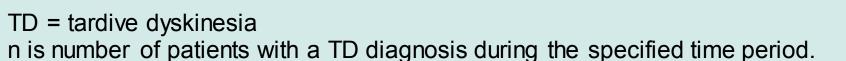




Figure 3. TD Prevalence by Payer Type (2016–2020)

Medicare Medicaid Government/ Commercial Other

Payer Type

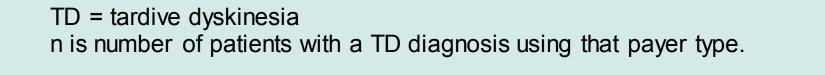
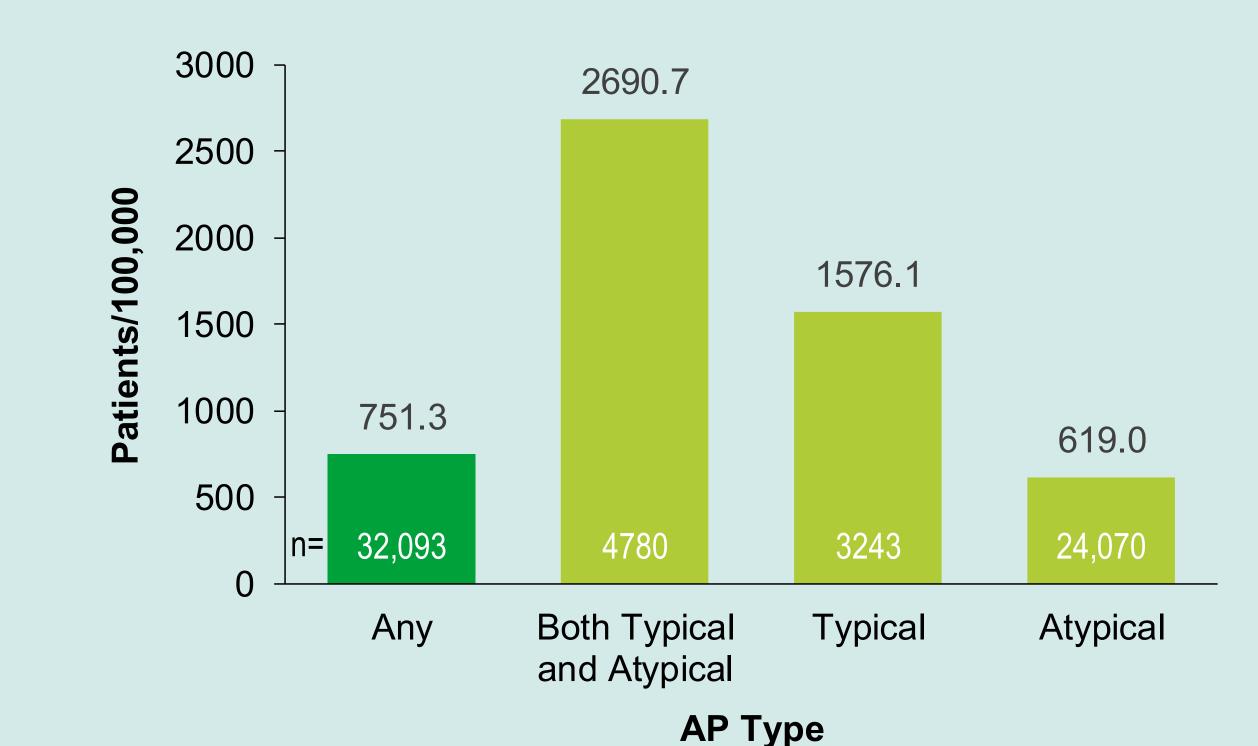
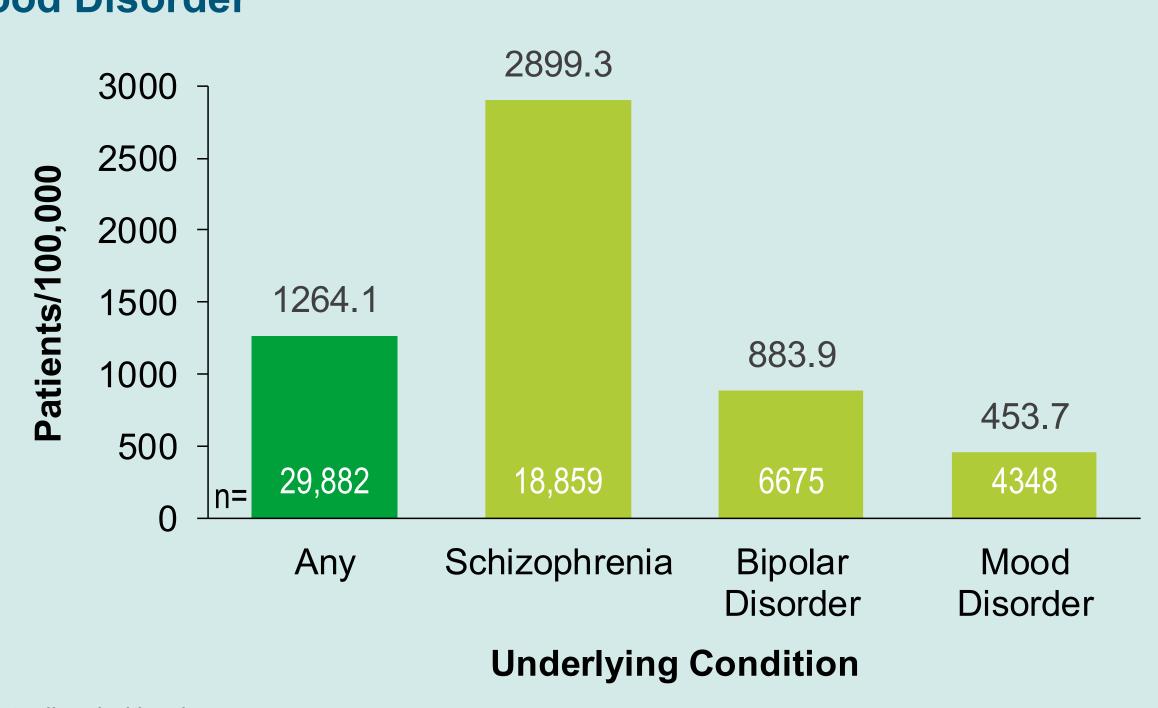


Figure 4. TD Prevalence by AP Type Among Patients With ≥2 AP Claims (2016–2020)



AP = antipsychotic medication, TD = tardive dyskinesia n is number of patients with TD diagnosis using that AP type.

Figure 5. TD Prevalence by Underlying Condition (2016–2020) Among Patients With Schizophrenia, Bipolar Disorder, or Mood Disorder



n is number of patients with TD diagnosis and an underlying condition diagnosis.

Demographic Characteristics

- Patients with TD were predominantly (55.1%) aged between 55 and 74 years, female (60.9%), and White (41.8%) (Table 1)
- Age and sex distributions did not change appreciably by year
- Although the proportion of patients identified as White appeared to increase by year, no conclusions can be drawn because of the high proportions of patients of other/unspecified race
- The most common payer type was Medicare (Table 1)
 - Proportions of patients using Medicare and Medicaid decreased by year, while proportions using commercial insurance increased

Table 1. Demographic Characteristics of Population With TD Diagnosis



Conclusion

- From 2016 to 2020, the yearly TD prevalence in this real-world dataset increased from 6.88 to 11.53 patients per 100,000, which may be related to the aging population, expanded use of APs, improved clinician awareness of TD, and/or availability of new TD treatments in 2017
 - The effect of age is reflected in the relatively higher prevalence among Medicare beneficiaries, while the effect of expanded AP use is reflected by increased prevalence among patients who have used both typical and atypical APs
- These claims-based data suggest that TD in the US is underdiagnosed; it has been estimated that 20.7%–30%³ of patients with a history of AP use will develop TD, yet <1% of patients with ≥2 AP claims in this study had a TD diagnosis
- Compared with other underlying conditions, patients with schizophrenia treated with APs were over 2-fold more likely to have a TD diagnosis

Presented at the 35th Annual Psych Congress; September 17–20, 2022; New Orleans, Louisiana.

Acknowledgements

Medical writing and editorial support were provided by Jennifer C. Jaworski, MS, BCMAS, and Kelsey Hogan, MS, of Ashfield MedComms, an Inizio company and were funded by Teva Branded Pharmaceutical Products R&D, Inc.

Disclosures
This study was supported by Teva Branded Pharmaceutical Products R&D, Inc. Sam Leo and Shoshana Reshef are employees and shareholders of Teva
Pharmaceuticals. Keshia Maughn, Austin Miller, and Sofia Shoaib are employees of STATinMED, which has received payments from Teva Pharmaceuticals
in relation to this study

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