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More Than Movements: The Ripple Effect of TD in Long-Term Care

IMPACT OF TD IN LTC

Beyond the Movements: How TD Impacts Experiences in LTC Facilities

When left untreated, TD can impact several aspects of residents' lives, the LTC staff who care for them, and the Star Rating of the LTC facility. Despite this, TD remains underdiagnosed and undertreated within the LTC setting. This article delves into the multidimensional impact of untreated TD and highlights the need for enhanced awareness and interventions to safeguard the quality and competitiveness of care facilities.

TREATMENT

AUSTEDO XR: A One Pill, Once-Daily Treatment Option for Residents With TD

Treatment of TD-diagnosed residents with a VMAT2 inhibitor has been associated with improved outcomes that can affect the quality measures of LTC facilities. AUSTEDO XR is a VMAT2 inhibitor indicated in adults for the treatment of chorea associated with Huntington's disease and for the treatment of TD. This article will highlight the efficacy and safety profile from clinical studies of AUSTEDO® (deutetrabenazine) tablets in TD.

LTC, long-term care; TD, tardive dyskinesia; VMAT2, vesicular monoamine transporter 2.

EXPERT COMMENTARY

Expert Commentary With Amber Hoberg and Jonathan Shaatal

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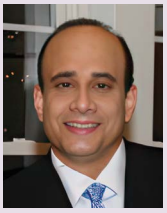

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This newsletter is produced by Teva Pharmaceuticals, and Amber Hoberg and Jonathan Shaatal were compensated by Teva for their insights.

INDICATIONS AND USAGE

AUSTEDO XR® (deutetrabenazine) extended-release tablets and AUSTEDO® (deutetrabenazine) tablets are indicated in adults for the treatment of chorea associated with Huntington's disease and for the treatment of tardive dyskinesia.

IMPORTANT SAFETY INFORMATION

Depression and Suicidality in Patients with Huntington's Disease: AUSTEDO XR and AUSTEDO can increase the risk of depression and suicidal thoughts and behavior (suicidality) in patients with Huntington's disease. Balance the risks of depression and suicidality with the clinical need for treatment of chorea. Closely monitor patients for the emergence or worsening of depression, suicidality, or unusual changes in behavior. Inform patients, their caregivers, and families of the risk of depression and suicidality and instruct them to report behaviors of concern promptly to the treating physician. Exercise caution when treating patients with a history of depression or prior suicide attempts or ideation. AUSTEDO XR and AUSTEDO are contraindicated in patients who are suicidal, and in patients with untreated or inadequately treated depression.

Please see additional Important Safety Information throughout and click here or visit www.AUSTEDOhcp.com to read/print the full Prescribing Information, including Boxed Warning, for AUSTEDO XR.

IMPACT OF TD IN LTC

Beyond the Movements: How Tardive Dyskinesia Impacts Experiences in LTC Facilities

TD is a chronic, hyperkinetic, drug-induced movement disorder caused by current or past exposure to dopamine receptor blocking agents, including first-generation (typical) and second-generation (atypical) antipsychotics used to treat certain mental health conditions, as well as prokinetics and antiemetics used for gastrointestinal conditions. TD is characterized by excessive, involuntary, repetitive movements that can affect any muscle group in the body.[1-5] These movements can have a negative physical impact on residents, which can, in turn, put an additional burden on the staff of an LTC facility, and negatively affect the quality rating of the facility itself.[6,7] In this article, we investigate the ripple effects of untreated TD, revealing how it shapes the lives of residents, challenges LTC staff, and influences the facility's overall standing and reputation.

Negative Impact of Untreated TD on Residents' Psychological, Social, and Physical Functioning

TD can have far-reaching negative effects on various aspects of a resident's life **(Figure 1)**. According to data from 577 patients enrolled in the real-world, 3-year, longitudinal IMPACT-TD study, 95% of individuals with TD reported experiencing impact in at least 1 area of their lives, with most individuals in the study experiencing impact across multiple domains of daily living, including their emotional, social, and physical well-being.[8]

Psychologically, TD can be profoundly challenging. Residents with TD may report feelings of depression, embarrassment, helplessness, frustration, and anger.[9] These emotional responses may stem from the involuntary movements characteristic of the disorder, which can be both unpredictable and uncontrollable.[1] Social consequences are similarly significant. Residents may avoid various social events and isolate themselves. This can be compounded by the stigma associated with TD, further isolating individuals from their support networks.[9] Physical symptoms are also a prominent aspect of living with TD. Specifically, involuntary movements can interfere with the physical functioning needed for basic activities such as eating and speaking.[6] TD is also associated with gait and postural abnormalities, which can increase the risk of mobility issues.[10]

Notably, movements, even when mild, can have a moderate to severe impact on a resident with TD. Data from the IMPACT-TD registry highlighted that over half of individuals with mild TD reported experiencing moderate to severe impacts, demonstrating that impact is not solely contingent on the severity of the movements, but also on how these movements affect day-to-day functioning.[8]

Even mild movements can have a moderate to severe impact on a resident with TD.

Figure 1. Residents With TD Experience Impact Across Multiple Domains of Daily Living[6,9]

*From 2 online surveys with 1-time data collection from 269 patients with TD and 162 caregivers of patients with TD.

LTC, long-term care; TD, tardive dyskinesia.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Contraindications: AUSTEDO XR® (deutetrabenazine) extended-release tablets and AUSTEDO® (deutetrabenazine) tablets are contraindicated in patients with Huntington's disease who are suicidal, or have untreated or inadequately treated depression. AUSTEDO XR and AUSTEDO are also contraindicated in: patients with hepatic impairment; patients taking reserpine or within 20 days of discontinuing reserpine; patients taking monoamine oxidase inhibitors (MAOIs), or within 14 days of discontinuing MAOI therapy; and patients taking tetrabenazine or valbenazine.

Please see additional Important Safety Information throughout and click here or visit www.AUSTEDOhcp.com to read/print the full Prescribing Information, including Boxed Warning, for AUSTEDO XR.

Negative Impact of Untreated TD on Residents' Activities of Daily Living and LTC Staff

The physical impact of TD on residents may negatively affect their activities of daily living **(Video 1)**. TD can affect any muscle group in the body, but most often involves the orofacial region.[1,11,12] These movements can lead to difficulties with eating, which can increase the risk of choking.[6] Orofacial TD can also lead to dental complications as well as a reduced clarity and naturalness of speech, impacting a resident's ability to communicate effectively.[6,10] TD is also linked with musculoskeletal pain due to chronic muscle spasms, and breathing complications, such as grunting and gasping, which can also impact day-to-day functioning.[10] The imbalance associated with TD can also increase a resident's risk of falls.[10]

Findings from an online survey of 269 patients demonstrated that, in the 7 days prior to completing the survey[6]:

- Up to 76% of patients with TD had difficulty eating
- 76% of patients with TD had difficulty holding objects
- Up to 73% faced challenges in speaking

These physical impacts of TD on residents can translate into an increased burden on the LTC staff. Residents with untreated TD symptoms often require more time and attention from caregivers, thereby straining staff resources.[7] The necessity for heightened vigilance and care can significantly affect daily operations and the overall well-being of both residents and staff **(Video 2)**.

Negative Impact of Untreated TD on the LTC Facility's Star Rating

The CMS Star Rating, which is used by residents and their families to compare the quality of care across different LTC facilities, can also be negatively impacted by untreated TD.[7] The Star Rating of 1 to 5 stars reflects the facility's performance across key domains, including quality measures and staffing levels and turnover.[7] In addition to the impact on staff, the deteriorated physical health of residents due to TD can negatively affect certain quality measures such as the percentage of residents experiencing falls with major injuries, increased need for assistance with activities of daily living, worsened independent mobility, and higher rates of outpatient emergency department visits per 1000 long-stay resident days.[7] Together, these effects may hinder the facility's ability to maintain a high standard of care and, therefore, Star Rating.

> Untreated TD symptoms can compromise the facility's ability to maintain a high standard of care and, therefore, Star Rating.

Underdiagnosis and Undertreatment of TD in LTC

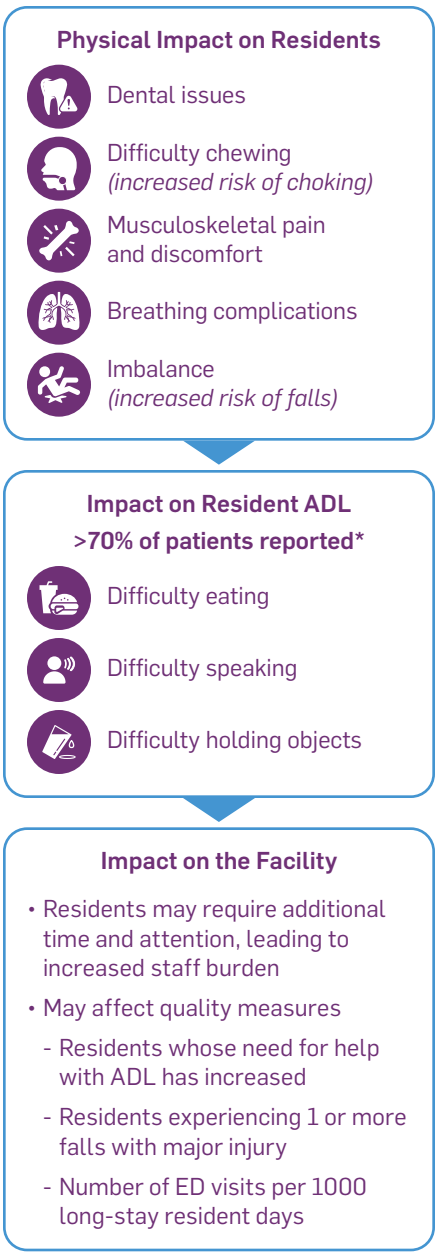
Despite these impacts, TD remains underdiagnosed and undertreated in LTC facilities.[13,14] In a meta-analysis, the prevalence of TD across 11,493 patients treated with typical or atypical antipsychotics was approximately 25%.[13] However, only 1% of over 700,000 LTC residents treated with antipsychotics in the PointClickCare life science database were diagnosed with TD.[14] Additionally, 25% of those 2536 residents diagnosed with TD received no treatment, underscoring the persistent gap in diagnosis and treatment within LTC settings.[14]

Video 1. Hear about the physical impact of TD on a resident

Video 2. Hear about the impact of untreated TD on LTC staff

CMS, Centers for Medicare & Medicaid Service.

Figure 2. Untreated TD Can Negatively Affect Residents, Staff, and the Facility[6,7,10,15]



*From 2 online surveys with 1-time data collection from 269 patients with TD and 162 caregivers of patients with TD.

Conclusion

In summary, untreated TD has profound implications for both residents and LTC facilities **(Figure 2)**. It may affect residents' psychological, social, and physical well-being and can increase their dependency, placing significant demands on caregivers and worsening staff challenges.[6,7,9] The cumulative effect of these impacts can lead to a decrease in the facility's CMS Star Rating and can compromise its ability to maintain a high standard of care.[7] Despite the impact that TD can have on residents' lives and the LTC facility, TD remains underdiagnosed and undertreated in this setting.[13,14] The recognition of these multidimensional impacts of TD as well as the subsequent diagnosis and appropriate treatment of TD are, therefore, crucial for improving the care for those affected by this condition. ■

TREATMENT

AUSTEDO XR: A One Pill, Once-Daily Treatment Option for Residents With TD

Treatment of TD With a VMAT2 Inhibitor Is Associated With Improvement in Outcomes That Affect LTC Facilities

TD is a hyperkinetic, typically irreversible movement disorder caused by current or prior exposure to dopamine receptor blocking agents.[1,2] When left untreated, physical symptoms of TD such as imbalance can lead to an increased risk of falls and, in turn, more visits to the ED.[3] The percentage of residents experiencing 1 or more falls and the number of ED visits for a facility are quality measures used by CMS to rate LTC facilities.[4] Therefore, untreated TD may have a negative effect on a facility's quality rating.

ADL, activities of daily living; CMS, Centers for Medicare & Medicaid Services; ED, emergency department; LTC, long-term care; TD, tardive dyskinesia; VMAT2, vesicular monoamine transporter 2.

Appropriate treatment with a VMAT2 inhibitor of residents with TD is associated with fewer falls and ED visits than treatment with a non-VMAT2 inhibitor.

VMAT2 inhibitors are the only treatment for TD approved by the US Food and Drug Administration and have been available since 2017.[5-7] Despite this, a retrospective electronic health record analysis of the PointClickCare database found that over 50% of residents with TD were being treated with non-VMAT2 inhibitors (ie, benztropine, benzodiazepine [>2 mg/day], amantadine, trihexyphenidyl, or vitamin E [≥400 IU/day].[8] Furthermore, residents with TD who were treated with a VMAT2 inhibitor had significantly fewer falls and ED visits per patient per year than non-VMAT2 inhibitor users **(Figure 2.1)**.[9] These findings demonstrate that treating TD with VMAT2 inhibitors is associated with improved outcomes that can directly affect the quality measures of an LTC facility.

AUSTEDO XR Is a One Pill, Once-Daily VMAT2 Inhibitor for Residents With TD

AUSTEDO XR is a VMAT2 inhibitor approved in adults for the treatment of TD and chorea associated with Huntington's disease.[6] The efficacy and safety of AUSTEDO were examined in 2 pivotal clinical trials and a 3-year open-label extension study.

The pivotal clinical trials, ARM-TD and AIM-TD, were 12-week, randomized, double-blind, placebo-controlled studies that included adult patients up to 81 years old.[6,10,11]

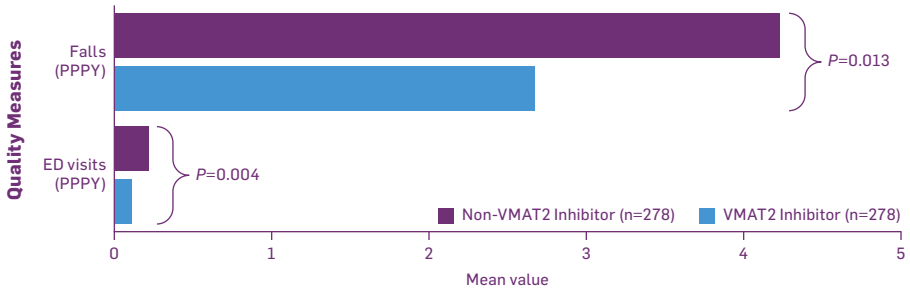
- ARM-TD: In this parallel-group study, patients received AUSTEDO BID or placebo (1:1). This was a flexible-dose study, where the dose of AUSTEDO was individualized and titrated to a dosage that reduced abnormal movements and was tolerated by the patient[11]
- AIM-TD: In this fixed-dose trial, patients were randomly assigned 1:1:1:1 to receive placebo or 12 mg/day, 24 mg/day, or 36 mg/day AUSTEDO BID[10]

The primary efficacy endpoint for both studies was the change in AIMS total score from baseline to Week 12.[10,11] A rapid response was observed as early as Week 2, and ARM-TD participants displayed significant and meaningful improvement in AIMS total score (P=0.019) compared to placebo at Week 12 (3.0-point reduction vs 1.6-point reduction), which was consistent with AIM-TD results at Week 12.[6,10-12]

Long-term treatment with AUSTEDO was studied in the RIM-TD open-label extension study. Patients who successfully completed ARM-TD or AIM-TD were eligible to enroll and followed for up to 3 years. After a 1-week washout period, AUSTEDO was started at 12 mg/day and was titrated weekly by 6 mg/day until the maximum allowable dose was reached, a clinically significant AE occurred, or adequate TD control was achieved.[13]

Of the 335 participants evaluated, 257 were aged 21 to 64 years and 78 were between 65 and 81—making it the largest elderly population of any TD clinical study.[12,14] Across the study's duration, increasing improvements

Figure 2.1: Key Clinical Outcomes in Patients on VMAT2 vs Non-VMAT2 Inhibitors[9]



AE, adverse event; AIMS, Abnormal Involuntary Movement Scale; AIM-TD, Addressing Involuntary Movements in TD; ARM-TD, Aim to Reduce Movements in Tardive Dyskinesia; BID, twice daily; PPPY, per patient per year; RIM-TD, Reducing Involuntary Movements in Participants With TD.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Neuroleptic Malignant Syndrome (NMS), a potentially fatal symptom complex reported in association with drugs that reduce dopaminergic transmission, has been observed in patients receiving tetrabenazine. The risk may be increased by concomitant use of dopamine antagonists or antipsychotics. The management of NMS should include immediate discontinuation of AUSTEDO XR and AUSTEDO; intensive symptomatic treatment and medical monitoring; and treatment of any concomitant serious medical problems.

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in AIMS scores were observed over 3 years in all participants, including in the elderly patient subgroup **(Figure 2.2)**.[12,13] Consistent results were also documented in other at-risk groups, including postmenopausal women, patients with mood disorders, and those with schizophrenia **(Figure 2.3)**.[15]

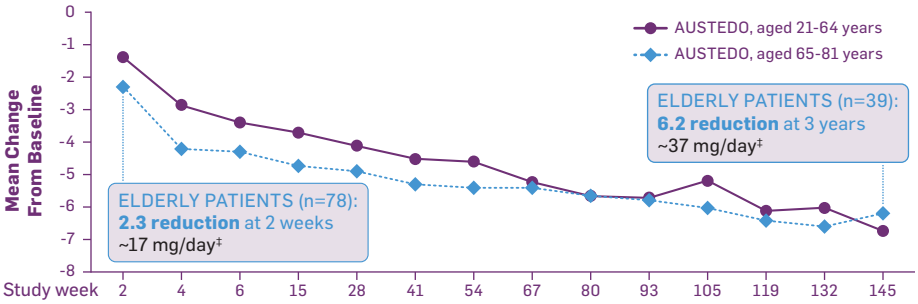
Improvements in Daily Living Were Reported by Elderly Patients Taking AUSTEDO XR® (deutetrabenazine) extended-release tablets

In a real-world survey of patients' experience with AUSTEDO XR, 74% of elderly patients aged 65 to 90 years old reported movement reduction with treatment, resulting in improvements in physical, social, and emotional well-being **(Figure 2.4)**.[12] Importantly, a vast majority (99%) of elderly patients surveyed found that AUSTEDO XR was easy to take, and 86% were satisfied with the medication.[12]

Elderly patients taking AUSTEDO XR reported improvements in physical, social, and emotional well-being as a result of movement reduction.

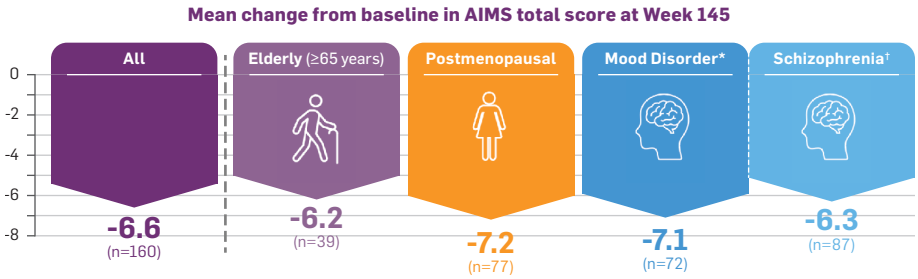
OLE, open-label extension.

Figure 2.2: Increasing Improvement for Elderly Patients and Younger Patients[12,14*†]



*71% of patients at Week 145 saw improvement relative to Week 15. †In a post hoc subgroup analysis of the RIM-TD OLE. ‡Mean total dose.

Figure 2.3: Consistent 3-Year Results in Patients at Increased Risk for TD, Including Elderly Patients[13-16]



Patients in the RIM-TD study received the AUSTEDO BID formulation.[12]
*Includes patients with bipolar disorder and depression.[16] †Includes schizophrenia or schizoaffective disorder.[16]

Figure 2.4: Older Patients Reported Improved Physical, Social, and Emotional Well-Being as a Result of Movement Reduction With AUSTEDO XR[12]*

Overall Symptom Improvement

74%

reported much or very much movement improvement

Improved physical, social, and emotional well-being

- Better overall physical health (53%)
- Greater self-esteem (60%) and less embarrassment (66%)
- Less anxiety (57%) and better overall emotional well-being (74%)
- Feeling more comfortable in social settings (77%)

*An observational, cross-sectional survey included 209 adults with TD taking AUSTEDO XR, including 122 adults aged 19 to 64 and 87 adults aged 65 to 90. Results shown are from patients 65 to 90 years old.[12]

IMPORTANT SAFETY INFORMATION (CONTINUED)

Akathisia, Agitation, and Restlessness: AUSTEDO XR and AUSTEDO® (deutetrabenazine) tablets may increase the risk of akathisia, agitation, and restlessness. The risk of akathisia may be increased by concomitant use of dopamine antagonists or antipsychotics. If a patient develops akathisia, the AUSTEDO XR or AUSTEDO dose should be reduced; some patients may require discontinuation of therapy.

Please see additional Important Safety Information throughout and click here or visit www.AUSTEDOhcp.com to read/print the full Prescribing Information, including Boxed Warning, for AUSTEDO XR.

Polypharmacy Risk in Residents and Considerations for Potential DDIs

In older populations, polypharmacy is common, elevating the risk of DDIs in these individuals.[17] In a retrospective analysis, the average number of medications being taken by residents at the time of TD diagnosis was ~15.[8] The metabolic profile of AUSTEDO XR allows for few restrictions related to DDIs, offering dosing flexibility alongside complex medication regimens. Only with AUSTEDO XR can providers increase once-daily doses in residents taking strong CYP inhibitors and inducers, with a maximum dose of 36 mg/day for those taking strong CYP2D6 inhibitors (or poor CYP2D6 metabolizers) and 48 mg/day for all others. There is also no clinically significant QT prolongation up to the maximum dose of 48 mg/day[6,7] **(Table 2.1)**.

Table 2.1: AUSTEDO XR Has Few Restrictions Related to Drug-Drug Interactions[6,7,18]

	AUSTEDO XR	Valbenazine/Valbenazine Sprinkle
Strong CYP3A4/5 inducer	No dose restriction	Concomitant use is not recommended
Strong CYP3A4/5 inhibitor	No dose restriction	40 mg/day (lowest dose available)
Strong CYP2D6 inhibitor (or if a patient is a poor CYP2D6 metabolizer)	Up to 36 mg/day	40 mg/day (lowest dose available)
P-gp substrate (eg, calcium channel blockers, statins, antimicrobials, and digoxin)	No dose adjustment to P-gp substrate required	Dose adjustment to P-gp substrate may be required

These differences should not be construed to imply differences in safety, efficacy, or clinical outcome.

Demonstrated Safety and Tolerability in Clinical Studies

Table 2.2 shows the most common AEs reported by ≥2% of patients treated with AUSTEDO in the placebo-controlled pivotal studies.[6,12] Discontinuation due to AEs occurred in 4% of patients taking AUSTEDO vs 3% of patients taking placebo.[10] Dose reduction due to AEs was required in 4% of patients taking AUSTEDO vs 2% of patients taking placebo.[6] Once patients were titrated to their maintenance dose, dry mouth and nausea were no longer reported in AIM-TD and somnolence and dry

Table 2.2: Adverse Events Reported in ≥2% of Patients Treated With AUSTEDO in TD Pivotal Studies[6,12]

Adverse Reaction	AUSTEDO (n=279)	Placebo (n=131)
Headache	5%	8%
Somnolence	4%	7%
Diarrhea	4%	4%
Nasopharyngitis	4%	2%
Fatigue	4%	5%
Insomnia	4%	1%
Anxiety	4%	5%
Upper respiratory tract infection	3%	4%
Dry mouth	3%	5%
Nausea	2%	7%
Weight increased	2%	3%
Urinary tract infection	2%	2%
Depression/dysthymic disorder	2%	1%
Akathisia/agitation/restlessness	2%	1%
Arthralgia	2%	1%

Patients in the pivotal and long-term studies received the AUSTEDO BID formulation. Adverse reactions with AUSTEDO XR are expected to be similar to AUSTEDO BID.[6,12]

DDI, drug-drug interaction; P-gp, P-glycoprotein.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Parkinsonism: AUSTEDO XR and AUSTEDO may cause parkinsonism in patients with Huntington's disease or tardive dyskinesia. Parkinsonism has also been observed with other VMAT2 inhibitors. The risk of parkinsonism may be increased by concomitant use of dopamine antagonists or antipsychotics. If a patient develops parkinsonism, the AUSTEDO XR or AUSTEDO dose should be reduced; some patients may require discontinuation of therapy.

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mouth were no longer reported in ARM-TD.[12] Adverse reactions with AUSTEDO XR® (deutetrabenazine) extended-release tablets are expected to be similar to those with AUSTEDO® (deutetrabenazine) tablets BID.[6]

No new safety signals appeared in the OLE study and AEs in the 3-year study were comparable with those in the 12-week clinical trials.[13] Of note, a similar safety and tolerability profile was observed between elderly and younger patients.[14]

Simple Start for Residents: 4-Week Titration Kit or PointClickCare® Order Set

Residents can get started on AUSTEDO XR at no cost, without needing to modify their antipsychotic dose.[10-12] Providers can either prescribe the 4-week Titration Kit and ask the pharmacy to apply the 30-day free trial voucher or prescribe with the PointClickCare pharmacy order set and request that the 30-day free trial voucher be applied.[12]*

The recommended starting dose of AUSTEDO XR is 12 mg/day, and the dose should be increased by 6 mg/day at weekly intervals until desired symptom control is tolerably achieved **(Figure 2.5)**.[6] Importantly, there are no restrictions on the use of AUSTEDO XR or dosage in elderly patients.[6] Once-daily AUSTEDO XR may be taken at any time of day with or without food. AUSTEDO XR tablets should be swallowed whole and not chewed, crushed, or broken.[6]

*Certain restrictions apply. Terms and conditions on **AUSTEDOcardform.com**.[12]

Summary

In conclusion, VMAT2 inhibitors are an evidence-based treatment for TD. In a retrospective analysis, treatment with VMAT2 inhibitors was associated with fewer falls and ED visits than treatment with non-VMAT2 therapies.[9] AUSTEDO XR is a VMAT2 inhibitor approved for the treatment of TD.[6] AUSTEDO has an established efficacy and safety profile, with 3-year data from the largest elderly population of any TD clinical study.[6,10-13] As a result of movement reduction with AUSTEDO XR, elderly patients reported improved physical, social, and emotional well-being.[12] AUSTEDO XR offers a once-daily dosing regimen that allows for few restrictions related to DDIs and offers the flexibility to individualize dosing for your elderly residents with TD.[6] ■

Figure 2.5: Dosing Flexibility for Effective and Tolerable Control[6,12]

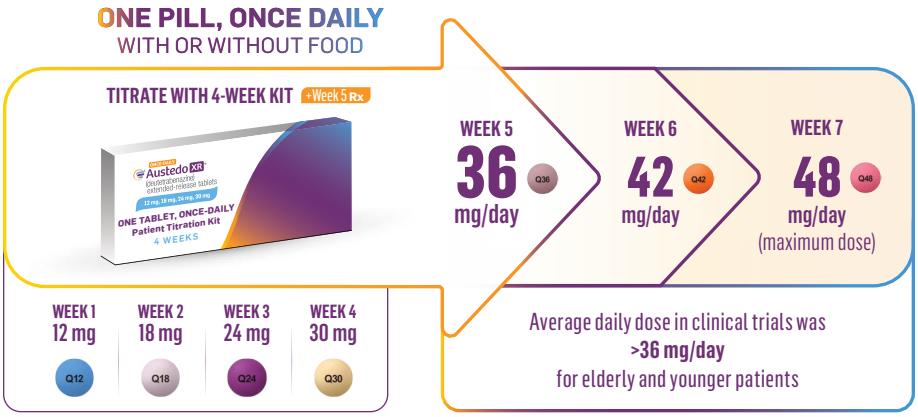

Image shown is not the actual 4-week Titration Kit. Tablets not shown to actual size.
If a patient misses a dose for less than 1 week, they can restart at the same dose of AUSTEDO XR or AUSTEDO.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Sedation and Somnolence: Sedation is a common dose-limiting adverse reaction of AUSTEDO XR and AUSTEDO. Patients should not perform activities requiring mental alertness, such as operating a motor vehicle or hazardous machinery, until they are on a maintenance dose of AUSTEDO XR or AUSTEDO and know how the drug affects them. Concomitant use of alcohol or other sedating drugs may have additive effects and worsen sedation and somnolence.

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EXPERT COMMENTARY

Seeing the Whole Resident: Addressing the Broader Impact of Tardive Dyskinesia in Long-Term Care

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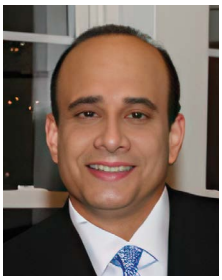

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This newsletter is produced by Teva Pharmaceuticals, and Amber Hoberg and Jonathan Shaatal were compensated by Teva for their insights.

The impact of TD, a chronic movement disorder caused by exposure to typical (first-generation) and atypical (second-generation) antipsychotics, extends beyond the movements to include multiple aspects of residents' physical, social, and psychological well-being.[1-3] Amber Hoberg, PMHNP-BC, MSN, and Jonathan Shaatal, MS, RPh, discuss their firsthand experiences assessing and treating residents with TD, and bear witness to the impact it can have on residents, the staff at LTC facilities, and the facility itself.

Q: Can you speak to the impact of untreated TD on different aspects of a resident's well-being?

Jonathan Shaatal, MS, RPh:
Movements caused by TD can have physical effects on residents, but what I would like to highlight is the social and emotional burden of this disorder.[3] What we have found is that residents with TD tend to stay in their rooms because they are self-conscious of their movements and embarrassed to be around others. For example, they sometimes prefer to eat in their rooms rather than in the dining room with everyone else. Additionally, despite the fact that our therapeutic recreation department organizes events like barbecues and sing-alongs for entertainment, residents with uncontrollable movements often refrain from participating in these activities.

Amber Hoberg, PMHNP-BC, MSN:
I've seen the same kinds of things, Jonathan. In fact, I always call TD a disease of isolation; it's more than just a movement disorder because the movements lead to this social impact.[2] Residents with TD may be stigmatized by other residents in the facility.[2] In one incident, a resident's tongue kept protruding from her mouth because of her TD, and she was shunned by other residents because they did not understand what the uncontrollable movements were. She ate at a table by herself, and this, in turn, worsened her depression. I've seen other residents avoid group activities, like bingo, because they think that being there may affect other residents' abilities to have a good time. The social impact of TD—the isolation—can lead to a worsening of depression and anxiety in residents.

Q: How do the physical symptoms of TD impact residents' activities of daily living?

Amber Hoberg, PMHNP-BC, MSN:
TD, which can affect any muscle group in the body, affects a resident's physical functioning in many ways, especially in long-term care.[1] I recently had a resident with TD who was a chronic jaw clencher and needed $10,000 worth of reconstructive surgery on her mouth because her teeth were breaking and her partial dentures were not fitting properly. I have had residents with hand movements tell me that they would love to be able to hold a coffee cup, instead of spill-proof cups. Other residents of mine needed to be seated at a feeder table and have their food cut up or fed to them because their hand movements prevented them from being able to use utensils or hold food. Another one of

LTC, long-term care; TD, tardive dyskinesia;

IMPORTANT SAFETY INFORMATION (CONTINUED)

Hyperprolactinemia: Tetrabenazine elevates serum prolactin concentrations in humans. If there is a clinical suspicion of symptomatic hyperprolactinemia, appropriate laboratory testing should be done and consideration should be given to discontinuation of AUSTEDO XR and AUSTEDO.

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my residents who had TD in the lower extremities ultimately had a fall.

Jonathan Shaatal, MS, RPh: Residents with TD also often have a difficult time communicating clearly due to movements in the orofacial region, which can lead to them shutting down and avoiding communicating altogether.[3] This can make communicating potential needs to staff difficult, which can ultimately affect the quality of care they receive in facilities. It can also impact their relationships with family members and other residents at the facility.

Q: How can TD symptoms affect the LTC staff?

Jonathan Shaatal, MS, RPh: Because of their abnormal movements, residents with TD may become more dependent on CNAs for activities of daily living such as bathing, feeding, and using the bathroom. Assisting with these tasks takes up more of CNAs' time. CNAs are responsible for 6 to 8 residents, and the more time they have to spend with residents with these additional needs, the less they can spend on others. This can affect both the staff as well as the level of care provided to residents. For example, a CNA who has to feed 2 residents at the same time due to a staff shortage may not be able to closely monitor whether both of their residents are eating sufficiently. While CNAs love and care for these residents, whom they have known for years, the increased burden on them can be very taxing.

Amber Hoberg, PMHNP-BC, MSN: LTC-staff burden is a real ordeal. There is already a shortage of CNAs in LTC facilities, and residents with TD can further increase their workload. Over time, this can wear on the staff and may contribute to the high turnover rate we see in facilities.

Q: How can untreated TD affect the LTC facility?

Amber Hoberg, PMHNP-BC, MSN: Quality measures, which contribute to a facility's CMS Star Rating, can be affected by untreated TD. Earlier I mentioned that a resident of mine with untreated TD in the lower extremities had a fall that resulted in broken ribs. This incident increased the percentage of residents experiencing falls with major injuries and the rate of outpatient emergency department visits per 1000 long-stay resident days—2 important quality measures that contribute to the overall Star Rating of the facility.[4]

We have also discussed how untreated TD can increase a resident's need for assistance with activities of daily living, another quality measure that affects the rating of the facility.[4] Moreover, when residents with TD isolate themselves from the rest of the community and refrain from participating in activities, it can also affect the overall atmosphere within the facility.

Q: What are your best practices for assessing the impact of TD on your residents? How do you do this in residents who are cognitively impaired?

Jonathan Shaatal, MS, RPh: I lean heavily on the observations made by the CNAs, who are the ones who know the residents particularly well. They can give us a lot of good feedback when it comes to what happens during feeding, bathing, and getting dressed, and they can give us insight into the impact of movements on resident's activities of daily living. Feedback from CNAs and even family members can also be particularly helpful when assessing residents who are cognitively impaired. Accordingly, educating CNAs about TD and its potential impact on residents is critical. After in-service education sessions, many nurses have told me of patients who could benefit from screening for TD, and I think this was an important mindset shift.

Amber Hoberg, PMHNP-BC, MSN: I agree. I let my staff, including housekeepers and activity directors who have frequent contact with residents, know that they can all play a role, and I remind them that **if you see something, say something**.

To ensure that I don't miss residents who might have TD, the night before I visit a facility, I review their current medication regimens. If they are on an antipsychotic or prokinetic, I note that and ensure that I look at them very closely. If I detect new or worsening movement, I perform an AIMS assessment and, importantly, ask questions to assess the impact of TD. I believe that TD is often ignored in long-term care, especially when the movements are

AIMS, Abnormal Involuntary Movement Scale; CMS, Centers for Medicare & Medicaid Services; CNA, certified nursing assistant.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Binding to Melanin-Containing Tissues: Deutetrabenazine or its metabolites bind to melanin-containing tissues and could accumulate in these tissues over time. Prescribers should be aware of the possibility of long-term ophthalmologic effects.

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mild. However, even mild movements can have a severe impact on patients, so it is very important to regularly assess impact.[5]

Q: AUSTEDO XR® (deutetrabenazine) extended-release tablets have an established efficacy and safety profile in patients with TD. What other improvements have you seen in residents as a result of movement reduction with AUSTEDO XR?

Jonathan Shaatal, MS, RPh: One of the things that we have seen due to the improvement in residents' movements is a boost in their self-esteem. I have also observed better communication due to these movement improvements within a few weeks of initiating treatment. The feedback we get from families is also incredibly heartwarming. They mention that they can have conversations with their loved ones and that they seem more like their old selves.

I would like to add that when initiating treatment with AUSTEDO XR, I ensure that my residents are titrated to the appropriate dosage. I increase the dose by 6 mg/day at weekly intervals until the desired symptom control is tolerably achieved.[6]

Amber Hoberg, PMHNP-BC, MSN: My resident who fell and broke her ribs has not had another fall in the year and a half since she has started treatment. In fact, this aligns with recent data demonstrating that residents with TD treated with a VMAT2 inhibitor had fewer falls and ED visits compared with residents treated with a non-VMAT2 inhibitor.[7] I have had residents regain some of their independence and be able to dress themselves with less difficulty due to their movement improvement. Some have become more confident and started participating in group activities again. They are also more willing to go out with their family to the store or to a restaurant because their movements have been reduced. I also had a resident who, after being treated, was so excited to show me that he could pull out his wallet, take out a dollar, and buy a coke from a vending machine for the first time in 7 years. As a provider, stories like these are highly rewarding.

Q: Is there anything else that you would like to share with your colleagues who work in LTC about caring for residents with TD?

Amber Hoberg, PMHNP-BC, MSN: In long-term care we need to **quit normalizing what is abnormal**. Sometimes abnormal movements are ignored. Friends, family, and caregivers might think, "Oh, they've had those movements for so long, that's just who they are." But, if someone at the grocery store had the same kinds of movements, you would not ignore them. So, why would we normalize them in the nursing home? We should all be recognizing these movements and bringing them to the attention of the providers so that they can formally assess residents and determine the best course of action. For providers, it is critical to be able to perform an AIMS assessment; failing to assess for movements can prevent residents from receiving the best available care. I was practicing during the period when there was no treatment for TD. Now that treatment is available, we have to ensure that we are talking to patients about TD and, when appropriate, treating them.

Jonathan Shaatal, MS, RPh: **I cannot overstate how important education is for all the staff in LTC facilities.** All staff members can observe movements associated with TD and bring them to our attention. So, it is critical to educate them about what these movements look like. Providers also need to be educated on the appropriate treatments for TD; specifically, they need to know that treatments for drug-induced parkinsonism like benztropine are inappropriate for the treatment of TD and may even worsen TD symptoms.[8] As a Director of Pharmacy, I have observed instances where residents were inappropriately given benztropine by prescribers who were not aware that different movement disorders require different treatments.

Lastly, I find that we as providers tend to put an emphasis on screening for and monitoring conditions like hypertension, hyperlipidemia, and diabetes. However, because TD is not measurable through typical vital signs, it might get overlooked and then worsen. We need to ensure that we are doing our due diligence to recognize TD and treat it appropriately. ■

ED, emergency department; VMAT2, vesicular monoamine transporter 2.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Common Adverse Reactions: The most common adverse reactions for AUSTEDO® (deutetrabenazine) tablets (>8% and greater than placebo) in a controlled clinical study in patients with Huntington's disease were somnolence, diarrhea, dry mouth, and fatigue. The most common adverse reactions for AUSTEDO (4% and greater than placebo) in controlled clinical studies in patients with tardive dyskinesia were nasopharyngitis and insomnia. Adverse reactions with AUSTEDO XR extended-release tablets are expected to be similar to AUSTEDO tablets.

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References

IMPACT OF TD IN LTC: Beyond the Movements: How Tardive Dyskinesia Impacts Experiences in LTC Facilities

1. Hauser RA, Meyer JM, Factor SA, et al. Differentiating tardive dyskinesia: a video-based review of antipsychotic-induced movement disorders in clinical practice. *CNS Spectr*. 2022;27(2):208-217. **2.** Fahn S, Jankovic J, Hallet M, eds. *Principles and Practice of Movement Disorders*. 2nd ed. Elsevier, Inc; 2011. **3.** Zutshi D, Cloud LJ, Factor SA. Tardive syndromes are rarely reversible after discontinuing dopamine receptor blocking agents: experience from a university-based movement disorder clinic. *Tremor Other Hyperkinet Mov (N Y)*. 2014;4:266. **4.** Rao AS, Camilleri M. Review article: metoclopramide and tardive dyskinesia. *Aliment Pharmacol Ther*. 2010;31(1):11-19. **5.** Caroff SN, Davis VG, Miller DD, et al. Treatment outcomes of patients with tardive dyskinesia and chronic schizophrenia. *J Clin Psychiatry*. 2011;72(3):295-303. **6.** Ayyagari R, Goldschmidt D, Zhou M, Leo S. Impact of tardive dyskinesia on physical aspects of patient lives: a survey of patients and caregivers in the United States. Presented at: 175th Annual Meeting of the American Psychiatric Association; May 21-25, 2022; New Orleans, LA. **7.** Centers for Medicare & Medicaid Services. *Design for Care Compare* nursing home five-star quality rating system: technical users' guide. July 2025. Accessed May 14, 2026. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf **8.** Finkbeiner S, Konings M, Klakotskaia D, et al. Multidimensional impact of tardive dyskinesia reported by clinicians: second interim analysis from the IMPACT-TD Registry. Presented at: Annual Psych Congress Elevate; May 28-31, 2025; Las Vegas, NV. **9.** Jackson R, Brams MN, Citrome L, et al. Assessment of the impact of tardive dyskinesia in clinical practice: consensus panel recommendations. *Neuropsychiatr Dis Treat*. 2021;17:1589-1597. **10.** Strassnig M, Rosenfeld A, Harvey PD. Tardive dyskinesia: motor system impairments, cognition and everyday functioning. *CNS Spectr*. 2018;23(6):370-377. **11.** Waln O, Jankovic J. An update on tardive dyskinesia: from phenomenology to treatment. *Tremor Other Hyperkinet Mov (N Y)*. 2013;3:tre-03-161-4138-1. **12.** Warikoo N, Schwartz TL, Citrome L. Tardive dyskinesia. In: Schwartz TL, Megna J, Topel ME, eds. *Antipsychotic Drugs: Pharmacology, Side Effects and Abuse Prevention*. Nova Science Publishers, Inc; 2013:235-258. **13.** Carbon M, Hsieh C-H, Kane JM, Correll CU. Tardive dyskinesia prevalence in the period of second-generation antipsychotic use: a meta-analysis. *J Clin Psychiatry*. 2017;78(3):e264-e278. **14.** Hoberg A, Ghandi P, Luo W, et al. Clinical and demographic characteristics of patients taking antipsychotics and treatment patterns among patients with tardive dyskinesia in a long-term care setting. Presented at: Annual Psych Congress Elevate; May 28-31, 2025; Las Vegas, NV. **15.** Yassa R. Functional impairment in tardive dyskinesia: medical and psychosocial dimensions. *Acta Psychiatr Scand*. 1989;80(1):64-67.

TREATMENT: AUSTEDO XR: A One Pill, Once-Daily Treatment Option for Residents With TD

1. Hauser RA, Meyer JM, Factor SA, et al. Differentiating tardive dyskinesia: a video-based review of antipsychotic-induced movement disorders in clinical practice. *CNS Spectr*. 2022;27(2):208-217. **2.** Rao AS, Camilleri M. Review article: metoclopramide and tardive dyskinesia. *Aliment Pharmacol Ther*. 2010;31(1):11-19. **3.** Strassnig M, Rosenfeld A, Harvey PD. Tardive dyskinesia: motor system impairments, cognition and everyday functioning. *CNS Spectr*. 2018;23(6):370-377. **4.** Centers for Medicare & Medicaid Services. *Design for Care Compare* nursing home five-star quality rating system: technical users' guide. July 2025. Accessed April 10, 2025. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf **5.** American Psychiatric Association. *The American Psychiatric Association Practice Guideline for the Treatment of Patients With Schizophrenia*. 3rd ed. Washington, DC: American Psychiatric Association; 2021. **6.** AUSTEDO® XR (deutetrabenazine) extended-release tablets/AUSTEDO® current Prescribing Information. Parsippany, NJ: Teva Neuroscience, Inc. **7.** Ingrezza® (valbenazine) capsules. Prescribing Information. San Diego, CA: Neurocrine Biosciences, Inc. **8.** Hoberg A, Ghandi P, Luo W, et al. Clinical and demographic characteristics of patients taking antipsychotics and treatment patterns among patients with tardive dyskinesia in a long-term care setting. Presented at: Annual Psych Congress Elevate; May 28-31, 2025; Las Vegas, NV. **9.** Hoberg A, Wagner B, Zhang D, et al. Clinical outcomes of vesicular monoamine transporter 2 inhibitor versus non-vesicular monoamine transporter 2 inhibitor treatments among patients with tardive dyskinesia in long-term care. Presented at: Annual Psych Congress; September 17-21, 2025; San Diego, CA. **10.** Anderson KE, Stamler D, Davis MD, et al. Deutetrabenazine for treatment of involuntary movements in patients with tardive dyskinesia (AIM-TD): a double-blind, randomised, placebo-controlled, phase 3 trial. *Lancet Psychiatry*. 2017;4(8):595-604. **11.** Fernandez HH, Factor SA, Hauser RA, et al. Randomized controlled trial of deutetrabenazine for tardive dyskinesia: the ARM-TD study. *Neurology*. 2017;88(21):2003-2010. **12.** Data on file. Parsippany, NJ: Teva Neuroscience, Inc. **13.** Hauser RA, Barkay H, Fernandez HH, et al. Long-term deutetrabenazine treatment for tardive dyskinesia is associated with sustained benefits and safety: a 3-year, open-label extension study. *Front Neurol*. 2022;13:773999. **14.** Sajatovic M, Gandhi P, Konings M, Barash S, Finkbeiner S. Long-term safety and efficacy of deutetrabenazine in patients aged ≥65 years with tardive dyskinesia. Presented at: American Association for Geriatric Psychiatry; March 14-17, 2025; Phoenix, AZ. **15.** Nasrallah H, Chen M, Barkay H, Gordon MF, Finkbeiner S. Long-term efficacy and safety of deutetrabenazine in postmenopausal women with tardive dyskinesia. Presented at: 35th Annual Psych Congress 2022; September 17-20, 2022; New Orleans, LA. **16.** Hauser RA, Barkay H, Fernandez HH, et al. Deutetrabenazine provides long-term benefit for tardive dyskinesia regardless of underlying condition and dopamine receptor antagonist use: a post hoc analysis of the 3-year, open-label extension study. *J Clin Psychopharmacol*. 2024;44(4):386-396. **17.** Jokanovic N, Tan EC, Dooley MJ, Kirkpatrick CM, Bell JS. Prevalence and factors associated with polypharmacy in long-term care facilities: a systematic review. *J Am Med Dir Assoc*. 2015;16(6):535.e1-e12. **18.** DrugBank Online. P-glycoprotein substrates. Accessed January 5, 2026. https://go.drugbank.com/categories/DBCAT002668

EXPERT COMMENTARY: Seeing the Whole Resident: Addressing the Broader Impact of Tardive Dyskinesia in Long-Term Care

1. Hauser RA, Meyer JM, Factor SA, et al. Differentiating tardive dyskinesia: a video-based review of antipsychotic-induced movement disorders in clinical practice. *CNS Spectr*. 2022;27(2):208-217. **2.** Jackson R, Brams MN, Citrome L, et al. Assessment of the impact of tardive dyskinesia in clinical practice: consensus panel recommendations. *Neuropsychiatr Dis Treat*. 2021;17:1589-1597. **3.** Ayyagari R, Goldschmidt D, Zhou M, Leo S. Impact of tardive dyskinesia on physical aspects of patient lives: a survey of patients and caregivers in the United States. Presented at: 175th Annual Meeting of the American Psychiatric Association; May 21-25, 2022; New Orleans, LA. **4.** Centers for Medicare & Medicaid Services. *Design for Care Compare* nursing home five-star quality rating system: technical users' guide. July 2025. Accessed June 2, 2026. https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcomplianc/downloads/usersguide.pdf **5.** Finkbeiner S, Konings M, Klakotskaia D, et al. Multidimensional impact of tardive dyskinesia reported by clinicians: second interim analysis from the IMPACT-TD Registry. Presented at: Annual Psych Congress Elevate; May 28-31, 2025; Las Vegas, NV. **6.** AUSTEDO® XR (deutetrabenazine) extended-release tablets/AUSTEDO® current Prescribing Information. Parsippany, NJ: Teva Neuroscience, Inc. **7.** Hoberg A, Wagner B, Zhang D, et al. Clinical outcomes of vesicular monoamine transporter 2 inhibitor versus non-vesicular monoamine transporter 2 inhibitor treatments among patients with tardive dyskinesia in long-term care. Presented at: Annual Psych Congress; September 17-21, 2025; San Diego, CA. **8.** Benztropine mesylate tablet. Prescribing Information. Warren, NJ: Cipla USA, Inc.