

Tardive Dyskinesia Essentials: Clinical Insights for Long-Term Care Professionals Caring for Elderly Residents

RISK OF TD IN LTC FACILITIES

Tardive Dyskinesia in Long-Term Care: What's at Risk if It's Left Untreated?

In long-term care (LTC) facilities, elderly residents with a history of dopamine receptor blocking agent (DRBA) exposure are at increased risk of developing tardive dyskinesia (TD). Despite this elevated risk, TD is frequently underdiagnosed and undertreated in LTC facilities. When left untreated, TD can negatively affect residents, staff, and the facility. Therefore, it is critical to screen for, diagnose, and appropriately treat residents with TD.

TREATMENT

AUSTEDO XR in Elderly Residents With TD

AUSTEDO XR is a vesicular monoamine transporter 2 (VMAT2) inhibitor approved in adults for the treatment of TD and chorea associated with Huntington's disease. This article highlights key findings from the pivotal clinical trials of AUSTEDO[®] (deutetrabenazine) tablets in patients with TD, including its efficacy and safety profile. Long-term results, including findings in elderly patients, who are at increased risk of developing TD, are also discussed. Patient experiences with AUSTEDO XR, its dosing flexibility, and how to start residents on the medication are also reviewed.

EXPERT COMMENTARY

Expert Commentary With Robert Morton and Susan Scanland



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This newsletter is produced by Teva Pharmaceuticals, and Dr Robert Morton and Susan Scanland 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.

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Tardive Dyskinesia in Long-Term Care: What's at Risk if It's Left Untreated?

Prevalence of Antipsychotic Use

Over recent decades, the proportion of nursing home residents with psychiatric diagnoses has risen markedly from 11.2% in 1985 to 31.4% in 2015.¹ Outside of LTC facilities, antipsychotic prescriptions have risen steadily over the past decade, driven largely by FDA-approved uses in mood disorders (eg, adjunctive treatment for major depressive disorder and treatment of bipolar disorder).^{2,3} As a result, many residents may enter LTC facilities with current or prior antipsychotic exposure.

To reduce the use of antipsychotics, the CMS requires LTC facilities to attempt a gradual dose reduction of antipsychotics, unless clinically contraindicated, within the first year after admission for residents receiving an antipsychotic. Despite the CMS initiatives to reduce antipsychotic use, it remains prevalent in LTC. A 2026 CMS report found that 17% of elderly nursing home residents receive antipsychotic

medications. A recent analysis of the PointClickCare database identified more than 700,000 residents currently taking antipsychotic medications.⁴⁻⁶

TD Risk and Clinical Considerations in Older Adults Exposed to Antipsychotics

TD is caused by current or past exposure to dopamine receptor blocking agents, including both first-generation (typical) and second-generation (atypical) antipsychotics used for psychiatric conditions, as well as prokinetics and antiemetics for gastrointestinal conditions. It is a chronic, often irreversible, hyperkinetic drug-induced movement disorder characterized by involuntary, repetitive movements that can affect any muscle group in the body.⁷⁻¹¹

The prevalence of TD among patients with a history of typical or atypical antipsychotic use is approximately 25%.¹² The risk of TD is further elevated by female

sex (especially postmenopausal); antipsychotic treatment characteristics, including dose, duration, potency, and antipsychotic class (typical vs atypical); underlying psychiatric conditions such as mood disorders and substance use disorders; and increased age.¹³⁻¹⁷ Individuals older than 55 years are at substantially greater risk for developing TD, with an estimated 5- to 6-fold higher incidence than in younger patients. This elevated risk can persist even with low-dose or short-duration antipsychotic regimens, presenting a clinical challenge in LTC facilities.^{1,13,18} In addition, TD may be masked by ongoing antipsychotic treatment and may become apparent when the antipsychotic dose is reduced or discontinued, such as during gradual dose reduction.¹⁹ LTC staff are thus likely to encounter TD and should remain vigilant and routinely screen for abnormal movements.

Underdiagnosis and Undertreatment of TD in LTC

Despite the increased risk of TD among elderly residents, this condition is frequently underdiagnosed and undertreated in LTC facilities (**Figure 1.1**). Although TD prevalence among patients receiving typical or atypical antipsychotics is approximately 25%, only 1% of >700,000 LTC residents treated with antipsychotics in the

CMS, Centers for Medicare & Medicaid Services; FDA, US Food and Drug Administration; 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.

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PointClickCare database had a documented TD diagnosis.^{5,12} 25% of 2,536 patients diagnosed with TD did not receive any form of treatment.⁵ Furthermore, less than 50% were treated with a vesicular monoamine transporter 2 inhibitor, the sole FDA-approved treatment for TD. This persistent underdiagnosis and inadequate treatment of TD can negatively impact the well-being of residents.⁵

Impact of TD Relevant to Elderly LTC Residents

In LTC settings, older adults often have multimorbidity, frailty, and baseline functional limitations,

frequently requiring assistance with ADL.²⁰ TD compounds these factors and can negatively impact various aspects of life for elderly residents in LTC facilities, affecting multiple dimensions of their well-being. The real-world IMPACT-TD Registry study of 577 patients with TD revealed that 95% of individuals experienced negative effects of TD in at least 1 area of their lives—physical, psychological/psychiatric, or social.²¹ In the same study, more than half of individuals with mild TD reported moderate to severe impact.²¹ TD can affect any muscle group, which can potentially impair chewing and balance. In elderly

LTC residents, this heightens concerns about choking and falls—issues already prevalent in this population.²²⁻²⁴

Impact of TD on LTC Facilities

Untreated TD can negatively affect an LTC facility's CMS Star Rating, which assists residents and their families in comparing the quality of care across different facilities. This rating considers quality measures and staffing levels (**Figure 1.2**). Quality measures that could be affected by untreated TD include percentage of residents needing help with ADL, those experiencing falls with major injury, and outpatient ED visits per 1,000 long-stay days.²⁵ Additionally, TD symptoms increase residents' care needs, affecting staff workload and potentially raising turnover rates, impacting the Star Rating.²⁵ Given the potential impact to residents, staff, and the facility's Five-Star Rating, it is critical to screen for, diagnose, and appropriately treat residents with TD.

Figure 1.1. TD Remains Underdiagnosed and Undertreated in LTC Facilities^{5,12}

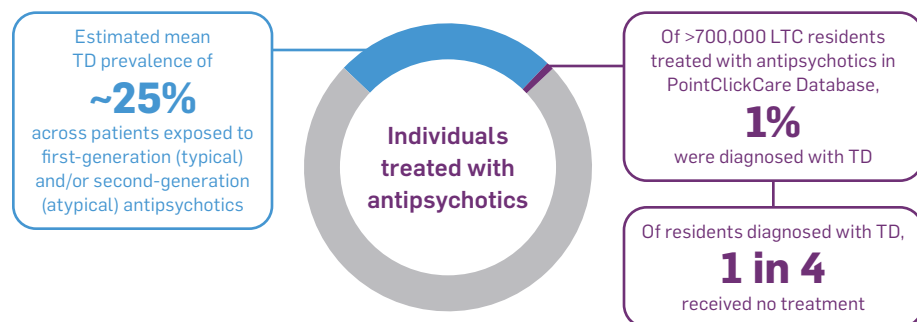
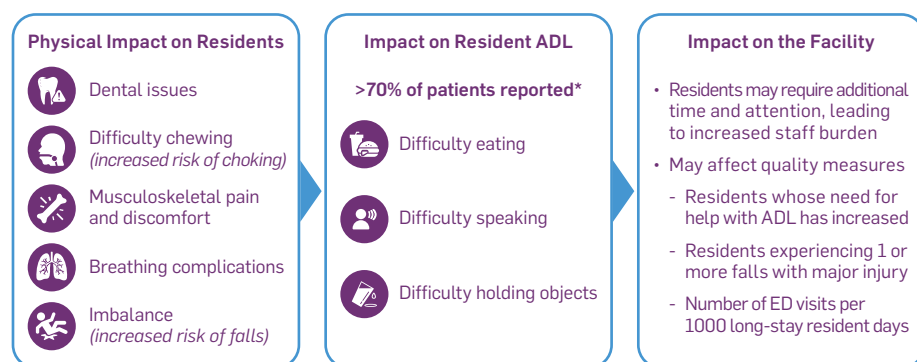


Figure 1.2. Untreated TD Can Negatively Affect Residents, Staff, and the Facility²²⁻²⁵

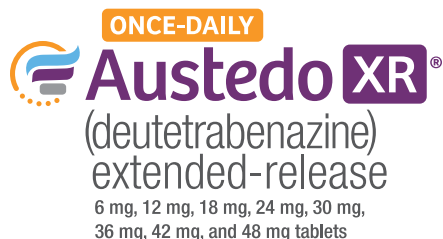


ADL, activities of daily living; ED, emergency department.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Clinical Worsening and Adverse Events in Patients with Huntington's Disease: AUSTEDO XR and AUSTEDO may cause a worsening in mood, cognition, rigidity, and functional capacity. Prescribers should periodically re-evaluate the need for AUSTEDO XR or AUSTEDO in their patients by assessing the effect on chorea and possible adverse effects.

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TREATMENT

AUSTEDO XR in Elderly Residents With TD

TD, a hyperkinetic movement disorder, is caused by the use of dopamine receptor blocking agents such as first- and second-generation antipsychotics, antiemetics, and prokinetics.^{1,2} All patients taking these medications are at risk of developing TD, but there are additional factors that can put an individual at increased risk.³ One such risk factor is older age. Older patients taking antipsychotics have a 5 to 6 times higher risk of TD compared with younger patients.⁴ Given that in one study >700,000 residents in long-term care facilities were treated with an antipsychotic, TD is of particular concern in long-term care.⁵

VMAT2 inhibitors were approved in 2017 and are the only treatments approved by the US Food and Drug Administration for the treatment

of TD.⁶⁻⁸ The American Psychiatric Association guidelines also recommend that TD symptoms that have an impact on residents should be treated with a VMAT2 inhibitor.⁷ Moreover, residents with TD who were treated with a VMAT2 inhibitor had fewer falls and emergency department visits versus those treated with a non-VMAT2 inhibitor.⁹ Therefore, if a resident displays symptoms of TD, making a formal diagnosis and treating the resident appropriately are crucial. Once-daily AUSTEDO XR is a VMAT2 inhibitor approved in adults for the treatment of TD.⁶ This article will highlight key findings from the clinical trials of AUSTEDO® (deutetrabenazine) tablets and real-world studies of experiences with AUSTEDO XR in a variety of patients with TD, including elderly patients.

Statistically Significant TD Symptom Control Demonstrated in the 2 AUSTEDO Pivotal Trials

The efficacy and safety profile of AUSTEDO was established in two 12-week, randomized, double-blind, placebo-controlled pivotal clinical trials, ARM-TD and AIM-TD.^{6,10,11} These studies included adult patients up to 81 years of age.⁶

- ARM-TD was a randomized, double-blind, parallel-group study in adult patients with TD. Patients were randomized 1:1 to receive AUSTEDO BID or placebo. In this flexible-dose clinical trial, patients' doses of AUSTEDO were titrated to an individualized dosage that reduced abnormal movements and was tolerated by the patient¹¹
- AIM-TD was a randomized, double-blind, placebo-controlled, phase 3 clinical trial in adult patients with TD. Patients were randomly assigned 1:1:1:1 to receive 1 of 3 fixed doses of AUSTEDO (12 mg/day, 24 mg/day, or 36 mg/day) or placebo¹⁰

The primary efficacy endpoint in both studies was the change in AIMS total score (sum of items 1 through 7) from baseline (defined for each patient as the value from the Day 0 visit) to Week 12.¹⁰⁻¹² There was a rapid response as early as Week 2 in these studies.^{6,10,11} Patients in the ARM-TD study showed a

ARM-TD, Aim to Reduce Movements in Tardive Dyskinesia; AIMS, Abnormal Involuntary Movement Scale; AIM-TD, Addressing Involuntary Movements in TD; BID, twice daily; TD, tardive dyskinesia; VMAT2, vesicular monoamine transporter 2

IMPORTANT SAFETY INFORMATION (CONTINUED)

QTc Prolongation: AUSTEDO XR extended-release tablets and AUSTEDO tablets may prolong the QT interval, but the degree of QT prolongation is not clinically significant when AUSTEDO XR or AUSTEDO is administered within the recommended dosage range. AUSTEDO XR and AUSTEDO should be avoided in patients with congenital long QT syndrome and in patients with a history of cardiac arrhythmias.

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significant improvement in AIMS total score from baseline ($P=0.019$) at Week 12 vs placebo (3.0-point reduction vs 1.6-point reduction). Results were consistent with those observed in AIM-TD at Week 12.^{10,11,13}

Increasing Improvement Observed Over 3 Years in an OLE Study, Including in Patients Aged 65 and Older

Long-term safety of AUSTEDO was studied in RIM-TD, an open-label, long-term maintenance study in patients who successfully completed ARM-TD or AIM-TD.¹⁴ After a 1-week washout period, AUSTEDO was started at a dose of 12 mg/day, which was titrated for up to 6 weeks in a response-driven manner on a weekly basis by 6 mg/day until the maximum allowable dose was reached, a clinically significant AE occurred, or adequate dyskinesia control was achieved.¹⁴ Patients were followed for approximately 3 years.¹⁴

The overall population of patients treated with AUSTEDO experienced an improvement in the AIMS total score from baseline over 3 years.¹⁴ Consistent results were observed in those patients at increased risk of developing TD, specifically in postmenopausal women, patients with a mood disorder, and patients with schizophrenia. (Figure 2.1).^{15,16}

Among the 335 patients evaluated, 257 were aged 21 to 64 years and 78 were aged 65 to 81 years.^{13,17} Mean daily dose at Week 145 was similar for both age groups, with a dose of 40.3 mg/day in the cohort

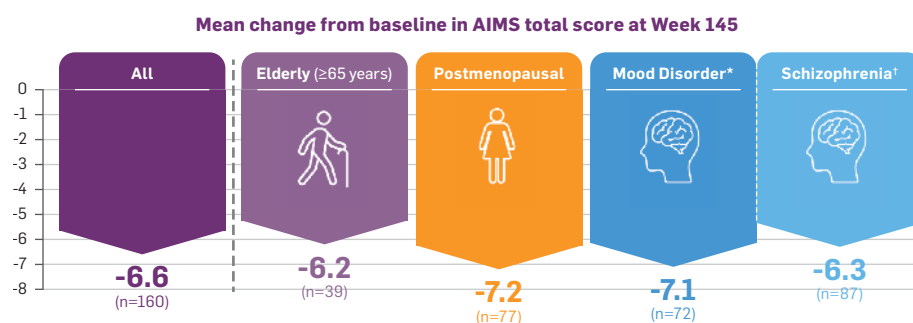
aged <65 years and 36.8 mg/day in the cohort aged ≥ 65 years.^{13,17}

Elderly patients specifically experienced a 2.3-point reduction in AIMS total score at Week 2. Additionally, increasing improvement was observed for both age groups through 3 years, with elderly patients experiencing a 6.2-point reduction in AIMS total score at Week 145 (Figure 2.1 and Figure 2.2).¹³

Improvements in Daily Living Were Reported by Elderly Patients Taking AUSTEDO XR

In a real-world study of patients' experience with AUSTEDO XR, 74% of elderly patients aged 65 to 90 years old reported overall symptom improvement with treatment.¹³ Moreover, older patients reported improved physical, social, and

Figure 2.1: Consistent 3-Year Results in Patients at Increased Risk for TD¹⁴⁻¹⁷

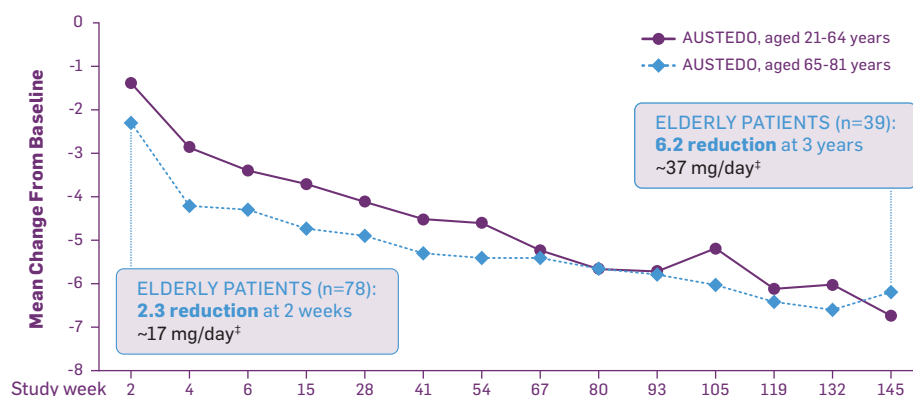


Patients in the RIM-TD study received the AUSTEDO BID formulation.¹³

*Includes patients with bipolar disorder and depression.¹⁶

†Includes schizophrenia or schizoaffective disorder.¹⁶

Figure 2.2: Increasing Improvement for Elderly Patients and Younger Patients^{13,17,*†}



*71% of patients at Week 145 saw improvement relative to Week 15.¹³

†In a post hoc subgroup analysis of the RIM-TD OLE.¹³

‡Mean total dose.¹³

OLE, open-label extension; 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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emotional well-being as a result of the movement reduction with AUSTEDO XR® (deutetrabenazine) extended-release tablets.¹³

- 53% of older patients reported better overall physical health¹³
- 60% experienced improved self-esteem, while 66% reported feeling less embarrassed¹³
- 74% of elderly patients surveyed reported improved overall emotional well-being, with 57% experiencing less anxiety¹³
- 77% of these older patients felt more comfortable in social settings¹³

Of elderly patients surveyed, 99% said it was easy to take once-daily AUSTEDO XR, and 86% were satisfied with the medication.

Polypharmacy in Residents and Considerations for Potential DDIs

Due to older age and comorbid conditions, polypharmacy is highly prevalent in residents, exposing them to an increased risk of DDIs.¹⁸ This makes it critical to review residents' clinical and medication history when choosing a therapy for residents with TD.

AE, adverse event; DDI, drug-drug interaction.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Akathisia, Agitation, and Restlessness: AUSTEDO XR and AUSTEDO 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.

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In a retrospective analysis, the average number of medications per resident at time of TD diagnosis was ~15.

The metabolic profile of AUSTEDO XR allows for few restrictions related to DDIs. Only with AUSTEDO XR do providers have the ability to increase the once-daily dose in residents taking strong CYP inhibitors and inducers, providing a flexible treatment option when treating TD residents who are taking concomitant medications. There is also no clinically significant QT prolongation up to the maximum dose (48 mg/day) of AUSTEDO XR. (Table 2.1).⁶

Table 2.1: AUSTEDO XR Has Few Restrictions Related to Drug-Drug Interactions^{6,8,19}

	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 Profile in Pivotal and 3-Year Studies

The most common AEs reported by ≥2% of patients treated with AUSTEDO® (deutetrabenazine) tablets in the placebo-controlled pivotal studies are shown in Table 2.2.^{6,13} 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 mouth were no longer reported in ARM-TD.¹³ Adverse reactions with AUSTEDO XR are expected to be similar to those with AUSTEDO BID.⁶

No new safety signals appeared in the OLE study; AEs in the 3-year study were comparable with those

Table 2.2: Adverse Events Reported in ≥2% of Patients Treated With AUSTEDO in TD Pivotal Studies^{6,13}

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.^{6,13}

in the 12-week clinical trials.¹⁴ Of note, a similar safety and tolerability profile was observed between elderly and younger patients.¹⁷

Flexible, Once-Daily Dosing Options With AUSTEDO XR

The recommended starting dose of AUSTEDO XR for TD is 12 mg/day and the dose should be increased

Figure 2.3: Dosing Flexibility for Effective and Tolerable Control¹³

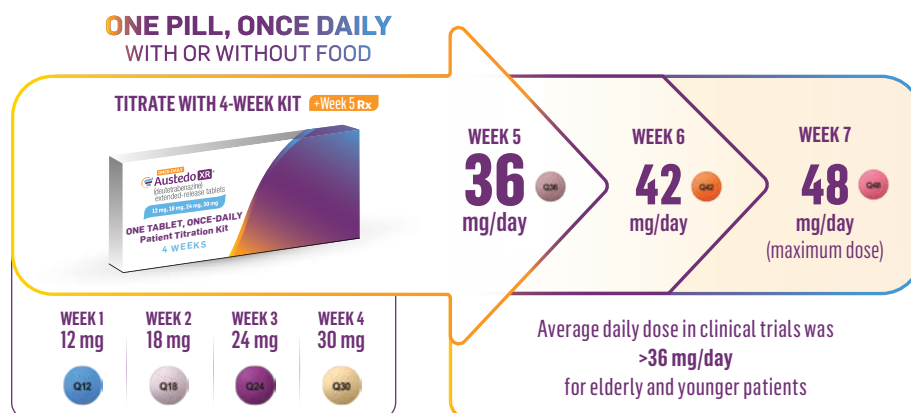


Image shown is not the actual 4-week Titration Kit. Tablets not shown to actual size. If a patient misses a dose for less than 1 week, they can restart at the same dose of AUSTEDO XR or AUSTEDO.

by 6 mg/day at weekly intervals for individual residents until desired symptom control is tolerably achieved (**Figure 2.3**).⁶

There are no restrictions on the use of AUSTEDO XR or dosage in elderly patients.

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

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.^{10,11,13} Providers can prescribe the 4-week Titration Kit and ask

the pharmacy to apply the 30-day Free Trial Voucher.* Alternatively, providers can prescribe with the PointClickCare pharmacy order set and request that the 30-day Free Trial Voucher be applied.¹³

*Certain restrictions apply. Terms and conditions on AUSTEDOcardform.com.

Summary

AUSTEDO XR is a VMAT2 inhibitor approved for the treatment of TD.⁶ Efficacy and safety profile was demonstrated in clinical studies with AUSTEDO, which included elderly patients who are at increased risk of developing TD.^{4,6,10,11,13} Clinical trials and long-term studies showed consistent movement improvement and a demonstrated safety profile with no additional safety signals in the 3-year study in patients with TD, with the largest elderly population of any TD clinical study.^{6,10,11,13,14,17} Patients taking AUSTEDO XR also reported improvements in different

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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aspects of their well-being as a result of reduction in their abnormal movements.¹³ AUSTEDO XR® (deutetrabenazine) extended-release tablets has few dose

restrictions related to DDIs, making it a suitable treatment option in long-term care settings where the average number of medications per resident is ~15.^{5,6} Residents can

get started on AUSTEDO XR at no cost using the 30-day Free Trial Voucher.^{13*} ■

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EXPERT COMMENTARY

A Dialogue on Tardive Dyskinesia in Long-Term Care: Unique Considerations for Elderly Residents and the Role of AUSTEDO XR



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This newsletter is produced by Teva Pharmaceuticals, and Dr Robert Morton and Susan Scanland were compensated by Teva for their insights.

What insights have these two clinicians gained from years of experience caring for residents with movement disorders? Robert Morton, MD, and Susan Scanland, MSN, CRNP, GNP-BC, CDP, discuss their experiences assessing and treating residents with TD, a chronic movement disorder caused by exposure to typical (first-generation) and atypical (second-generation) antipsychotics, in LTC settings.¹

Q: What is the prevalence of antipsychotic use among residents in a long-term care facility and its implications for the development of TD?

Susan Scanland, MSN, CRNP, GNP-BC, CDP: Despite current CMS measures that aim to reduce the use of antipsychotics in long-term care, many residents are treated with these medications, often as an adjunctive therapy for treatment-resistant depression.^{2,3} In some cases, antipsychotic use is necessary to maintain a patient's psychiatric stability.

Robert Morton, MD: I agree, Susan. Antipsychotics are used quite significantly in this population, though elderly individuals can be particularly sensitive to side effects, such as

the development of drug-induced movement disorders.⁴ In fact, age is a significant risk factor for TD.⁵ Other risk factors include the dose and duration of antipsychotic use, postmenopausal status, female sex, and mood disorder.⁶⁻⁸ Many of the residents I see in LTC facilities have some of these characteristics. Even if a resident is no longer taking an antipsychotic, cumulative exposure to antipsychotics throughout their lifetime places them at increased risk for TD.⁶

Susan Scanland, MSN, CRNP, GNP-BC, CDP: Given the increased risk of developing TD

CMS, Centers for Medicare & Medicaid Services; LTC, long-term care; TD, tardive dyskinesia.

IMPORTANT SAFETY INFORMATION (CONTINUED)

Sedation and Somnolence: Sedation is a common dose-limiting adverse reaction of AUSTEDO XR and AUSTEDO® (deutetrabenazine) tablets. 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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among elderly individuals and postmenopausal women, it is critical to be vigilant about it among residents in LTC facilities. Unfortunately, TD often goes undiagnosed.^{9,10}

Q: What are some of the challenges associated with assessing TD in elderly residents, and what are some ways that they can be addressed?

Susan Scanland, MSN, CRNP, GNP-BC, CDP: In long-term care, primary care providers may not be aware of movement disorders in their patients and may also miss TD symptoms due to short visit times. Furthermore, CNAs in long-term care may not be familiar with TD movements or aware that they can be treated. To improve detection in this setting, all members of the multidisciplinary care team should proactively observe residents for abnormal movements. Additionally, all prescribers should be able to diagnose TD in their residents.¹¹ **Therefore, we need more proactive and recurrent screening and education in long-term care.** Empowering CNAs can also help address this issue as they are at the forefront of assessing residents. When they see something, they should say something and ensure that it is funneled up to the prescriber.

Robert Morton, MD: I agree with Susan and emphasize ongoing education for all LTC staff, including nursing staff. It is

also essential to differentiate TD from DIP. I believe this remains a significant barrier to diagnosis in the LTC setting, but we can offer providers a simple way to differentiate: TD movements are unpredictable – you do not know what part of the body may move next or when – while movements associated with DIP are predictable.¹ In any case, if you see a movement and you are not sure what it is, let additional members of the care team know. If LTC staff assess residents using these key points, it can help address underdiagnosis in this setting.

Q: What are best practices for assessing movements in the LTC setting?

Susan Scanland, MSN, CRNP, GNP-BC, CDP: The AIMS is the standard scale for systematically assessing and quantifying the severity of TD movements.¹¹ It is required in all populations every 6 months if someone is on an antipsychotic or another drug that can lead to TD.⁶ It should also be done when someone is started on an antipsychotic, if the dose of the antipsychotic is increased, if gradual dose reduction occurs, or if the antipsychotic is discontinued.⁶ Additionally, folks admitted to LTC facilities who are not currently on antipsychotics may have been on them several months prior to admission. For this reason, it may be a good idea to perform an AIMS on residents 2 months post-admission, regardless of whether they are

currently on antipsychotics. I would also like to add that because of the difficulties in differentiating DIP from TD, screening residents on benztropine may be a good idea as well, as these residents may have been misdiagnosed.

Robert Morton, MD: While the AIMS should be performed at regular intervals, every staff member who interacts with a resident can do an informal assessment of movements at every encounter, simply by looking at them and asking them about movements.^{6,11} I encourage them to look for movements in different parts of the body, starting with the forehead, eyes, lips, and jaw, followed by the trunk and extremities. They do not need to score the movements, just recognize them and report them to a prescriber for further assessment and possible treatment.

Though orofacial movements are most common, it is crucial that staff are trained to look everywhere, including the feet, which may be forgotten, particularly in bedridden or wheelchair-bound residents.¹² In one of my residents who was bedridden, I was only able to make the diagnosis because I checked her toes and noticed the movements. In order to assess movements in the hands, make sure that they are not holding on to anything. In addition, if you can safely sit a bedridden resident up, it becomes easier to see truncal movements.

AIMS, Abnormal Involuntary Movement Scale; CNA, certified nursing assistant; DIP, drug-induced parkinsonism.

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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Susan Scanland, MSN, CRNP, GNP-BC, CDP: I agree with Dr Morton. Truncal TD may not be obvious from the front so sitting them up and observing them from the side can be helpful. If you have a resident sitting on the edge of the bed, someone should be behind them and in front of them to make sure they don't fall. Being able to pick up on subtle truncal movements before they get worse is important. I've had patients with severe truncal TD who couldn't sit properly and would slide out of their wheelchairs and fall; it can be very disabling.

In residents with severe dementia, mimic the activation maneuvers and then the resident can mirror what you do. You can also ask them to have a drink and watch how they hold their cup.

I would like to add that all staff members should also be able to recognize and assess the impact of TD on the residents, because they may have subtle movements but experience a significant impact psychologically, physically, or socially.¹³ Speech therapists, for example, can assist with this assessment because TD often affects speech. Recreation therapists can notice people knocking things off their bingo cards, or they may notice if a resident is frequently absent from recreational activities. Dietary aides pushing food carts may observe someone with TD spilling their drink. **Everybody can assess for movements.**

Q: What is your approach to treating TD in elderly residents, and what key factors do you consider in this process?

Susan Scanland, MSN, CRNP, GNP-BC, CDP: I consider the fact that any TD symptoms that impact the resident should be treated.⁶ This is why I emphasized previously that the impact of TD on the residents should be regularly assessed.

Robert Morton, MD: I second that; untreated TD symptoms can be associated with more emergency room visits, falls, and choking, all of which are of great concern to the CMS and, therefore, to the facility, as they may affect a facility's Star Rating.^{2,14,15}

Susan Scanland, MSN, CRNP, GNP-BC, CDP: Beyond that, CMS regulations also require that therapeutic regimens for residents should not include drugs with inadequate indications.¹⁶ VMAT2 inhibitors are the only FDA-approved treatment for TD.⁶ Despite this, anticholinergics like benztropine are often misused for residents with TD and its misuse may result in the issuance of an F-tag (F-757).^{10,16} It is also important to consider the fact that the risk of drug-drug interactions is increased in the elderly because of the prevalence of polypharmacy in this population.^{10,17}

Robert Morton, MD: When I'm treating geriatric patients, I am always concerned about

the side effects of medication, particularly because these patients have increased sensitivity to antipsychotics. Elderly patients can also have several comorbidities.¹⁸ Therefore, the use of medication that has a minimal impact on other conditions or their current medication regimen is important.

Q: How do you use AUSTEDO XR® (deutetrabenazine) extended-release tablets in your elderly residents with TD?

Robert Morton, MD: I like to take advantage of the wide range of dosing options available for AUSTEDO XR and titrate the dose to ensure tolerability in my residents while achieving effective symptom control.¹⁹

Susan Scanland, MSN, CRNP, GNP-BC, CDP: Sometimes providers do not go up to a high enough dose and then observe residual TD symptoms. I typically like to titrate my patients up to 36 mg/day, which is close to the average daily dose observed in elderly patients in the RIM-TD study (~37 mg/day).²⁰ If there are issues with tolerability, I can then lower the dose.

Q: Are there any additional characteristics of AUSTEDO XR that make it an appropriate treatment option for elderly residents with TD?

Susan Scanland, MSN, CRNP, GNP-BC, CDP: The risk of drug-drug interactions is high in

FDA, US Food and Drug Administration; RIM-TD, Reducing Involuntary Movements in Participants With TD; VMAT2, vesicular monoamine transporter 2.

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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this population.^{10,17} The metabolic profile of AUSTEDO XR allows for few restrictions related to drug-drug interactions.¹⁹ It has no dose restrictions with strong CYP3A4/5 inducers and inhibitors.¹⁹ In residents taking strong CYP2D6 inhibitors or who are poor CYP2D6 metabolizers, 5 different doses up to 36 mg/day can be administered.¹⁹ This is particularly relevant for residents in long-term care as some antidepressants are strong CYP2D6 inhibitors, and depression in this setting is common.^{21,22}

Q: How do you discuss AUSTEDO XR as a treatment option with residents and their families?

Susan Scanland, MSN, CRNP,

GNP-BC, CDP: I start with the clinical data. I explain that in the pivotal clinical trials, results were observed as early as 2 weeks,

and in the open-label extension study, increasing improvement was observed through 3 years.^{20,23-25} The most common adverse reactions observed in at least 4% of patients treated with AUSTEDO and occurring at a greater rate than in patients treated with placebo were nasopharyngitis and insomnia.¹⁸ Elderly patients and their families may be concerned about somnolence, so I share that somnolence occurred in 4% of patients treated with AUSTEDO and 7% of patients treated with placebo.²⁴ In one of the clinical trials (ARM-TD), somnolence and dry mouth were no longer reported after the titration phase.²⁴

I also direct them to publicly available videos containing patient testimonials; in my opinion, a video is worth 10,000 words for my patients.

Importantly, I assure residents that they can continue taking their current antipsychotic medications.^{23,26} I walk them through the titration process, explaining that the dose will be individualized to meet their needs. The 4-week Titration Kit helps make this process easy.

Finally, I ask the resident and their family whether they have any additional questions or concerns and address them.

Robert Morton, MD: It is also key to make residents and their families aware of what they might expect: that older patients experienced improved physical, social, and emotional well-being as a result of movement reduction with AUSTEDO XR.²⁴ This information is really crucial and can help make a difference in a resident's life. ■

IMPORTANT SAFETY INFORMATION (CONTINUED)

Common Adverse Reactions: The most common adverse reactions for AUSTEDO (>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

Tardive Dyskinesia in Long-Term Care: What's at Risk if It's Left Untreated?

1. Patel A, Whitt T. Burden and impact of tardive dyskinesia (TD) in older adults in long-term care settings. *Caring for the Ages*. 2025;26(3):16-17.
2. Spielmans GI, Berman MI, Linardatos E, Rosenlicht NZ, Perry A, Tsai AC. Adjunctive atypical antipsychotic treatment for major depressive disorder: a meta-analysis of depression, quality of life, and safety outcomes. *PLoS Med*. 2013;10(3):e1001403.
3. Rhee TG, Olfson M, Nierenberg AA, Wilkinson ST. 20-year trends in the pharmacologic treatment of bipolar disorder by psychiatrists in outpatient care settings. *Am J Psychiatry*. 2020;177(8):706-715.
4. Centers for Medicare & Medicaid Services. Center for Clinical Standards and Quality. Last updated September 10, 2025. Accessed February 26, 2026. <https://www.cms.gov/files/document/qso-25-20-nh-revised-2025-09-10.pdf>
5. 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.
6. Centers for Medicare & Medicaid Services. Unnecessary meds/med regimen review critical element pathway. Accessed March 3, 2026. <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/CMS-20082-Unnecessary-Medication.pdf>
7. 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.
8. Fahn S, Jankovic J, Hallett M, eds. *Principles and Practice of Movement Disorders*. 2nd ed. Elsevier, Inc; 2011.
9. 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.
10. Rao AS, Camilleri M. Review article: metoclopramide and tardive dyskinesia. *Aliment Pharmacol Ther*. 2010;31(1):11-19.
11. 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.
12. 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.
13. American Psychiatric Association. *The American Psychiatric Association Practice Guideline for the Treatment of Patients With Schizophrenia*. 3rd ed. American Psychiatric Association; 2021.
14. Glazer WM, Naftolin F, Morgenstern H, Barnea ER, MacLusky NJ, Brenner LM. Estrogen replacement and tardive dyskinesia. *Psychoneuroendocrinology*. 1985;10(3):345-350.
15. Jeste DV. Tardive dyskinesia rates with atypical antipsychotics in older adults. *J Clin Psychiatry*. 2004;65(suppl 9):21-24.
16. Vasan S, Padhy RK. Tardive dyskinesia. In: StatPearls [Internet]. StatPearls Publishing; 2025. Accessed December 19, 2025. <https://www.ncbi.nlm.nih.gov/books/NBK448207>
17. Yassa R, Jeste DV. Gender differences in tardive dyskinesia: a critical review of the literature. *Schizophr Bull*. 1992;18(4):701-715.
18. Bron M, Aweh G, Jen E, Patel A. Real-world claims analysis to characterize the burden of tardive dyskinesia in long-term care settings. *Neurol Ther*. 2025;14(5):2217-2226.
19. Caroff SN, Hurford I, Lybrand J, Campbell EC. Movement disorders induced by antipsychotic drugs: implications of the CATIE schizophrenia trial. *Neurol Clin*. 2011;29(1):127-148.
20. Carrasco-Ribelles LA, Roso-Llorach A, Cabrera-Bean M, et al. Dynamics of multimorbidity and frailty, and their contribution to mortality, nursing home and home care need: a primary care cohort of 1 456 052 ageing people. *EClinicalMedicine*. 2022;52:101610.
21. 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. **22.** Strassnig M, Rosenfeld A, Harvey PD. Tardive dyskinesia: motor system impairments, cognition and everyday functioning. *CNS Spectr*. 2018;23(6):370-377. **23.** Yassa R. Functional impairment in tardive dyskinesia: medical and psychosocial dimensions. *Acta Psychiatr Scand*. 1989;80(1):64-67. **24.** 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. **25.** Centers for Medicare & Medicaid Services. Design for *Care Compare* nursing home five-star quality rating system: technical users' guide. July 2025. Accessed November 13, 2025. <https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcompliance/downloads/usersguide.pdf>

AUSTEDO XR in Elderly 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.** Carbon M, Hsieh CH, 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. **4.** Jeste DV. Tardive dyskinesia rates with atypical antipsychotics in older adults. *J Clin Psychiatry*. 2004;65(suppl 9):21-24. **5.** 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. **6.** AUSTEDO® XR (deutetrabenazine) extended-release tablets/AUSTEDO® current Prescribing Information. Parsippany, NJ: Teva Neuroscience, Inc. **7.** American Psychiatric Association. *The American Psychiatric Association Practice Guideline for the Treatment of Patients With Schizophrenia*. 3rd ed. American Psychiatric Association; 2021. **8.** Ingrezza® (valbenazine) capsules. Prescribing Information. San Diego, CA: Neurocrine Biosciences, Inc. **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.** STABLE National Coordinating Council Resource Toolkit Workgroup. STABLE Resource Toolkit. Accessed December 19, 2025. <https://www.bcbst.com/docs/providers/Behavioral-health-toolkit/stable-resource-toolkit.pdf> **13.** Data on file. Parsippany, NJ: Teva Neuroscience, Inc. **14.** 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. **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.** 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. **18.** 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. **19.** DrugBank Online. P-glycoprotein substrates. Accessed January 5, 2026. <https://go.drugbank.com/categories/DBCAT002668>

A Dialogue on Tardive Dyskinesia in Long-Term Care: Unique Considerations for Elderly Residents and the Role of AUSTEDO XR

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.** Centers for Medicare & Medicaid Services. Design for *Care Compare* nursing home five-star quality rating system: technical users' guide. July 2025. Accessed April 9, 2026. <https://www.cms.gov/medicare/provider-enrollment-and-certification/certificationandcompliance/downloads/usersguide.pdf> **3.** Jha MK, Mathew SJ. Pharmacotherapies for treatment-resistant depression: how antipsychotics fit in the rapidly evolving therapeutic landscape. *Am J Psychiatry*. 2023;180(3):190-199. **4.** Olsson M, Xie F, Bushnell G, Hua J, Miles J, Crystal S. Antipsychotic medication use by older adults. *JAMA Psychiatry*. 2026;83(2):214-216. **5.** Jeste DV. Tardive dyskinesia rates with atypical antipsychotics in older adults. *J Clin Psychiatry*. 2004;65(suppl 9):21-24. **6.** American Psychiatric Association. *The American Psychiatric Association Practice Guideline for the Treatment of Patients With Schizophrenia*. 3rd ed. American Psychiatric Association; 2021. **7.** Vasan S, Padhy RK. Tardive Dyskinesia. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025. Accessed April 9, 2025. <https://www.ncbi.nlm.nih.gov/books/NBK448207> **8.** Yassa R, Jeste DV. Gender differences in tardive dyskinesia: a critical review of the literature. *Schizophr Bull*. 1992;18(4):701-715. **9.** Carbon M, Hsieh CH, 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. **10.** 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. **11.** Caroff SN, Citrome L, Meyer J, et al. A modified Delphi consensus study of the screening, diagnosis, and treatment of tardive dyskinesia. *J Clin Psychiatry*. 2020;81(2):19cs12983. **12.** American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed, Text Revision. Washington, DC: American Psychiatric Association; 2022. **13.** 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. **14.** Strassnig M, Rosenfeld A, Harvey PD. Tardive dyskinesia: motor system impairments, cognition and everyday functioning. *CNS Spectr*. 2018;23(6):370-377. **15.** 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. **16.** Centers for Medicare & Medicaid Services. Revised Long-Term Care (LTC) Surveyor Guidance: Significant revisions to enhance quality and oversight of the LTC survey process. November 18, 2024. Accessed April 9, 2025. <https://www.cms.gov/files/document/revised-long-term-care-ltc-surveyor-guidance-significant-revisions-enhance-quality-and-oversight-ltc.pdf> **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.** Qiao X, Chen X, Wang W, Guo L, Pan Q. Classification of elderly patients with comorbidities and their subtypes: a data-driven cluster analysis. *Clin Interv Aging*. 2025;20:1671-1680. **19.** AUSTEDO® XR (deutetrabenazine) extended-release tablets/AUSTEDO® current Prescribing Information. Parsippany, NJ: Teva Neuroscience, Inc. **20.** 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. **21.** Nahid NA, Johnson JA. CYP2D6 pharmacogenetics and phenoconversion in personalized medicine. *Expert Opin Drug Metab Toxicol*. 2022;18(11):769-785. **22.** Matos Queirós A, von Gunten A, Martins M, Wellens NIH, Verloo H. The forgotten psychopathology of depressed long-term care facility residents: a call for evidence-based practice. *Dement Geriatr Cogn Dis Extra*. 2021;11(1):38-44. **23.** 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. **24.** Data on file. Parsippany, NJ: Teva Neuroscience, Inc. **25.** 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. **26.** 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.

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