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Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

ADOLESCENT CATATONIA

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UW Medicine
UW SCHOOL OF MEDICINE

Integrated Care Training Program
UW Psychiatry & Behavioral Sciences

project ECHO

SPEAKER DISCLOSURES

✓No conflicts of interest

PLANNER DISCLOSURES

The following series planners have no relevant conflicts of interest to disclose; other disclosures have been mitigated.

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OBJECTIVES

1. Describe the nature, causes and treatment of catatonia
2. Understand the challenges of outpatient management of catatonia
3. Apply an awareness of outpatient benzodiazepine treatment for catatonia to your clinical practice

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CASE EXAMPLE

Ian is a 15yo male with a recent history of treatment for auditory hallucinations with risperidone, who presented with **progressively reducing function, speech, and dietary intake**

Risperidone had been discontinued due to increasing bradykinesia. No other medical or psychiatric history

In the ED: unresponsive, alert with eyes open, no speech or movement

Baseline: accomplished musician, scholarly, introverted

Social: both parents in healthcare, younger sister, busy with music and schoolwork, no substance use. Bullying in elementary school; socially isolated since COVID.

www.richmondsymphonysom.com

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CASE: INITIAL ASSESSMENT

Presentation

- Withdrawn from all interaction; circadian rhythm intact
- Required NG feeds and full nursing support

Workup

- Routine physical and labs WNL except for signs of dehydration.
- Mental state: **mutism, posturing, immobility/stupor, staring, withdrawal, autonomic changes**
- Neuro: Resisted opening eyes; grimaced to pain; no focal signs otherwise
- Brian MRI grossly normal, EEG with non-specific “diffuse slowing”, serum/CSF testing showed no abnormalities

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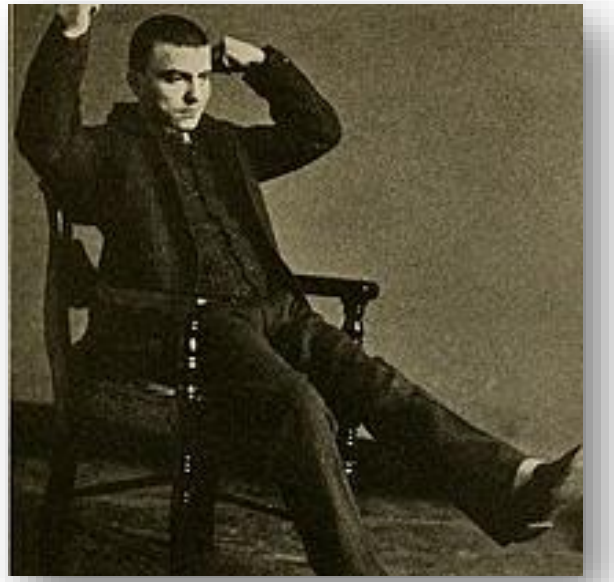
WHAT IS CATATONIA?

Catatonia is a neuropsychiatric syndrome characterized by marked psychomotor disturbances (decreased, increased, or qualitatively abnormal)

Associated with significant morbidity and mortality that causes strain on the medical system

Effective treatment requires rapid recognition, thorough evaluation, complex and often long-term management



Heckers S et al. Catatonia. N Engl J Med. 2023;389:1797-18.
Photos from Wikipedia

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TABLE 1. *DSM-5* Criteria for Catatonia

MOTOR SYMPTOMS	NONMOTOR SYMPTOMS
• Catalepsy (passively holding a posture against gravity) • Echopraxia (mimicking others' movements) • Grimacing • Mannerisms (unusual actions) • Posturing (holding a body/body part position against gravity for prolonged periods of time) • Stereotypies (repetitive and frequent movements that are not purposeful) • Waxy flexibility (mild but consistent resistance to positioning)	• Agitation • Echolalia (mimicking others' speech) • Mutism (no or very limited verbal response) • Negativism (opposition or lack of response to instructions or external stimuli) • Stupor (decreased reactivity)

Image: https://www.contemporarypediatrics.com

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Bush-Francis Catatonia Rating Scale

Test Patient A

Catatonia Assessment Resources

https://bfcrs.urmc.edu

WORKUP FOR CATATONIA

Causes & differentials

- Psychosis, mood disorders, autism, dementias
- Delirium, epilepsy, encephalitis, focal cerebral lesions
- Drugs (toxic, withdrawal, side-effects)
- **Malignant catatonia**

Workup

- Rule out medical causes
- Rating scales
  - Bush Francis Catatonia Rating Scale (BFCRS)
  - Pediatric Catatonia Rating Scale (PCRS)
  - Autistic Catatonia Questionnaire (ASQ)

Benzo challenge

Etiological Theories

An evolution-based fear response, a remnant of a defense strategy in prey animals when confronted by predators, conserved in humans and activated in times of extreme stress, akin to playing dead.[2]

- Disruption of the **cortico-striato-thalamo-cortical loop**
- Limbic dysrhythmia
- Neuroendocrine abnormalities via hypothalamic dysfunction

1. Wilson JE et al. Catatonia: APA Resource Document. J Acad Consult Liaison Psychiatry. 2025;66:277-299.
2. Moskowitz AK. "Scared stiff": catatonia as an evolutionary-based fear response. Psychological review. 2004;111:984.

MANAGEMENT OF CATATONIA

Step 1	
Lorazepam/other BZP	Give initial "challenge" dose of 2 mg lorazepam; Maintenance dose of 6-30 mg lorazepam daily given in divided doses at least every 6-8 hours for at least 2-3 days; transition to PO (by mouth) not recommended in first 24-48 hours begin workup for ECT*; if IV lorazepam is unavailable, alternatives include IV diazepam, SL (sublingual) lorazepam or PO lorazepam

*Electroconvulsive therapy

Maintenance **lorazepam dose: 6-30mg**

"There are no studies on benzodiazepine tapering and discontinuation after treatment response in catatonia. Ongoing maintenance therapy is recommended for patients with chronic or recurrent catatonia."[1]

Step 2	
ECT	At least 6 treatments (2-3 usually sufficient to lyse, though 10-20 sometimes needed); if not immediately available, skip to **Step 3**

Step 3	
Glutamate Antagonist	Amantadine 100 mg daily or memantine 10 mg daily; titrate as tolerated over 3–4 days to 600 mg daily or 20 mg daily, respectively

Step 4	
Anti-epileptic	Valproic acid 10-20 mg/kg, target dose usually 500-1500 mg PO or IV daily (Carbamazepine 300-600 mg PO daily could be an alternative for some patients but requires monitoring for drug-drug interactions)

Step 5	
Antipsychotic agent, with each dose given in combination with lorazepam	Target doses: Aripiprazole 10-30 mg, olanzapine 2.5-10 mg, or clozapine 200-300 mg daily* *If catatonia is secondary to clozapine withdrawal, clozapine is the treatment of choice

1. Wilson JE et al. Catatonia: APA Resource Document. J Acad Consult Liaison Psychiatry. 2025;66:277-299.
2. Rogers JP et al. Evidence-based consensus guidelines for the management of catatonia: Recommendations from the British Association for Psychopharmacology. J Psychopharmacol. 2023;37:327-369.

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CASE: INITIAL MANAGEMENT

Lorazepam challenge:

- Initial response: started talking, started eating
- Over time, became disinhibited, then awake but slowed
- Lorazepam titrated to 28mg daily over 6 weeks due to diminishing dose response
- Augmented with amantadine and zolpidem (20mg daily)

Barriers to ECT (Electro-Convulsive Therapy)

- Convincing parents (stigma)
- Sparse availability
- ITA (Involuntary Treatment Act) laws

Catatonia resolved after 4 sessions of ECT

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QUESTIONS & DISCUSSION

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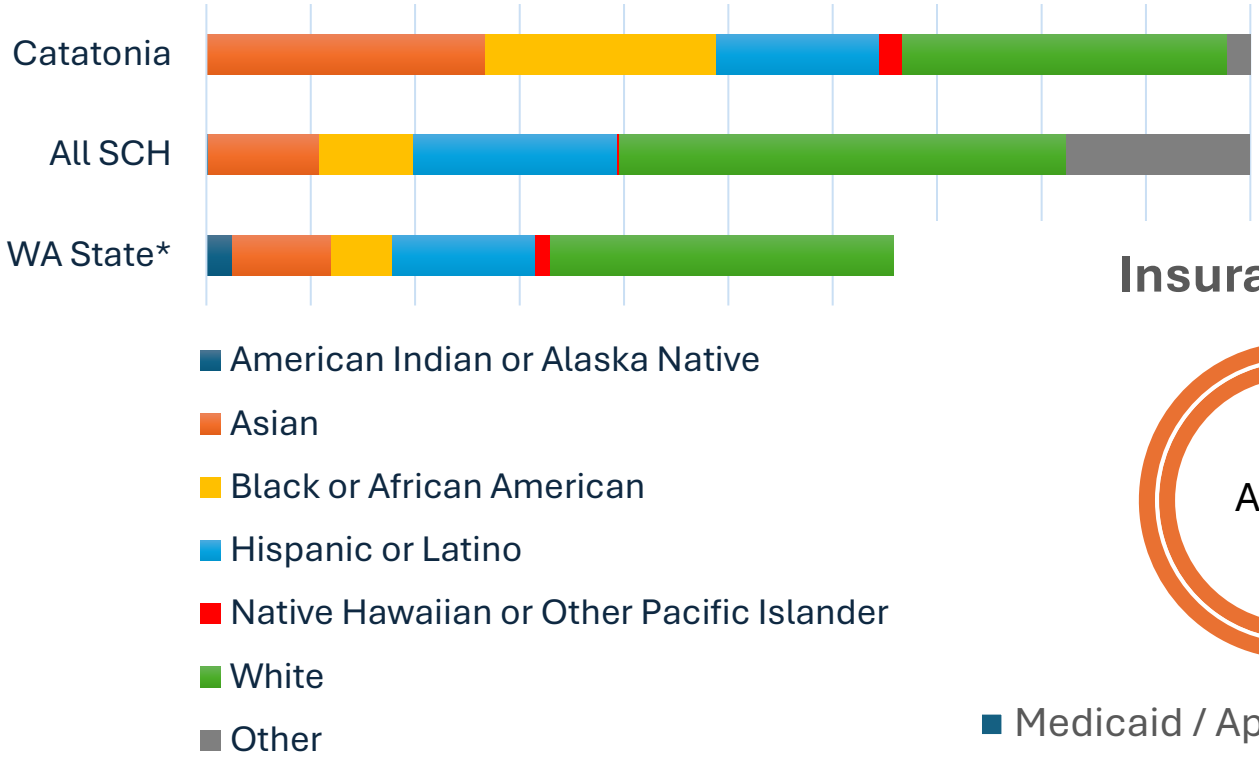
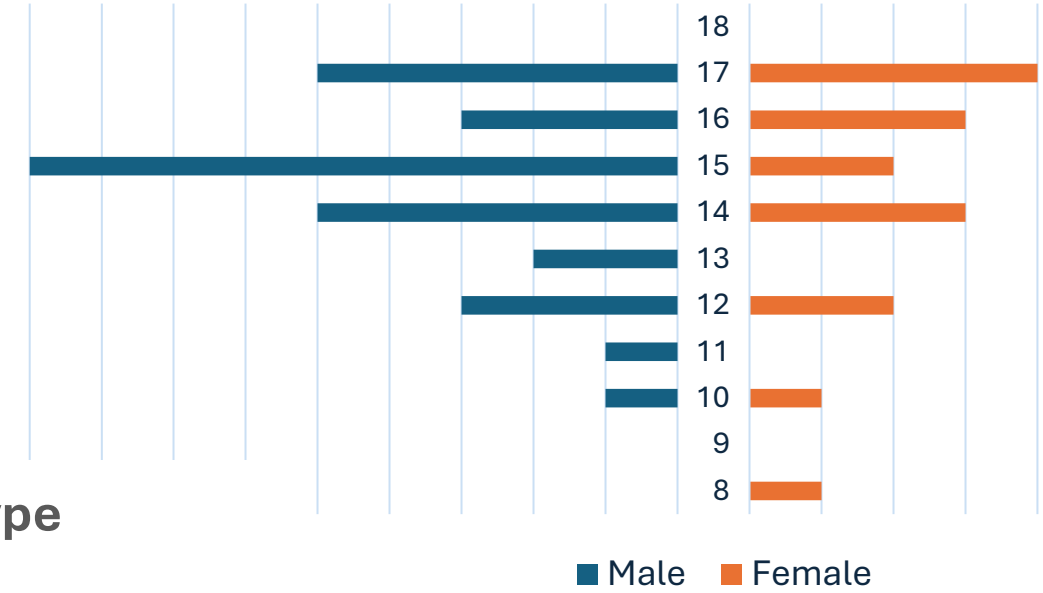
LOCAL DATA

Retrospective chart review of patients at Seattle Children's with first episode of catatonia, aged < 18 years, from 2018 to 2023

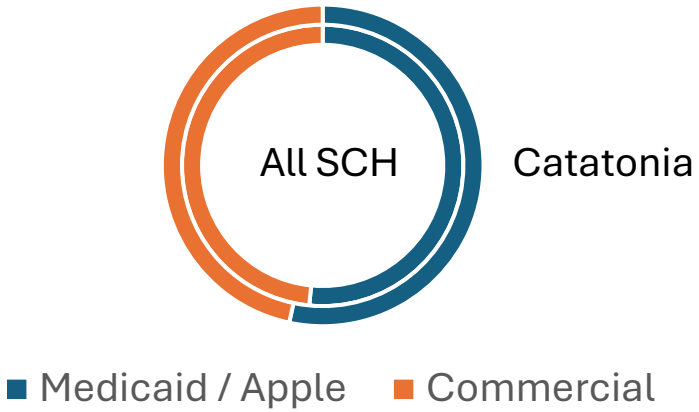
Race and Ethnicity



Age and Sex



Insurance type



45 patients in total

- 29 male; 16 female
- 10 pre COVID pandemic

Fries R, Berger R, Given A, Kodish I. Improving care for catatonia in pediatric patients. JAACAP. 2024;63:S192.

* Data from https://www.census.gov/library/stories/state-by-state/washington-population-change-between-census-decade.htmlc

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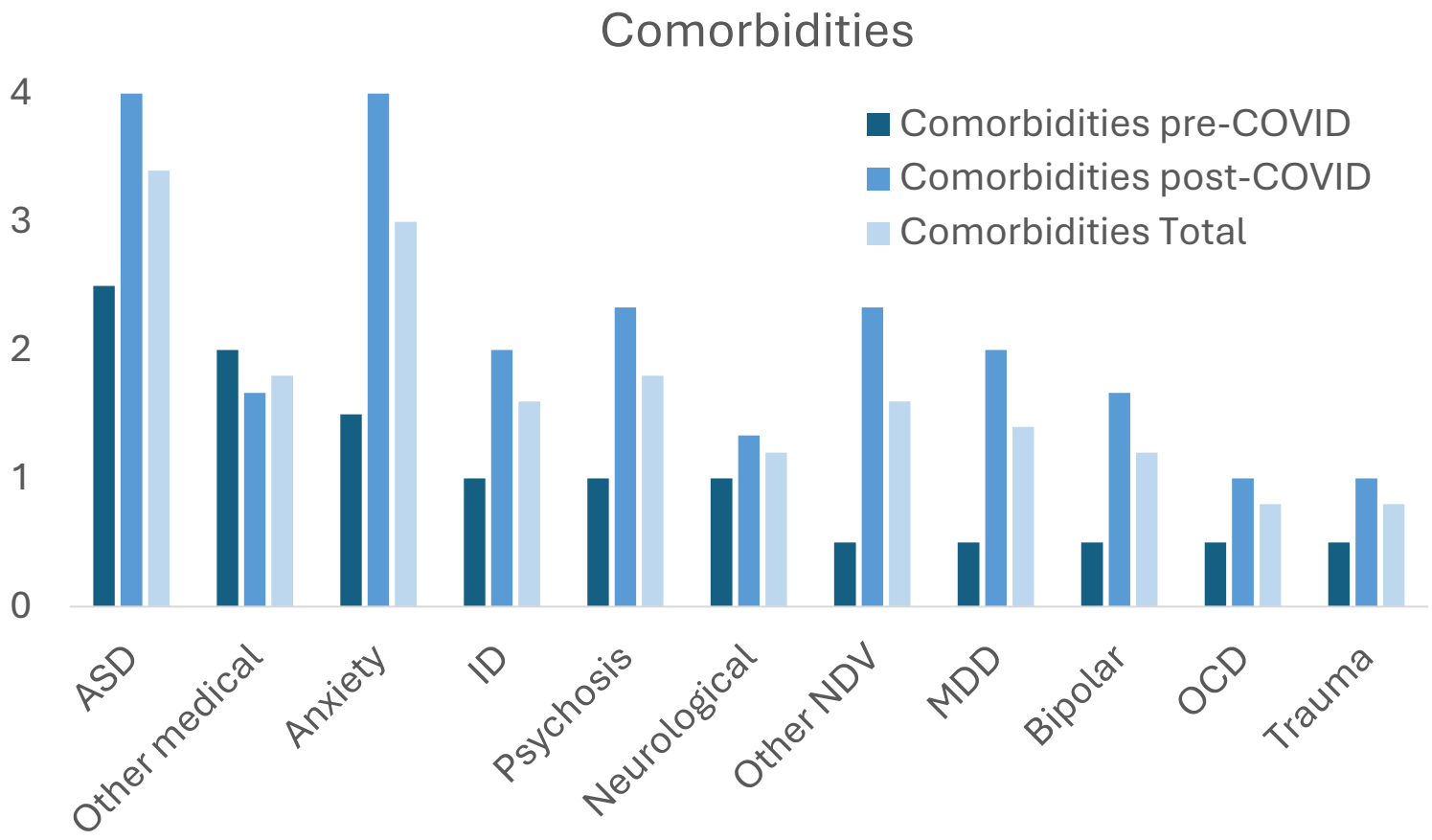
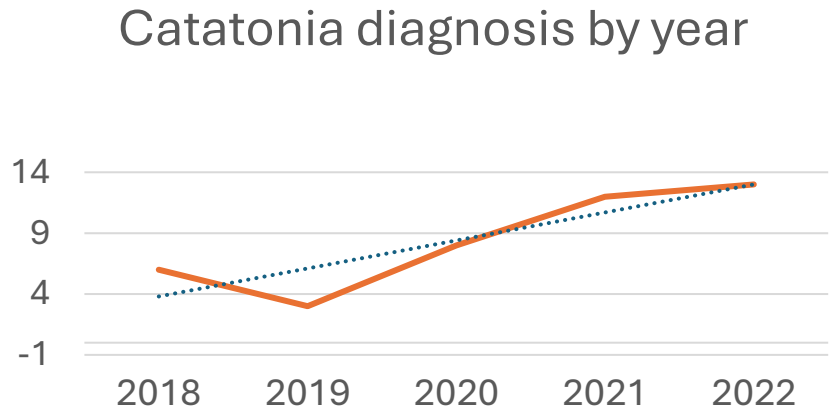
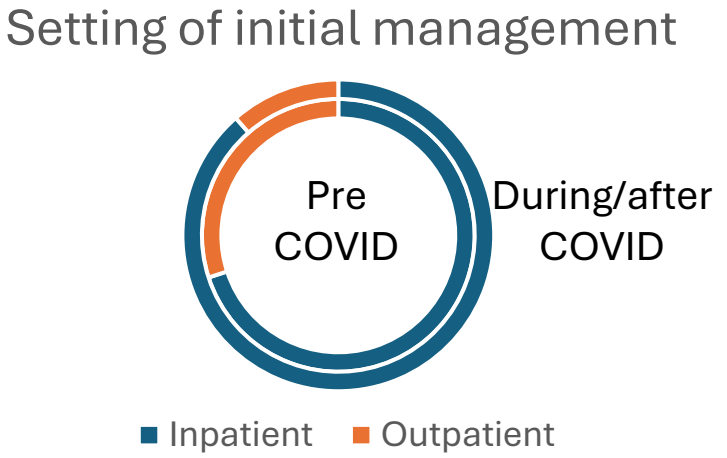
PATIENT CHARACTERISTICS







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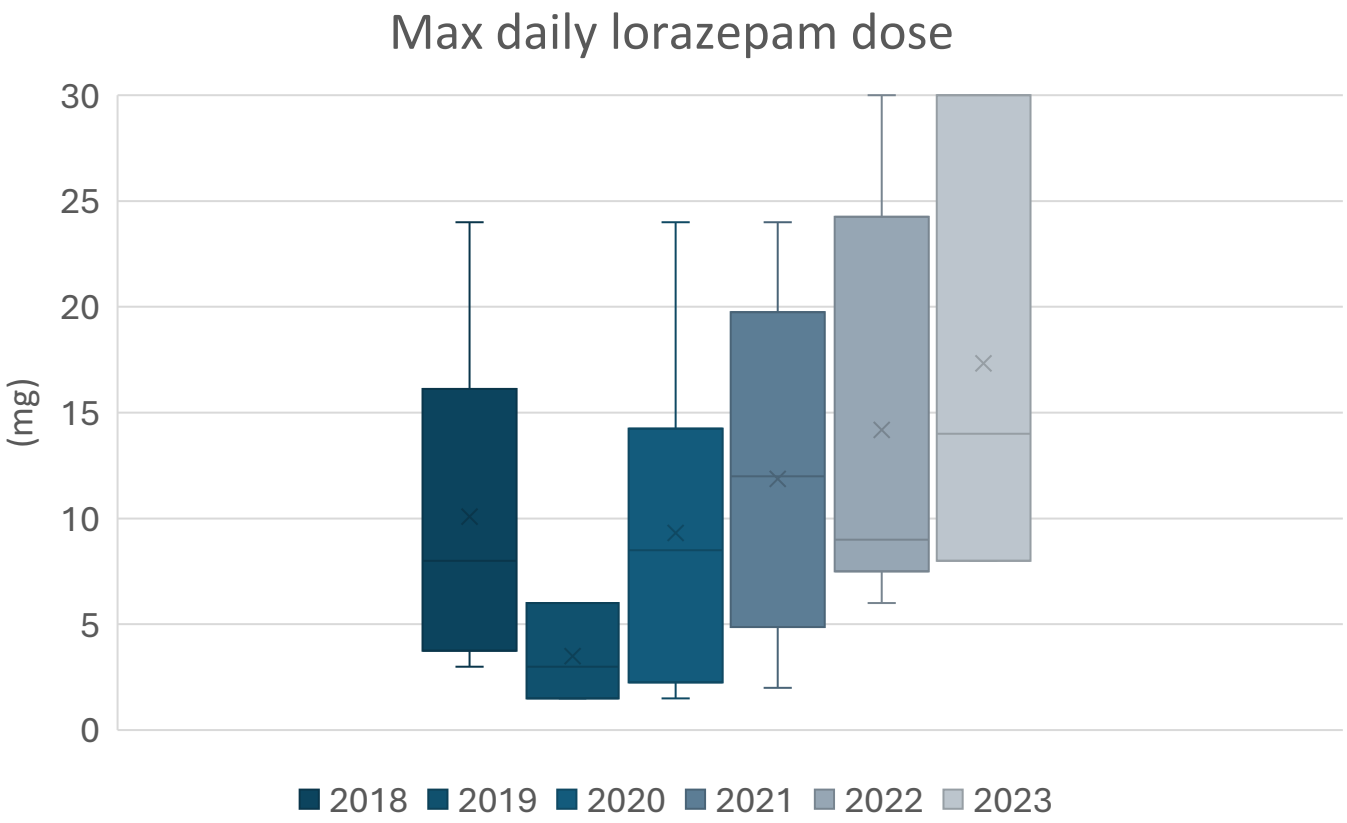
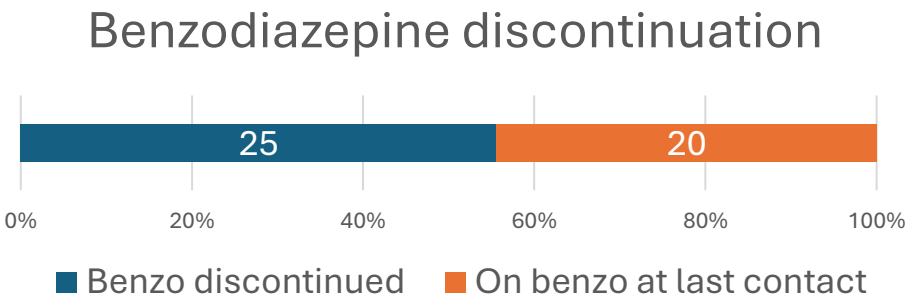
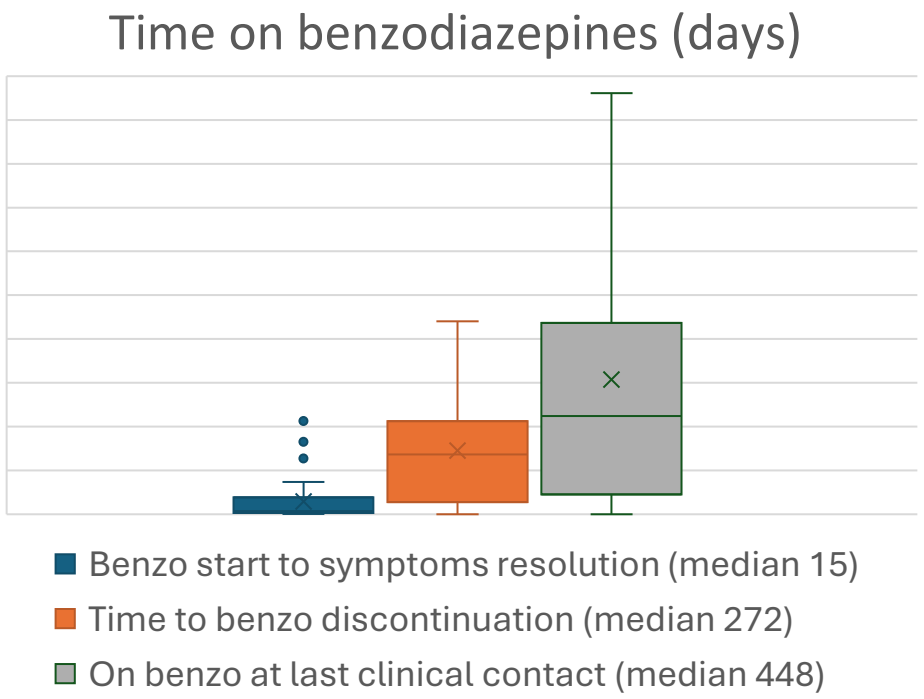
MEDICATION MANAGEMENT







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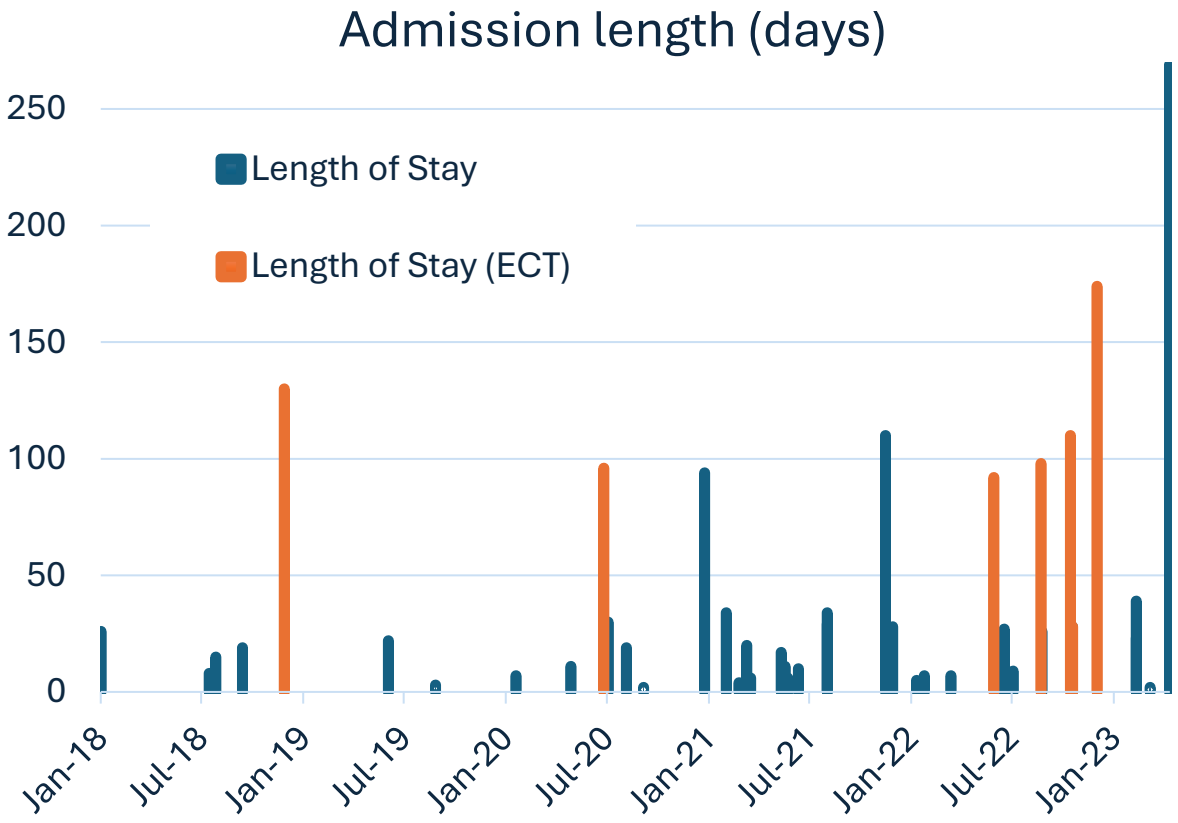
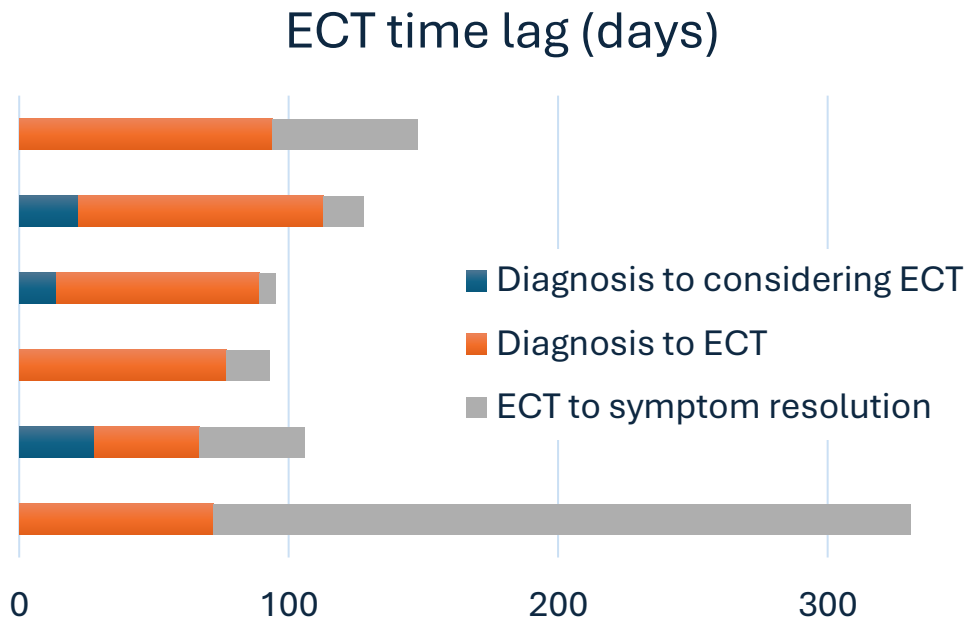
ECT FOR CATATONIA





42 days average length of stay

44% had benzo taper started before discharge

72% discharged with instructions for benzo management

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CASE: SYMPTOM & TREATMENT PROGRESSION

Discharged home after 5 months with outpatient ECT on 21mg lorazepam and 20mg zolpidem

- ECT tapered (2 months)
- Zolpidem tapered (2 months)
- Lorazepam tapered to 5mg daily over 11 months
- Emerging anxiety; questions about possible autism

1 year later: relapse of mutism / withdrawal following return to orchestra

- 2-week admission: lorazepam 21mg daily + ECT
- More work on pacing recovery, more gradual lorazepam taper

6 months later: readmitted with same presentation after returning to school…

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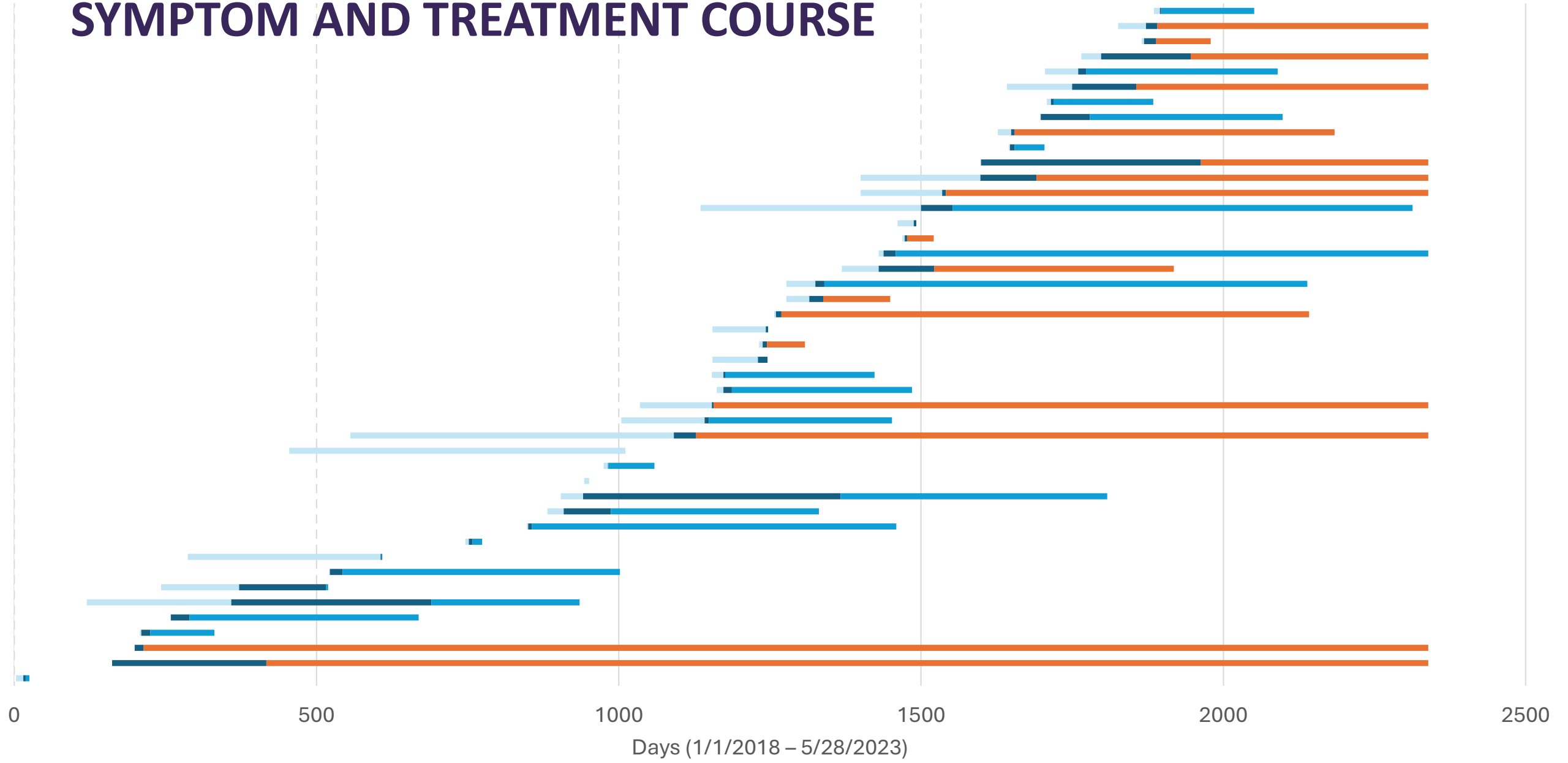
SYMPTOM AND TREATMENT COURSE



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OUTPATIENT MANAGEMENT

Sparse evidence for guidance on outpatient benzodiazepine tapering

2025 APA Resource Document on catatonia[1]

1. Maintenance therapy is recommended for patients with chronic or recurrent catatonia
2. Consider a trial reduction of up to 25% per week
3. Tapering after acute catatonia may take 1–2 weeks, whereas tapering in chronic catatonia can take months
4. PRN dose of benzodiazepine should be prescribed
5. **Tapers should be done slowly to minimize the risk of precipitating catatonia recurrence, with even more caution in older adults and those on treatment for longer periods**

1. Wilson JE et al. Catatonia: APA Resource Document. J Acad Consult Liaison Psychiatry. 2025;66:277-299.

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PRACTICAL CONSIDERATIONS

Barriers

- Pharmacy
- Outpatient providers
- Limited access to ECT -> reliance on benzodiazepines

Risks

- High dose benzodiazepines
- Long-term benzodiazepines
- Transition to adulthood
- Substance use (or redirection)
- Loss to follow-up

www.istockphoto.com/photos/angry-pharmacist

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RESEARCH QUESTIONS

When should we use “high dose” benzodiazepines?

- No dose-response relationship![1]
- Most studies used max of 8mg / day, for mean of 1 week, and remission 55%
- Some guidelines suggest a max of 16mg/day

Other questions

- Is it a fad?
- How do we manage all the risks?
- Are there sub-types of catatonia that respond differently to treatment?
- How does catatonia relate to Functional Neurological Symptoms (FNSD)[2]
- Is or will there be an association with substance use disorders?

1. Bot L et al. The Effect of Benzodiazepines on Catatonia: A Systematic Review and Meta-Analysis. Acta Psychiatrica Scandinavica. 2026;0:1–17.
2. Rogers S et al. The Spectrum Between Catatonia and Functional Neurologic Disorder Superimposed on Post-Infectious Encephalitis in a Marine Recruit. Mil Med. 2025;190:e1751-e1754.

QUESTIONS AND DISCUSSION

Hopefully, you can now:

1. Describe the nature, causes and treatment of catatonia
2. Understand the challenges of outpatient management of catatonia
3. Apply an awareness of outpatient benzodiazepine treatment for catatonia to your clinical practice

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