

Abstract 2025-01

Type of Research: Original Research

Title: The Impact of In-School and Out-of-School Suspension on Future Criminal Legal System Involvement and the Need for Mental Healthcare Collaboration in Prevention

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Introduction: School exclusionary discipline practices are associated with lower academic success, substance use, and engagement with the school-to-prison pipeline. Although in-school suspension (ISS) and out-of-school suspension (OSS) are both associated with negative outcomes, ISS is generally favored by policies, regardless of the scarcity of evidence supporting this preference. This study seeks to understand the relationship between suspension subtypes and future involvement with the legal system.

Methods: Young adults from the Future of Families and Child Wellbeing Study self-reported childhood school suspension during wave 7 of longitudinal data collection. Logistic regression models assessed the association between suspensions, criminal legal outcomes (arrests, jail time, charges), and sociodemographic information.

Results: Compared to non-suspended peers, students with ISS or OSS had significantly higher odds of arrest (ISS: OR = 3.25, $p=0.00$; OSS: OR = 3.44, $p=0.00$). ISS was linked to higher odds of spending a night in jail (OR = 2.01, $p=0.01$) and being charged with a crime (OR = 2.66, $p=0.00$). While OSS showed similar trends (jail: OR = 1.89, $p=0.08$; charges: OR = 1.72, $p=0.16$), these effect sizes were smaller and not statistically significant.

Discussion and Conclusion: Despite a shift from OSS to ISS, the risk of future criminal legal involvement remains, and may be greater among students with ISS. Students of color and with disabilities are at highest risk of suspension. Suspension disconnects students from education and social support, worsening long-term health and socioeconomic outcomes. Child and adolescent psychiatrists play a key role in integrating mental healthcare into schools for early intervention.

References: not applicable

Abstract 2025-02

Type of Research: Original Research

Title: Patients' Perception of Non-Pharmacological Treatments to Treat Opioid Use Disorders

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Introduction: Less than 25% of patients with opioid use disorder (OUD) utilize medications for opioid use disorder (MOUD), so testing novel, non-pharmacological treatments, as a stand-alone or complement to MOUD is essential. A potential treatment is cold plunge therapy (CPT), a brief, whole-body immersion in water <60°F.

Methods: To assess the feasibility and acceptability for CPT among patients with OUD, we developed and administered a 16-item survey to 80 patients with OUD at the University of Alabama at Birmingham University Hospital. Questions gauged patients' comfort discussing their OUD with friends and family, ease of access to buprenorphine, and preferences for non-pharmacological treatments. The survey was completed by scanning a Qualtrics QR code or on paper. Descriptive statistics were calculated using SPSS, version 29.

Results: Most respondents were male (55%), white (75%), and 35-44 years old (45%). On a 5-point Likert Scale, most participants reported using illicit substances "A lot" to make them feel better physically (63.7%) or psychologically (67.5%). Respondents also reported "Agree" (40%) or "Strongly Agree" (32.5%) regarding comfort discussing their OUD with family and friends, and "Strongly Agree" (58.8%) for their comfort seeking OUD treatment. 53.8% of participants indicated willingness to engage with non-pharmacological treatment options, and 61.3% were willing to try CPT specifically. Most respondents (43.8%) stated they would prefer non-pharmacological treatment options, and 33.8% of respondents favored a combination of MOUD and non-pharmacological treatment options.

Discussion and Conclusion: Patients with OUD were agreeable to consider trying non-pharmacological treatments, including CPT, especially as a complement to MOUD.

References: Hambræus, J., K. S. Hambræus and K. G. Sahlen (2020). "Patient perspectives on interventional pain management: thematic analysis of a qualitative interview study." *BMC Health Serv Res* 20(1): 604.

Keyes, K. M., et al. (2022). "What is the prevalence of and trend in opioid use disorder in the United States from 2010 to 2019? Using multiplier approaches to estimate

prevalence for an unknown population size." Drug and Alcohol Dependence Reports 3: 100052.

Timmermans, S., T. Stivers, K. Cox and A. McArthur (2024). "Patients in pain." Commun Med 19(2): 137-151.

Abstract 2025-03

Type of Research: Case Study

Title: Auditory Hallucinations as the initial presentation in Dissociative Identity Disorder

Presenting Author: Manprt Vohraa, PGY2, North Alabama Shoals Hospital, North Alabama Medical Center

Additional Author(s): Praveen Narahari MD, Shanthi Gatla MD, North Alabama Shoals Hospital, North Alabama Medical Center

Introduction: Dissociative identity disorder (DID) and schizophrenia-spectrum disorders (SSD) share some overlapping phenomenological features making accurate diagnosis more difficult.¹ Auditory hallucinations are common in dissociative identity disorder, borderline personality disorder, and complex posttraumatic stress disorder and are not specific to psychosis.²

Description: A 39 year old Caucasian female was admitted to Shoals Inpatient, with initial presentation of auditory hallucinations and disorganized speech. Initial mental status evaluation depicted a restricted and dismissive affect, tangential thought process with loose associations, auditory hallucinations, paranoia with poor insight and judgement. Patient was started on Risperdal 1mg at bedtime. Psychotic symptoms continued with reaction to internal stimuli. Risperdal was increased to 2mg. Patient gradually became more verbal and coherent and stated about the 8 personalities she endorsed. She mentioned about their names, roles and living arrangement. Patient also had a history of multiple psychosocial stressors i.e. sexual abuse, homelessness. The patient continued to endorse auditory hallucinations. She also endorsed mood lability with agitated episodes during the inpatient stay. Risperdal was gradually increased to 2mg twice a day. However, patient could not be monitored for a longer period due to unwillingness to stay inpatient. She was subsequently discharged against medical advice to Lotus Recovery House, with outpatient referral at Riverbend.

Discussion and Conclusion: The features that differentiate psychotic from dissociative voices include the qualities of the voices themselves, as well as other symptoms: for example, compared with dissociative voices, psychotic voices are accompanied by less sociability, more formal thought disorder, more negative symptoms including blunted affect, and more delusions.² Auditory hallucinations in DID are typically highly personified (i.e. related to a particular identity state, and are usually experienced as a voice inside rather than outside the head).³ More recently, specific links between dissociation and voice-hearing have been proposed with dissociative experiences potentially playing a predisposing role or acting as a preliminary stage in the development of AHs (Perona-Garcelán et al., 2011; Varese, Barkus, & Bentall, 2012).⁴ While some studies showed no co-occurrence of SSDs and DDs, others showed that between 9 and 50% of schizophrenia spectrum patients also meet diagnostic criteria for a DD.⁵

References: 1. Dorahy MJ, Nesbit A, Palmer R, Wiltshire B, Cording JR, Hanna D, Seager L, Middleton W. A comparison between auditory hallucinations, interpretation of voices,

and formal thought disorder in dissociative identity disorder and schizophrenia spectrum disorders. *J Clin Psychol*. 2023 Sep;79(9):2009-2022. Doi: 10.1002/jclp.23522. Epub 2023 Apr 19. PMID: 37074090.

2. Ross CA. Voices: Are They Dissociative or Psychotic? *J Nerv Ment Dis*. 2020 Sep; 208(9):658-662. Doi: 10.1097/NMD.0000000000001206. PMID: 32868688.

3. https://www.uptodate.com/contents/dissociative-identity-disorder-epidemiology-pathogenesis-clinical-manifestations-course-assessment-and-diagnosis?search=dissociative%20identity%20disorder%20and%20schizophrenia%20spectrum%20disorder&source=search_result&selectedTitle=6~150&usage_type=default&display_rank=6

4. Alderson-Day B, McCarthy-Jones S, Bedford S, Collins H, Dunne H, Rooke C, Fernyhough C. Shot through with voices: dissociation mediates the relationship between varieties of inner speech and auditory hallucination proneness. *Conscious Cogn*. 2014 Jul; 27(100):288-96. Doi: 10.1016/j.concog.2014.05.010. Epub 2014 Jun 28. PMID: 24980910; PMCID: PMC4111865.

5. Renard SB, Huntjens RJ, Lysaker PH, Moskowitz A, Aleman A, Pijnenborg GH. Unique and Overlapping Symptoms in Schizophrenia Spectrum and Dissociative Disorders in Relation to Models of Psychopathology: A Systematic Review. *Schizophr Bull*. 2017 Jan; 43(1):108-121. Doi: 10.1093/schbul/sbw063. Epub 2016 May 21. PMID: 27209638; PMCID: PMC5216848.

Abstract 2025-04

Type of Research: Original Research

Title: Lithium as a Potential Disease-Modifying Agent in Dementia: A Review of Emerging Evidence

Presenting Author: Sebrina Burnett, PGY2, University of South Alabama, Department of Psychiatry

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Introduction: Lithium, long established for mood disorders, is gaining attention for its neuroprotective role in dementia, especially Alzheimer's disease (AD) and mild cognitive impairment (MCI). This review synthesizes data from randomized controlled trials (RCTs), meta-analyses, and observational studies to assess its efficacy, mechanisms, dosing, and safety.

Methods: Meta-analyses show a significant decrease in decline versus placebo (standardized mean difference -0.41; 95% CI: -0.81 to -0.02) [1]. Network meta-analyses suggest lithium surpasses aducanumab, donanemab, and lecanemab in cognitive outcomes [3-4]. Observational studies report lower dementia incidence in lithium users, with protective effects against AD and vascular dementia (favorable hazard ratios) [2,5,7,8]. The pivotal Forlenza et al. (2019) RCT with 61 amnesic MCI patients on low-dose lithium (0.25–0.5 mEq/L) versus placebo over 2 years demonstrated stabilized cognition (ADAS-cog, CDR-SB), improved memory/attention, altered CSF amyloid-beta, and reduced MCI-to-dementia conversion [2]. Meta-analyses confirm modest benefits in MCI/early AD [1,3-5], though large RCTs are lacking for moderate/severe dementia or non-AD types (e.g., Lewy body, frontotemporal) [1-5,6]. Observational data hint at broader protection but suffer from non-randomization [6-8].

Mechanistically, lithium inhibits glycogen synthase kinase-3 β , reducing tau hyperphosphorylation and amyloid- β production, thus curbing neurofibrillary tangles. It promotes neurogenesis via Wnt/ β -catenin and PI3K/Akt/CREB pathways, upregulating BDNF and enhancing neural progenitor proliferation, particularly in the hippocampus. Lithium also boosts autophagic clearance of misfolded proteins and modulates inflammation by lowering pro-inflammatory cytokines (IL-1 α , IL-6, TNF- α , MIP-1B/CCL-4), raising IL-10, and inhibiting NF- κ B [6-8]. Low doses (0.25–0.5 mEq/L) are effective and tolerable in older adults, with monitoring for toxicity essential [1,8-10].

Recent 2024 meta-analyses extend benefits to Parkinson's disease through anti-inflammatory effects [6] and affirm dementia risk reduction [8]. Despite promising evidence, lithium is not first-line per guidelines; large RCTs and biomarker-driven trials are needed for routine adoption and subtype specificity [1-2,5,8,12].

- References:** 1. Matsunaga S, Kishi T, Annas P, et al. Lithium as a Treatment for Alzheimer's Disease: A Systematic Review and Meta-Analysis. *Journal of Alzheimer's Disease*. 2015;48(2):403-10. doi:10.3233/JAD-150437.
2. Forlenza OV, Radanovic M, Talib LL, Gattaz WF. Clinical and Biological Effects of Long-Term Lithium Treatment in Older Adults With Amnesic Mild Cognitive Impairment: Randomised Clinical Trial. *The British Journal of Psychiatry*. 2019;215(5):668-674. doi:10.1192/bjp.2019.76.
3. Terao I, Honyashiki M, Inoue T. Comparative Efficacy of Lithium and Aducanumab for Cognitive Decline in Patients With Mild Cognitive Impairment or Alzheimer's Disease: A Systematic Review and Network Meta-Analysis. *Ageing Research Reviews*. 2022;81:101709. doi:10.1016/j.arr.2022.101709.
4. Terao I, Kodama W. Comparative Efficacy, Tolerability and Acceptability of Donanemab, Lecanemab, Aducanumab and Lithium on Cognitive Function in Mild Cognitive Impairment and Alzheimer's Disease: A Systematic Review and Network Meta-Analysis. *Ageing Research Reviews*. 2024;94:102203. doi:10.1016/j.arr.2024.102203.
5. Forlenza OV, Diniz BS, Radanovic M, et al. Disease-Modifying Properties of Long-Term Lithium Treatment for Amnesic Mild Cognitive Impairment: Randomised Controlled Trial. *The British Journal of Psychiatry*. 2011;198(5):351-6. doi:10.1192/bjp.bp.110.080044.
6. Singulani MP, Ferreira AFF, Figueroa PS, et al. Lithium and Disease Modification: A Systematic Review and Meta-Analysis in Alzheimer's and Parkinson's Disease. *Ageing Research Reviews*. 2024;95:102231. doi:10.1016/j.arr.2024.102231.
7. Chen S, Underwood BR, Jones PB, Lewis JR, Cardinal RN. Association Between Lithium Use and the Incidence of Dementia and Its Subtypes: A Retrospective Cohort Study. *PLoS Medicine*. 2022;19(3):e1003941. doi:10.1371/journal.pmed.1003941.
8. Lu Q, Lv H, Liu X, et al. Lithium Therapy's Potential to Lower Dementia Risk and the Prevalence of Alzheimer's Disease: A Meta-Analysis. *European Neurology*. 2024;87(2):93-104. doi:10.1159/000538846.
9. Strawbridge R, Kerr-Gaffney J, Bessa G, et al. Identifying the Neuropsychiatric Health Effects of Low-Dose Lithium Interventions: A Systematic Review. *Neuroscience and Biobehavioral Reviews*. 2023;144:104975. doi:10.1016/j.neubiorev.2022.104975.
10. Hampel H, Ewers M, Bürger K, et al. Lithium trial in Alzheimer's disease: a randomized, single-blind, placebo-controlled, multicenter 10-week study. *Journal of Clinical Psychiatry*. 2009;70(6):922-31. doi:10.4088/JCP.08m04606.
11. Kessing LV, Gerds TA, Knudsen NN, et al. Association of Lithium in Drinking Water With the Incidence of Dementia. *JAMA Psychiatry*. 2017;74(10):1005-1010. doi:10.1001/jamapsychiatry.2017.2362.

12. Nunes MA, Viel TA, Buck HS. Microdose lithium treatment stabilized cognitive impairment in patients with Alzheimer's disease. *Current Alzheimer Research*. 2013;10(1):104-7. doi:10.2174/1567205011310010014.

Abstract 2025-05

Type of Research: Case Study

Title: Ketamine Administration Following an Acute Traumatic Event

Presenting Author: Maria Verde, MS-3, Frederick P. Whiddon College of Medicine

Additional Author(s): Sebrina Burnett, D.O. and William H Tillman III, M.D.

Introduction: Ketamine is a noncompetitive NMDA receptor antagonist that has demonstrated benefits in treating treatment-resistant depression and chronic posttraumatic stress disorder (PTSD). However, its role in acute stress disorder (ASD) remains understudied. Evidence suggests that ketamine administered in the immediate aftermath of trauma may worsen dissociative symptoms, though literature contains conflicting evidence and limited studies have been performed on sub-dissociative doses for ASD. Here we present a case in which a patient was administered intravenous ketamine following a traumatic event.

Description: A 38 y/o female with a past medical history of opioid use disorder on buprenorphine and lupus presented after intimate partner violence that resulted in a spontaneous abortion. In the emergency department, she was administered 50 mg intravenous ketamine which translates to 0.8 mg/kg for her weight. Psychiatry was consulted the following day in which she endorsed sadness, anxiety, and nightmares but did not exhibit worsening dissociation or psychosis despite receiving a dissociative dose of ketamine (>0.5 mg/kg IV).

Discussion and Conclusion: While ketamine has shown efficacy in treatment-resistant depression and chronic PTSD, its use in the acute trauma setting remains understudied and literature presents conflicting evidence of its effects. This case contrasts recent studies which have indicated that peritraumatic administration of ketamine may worsen ASD symptoms. Additionally, preclinical studies in acute stress rodent models have demonstrated that ketamine may attenuate stress-related behavioral sequelae through mechanisms including enhanced synaptic plasticity, modulation of traumatic memory reconsolidation, and reduction of neuroinflammation. Further clinical research is needed to clarify the effect of peritraumatic ketamine in ASD symptoms and determine confounders including dosage and co-administered drugs.

References: Louka, C. & Chiao, S. Intravenous Ketamine Exacerbating Symptoms of Acute Stress Disorder: A Case Report and Systematized Review of Existing Literature. *J. Acad. Consult.-Liaison Psychiatry* 65, 204–213 (2024).

Schnurr, P. P. et al. The Management of Posttraumatic Stress Disorder and Acute Stress Disorder: Synopsis of the 2023 U.S. Department of Veterans Affairs and U.S. Department of Defense Clinical Practice Guideline. *Ann. Intern. Med.* 177, 363–374 (2024).

Schönenberg, M., Reichwald, U., Domes, G., Badke, A. & Hautzinger, M. Effects of peritraumatic ketamine medication on early and sustained posttraumatic stress symptoms in moderately injured accident victims. *Psychopharmacology (Berl.)* 182, 420–425 (2005).

Valenza, M. et al. Molecular signatures of astrocytes and microglia maladaptive responses to acute stress are rescued by a single administration of ketamine in a rodent model of PTSD. *Transl. Psychiatry* 14, 209 (2024).

Zoladz, P. R. et al. Ketamine sex- and dose-dependently mitigates behavioral sequelae induced by a predator-based psychosocial stress model of post-traumatic stress disorder. *Behav. Brain Res.* 428, 113895 (2022).

Abstract 2025-06

Type of Research: Case Study

Title: Transcranial Magnetic Stimulation (TMS) Induced Manic Switch in Bipolar Depression: A Case Report

Presenting Author: Kripa Shrestha, MD, MPH, PGY-2, North Alabama Medical Center

Additional Author(s): B. Nagendra, MD; S. Gatla, MD; P. Narahari, MD, Department of Psychiatry, North Alabama Medical Center-Shoals Hospital

Introduction: Besides treatment resistant unipolar depression, non-invasive neuromodulation treatments as Transcranial Magnetic Stimulation (TMS) has emerged its use in treating depressive symptoms of bipolar disorder. Reports of mania associated with TMS continue to emerge, highlighting preventative strategies are essential to ensure patient safety.

Description: A 27-year-old male with past psychiatry history of MDD, Bipolar II, GAD, ADHD, status post standard TMS treatment over past 4 years, currently receiving maintenance TMS for last 5 months, non-compliant with his current medication of Lamotrigine and Olanzapine for a year, presented to outpatient clinic with symptoms suggestive of mania including elevated mood, irritability, pressured speech, decreased sleep, pacing around the home or driving around constantly, and increased goal directed activity.

Per collateral, since his start of last TMS session, patient was experiencing paranoid delusion of government plotting to take his daughter away, bizarre thoughts of seeing end of world, wife made pregnant by demon; grandiose delusions of repeated reincarnation and claiming himself to be God. Additionally, recent disorganized behaviors, increased agitation and impulsivity resulted in familial strain and loss of job.

Patient was admitted and started on Lithium and Olanzapine, which resulted in rapid resolution of symptoms and return to his baseline level of functioning in just three days. Patient was discharged on medication with plan to follow up outpatient for close monitoring.

Discussion and Conclusion: This case illustrates the symptoms of manic switch in a patient of bipolar depression on TMS therapy after discontinuation of mood stabilizers, which potentially precipitated manic incidence, which in this case tend to be less severe; lasting short period of time and responding well to acute anti-manic treatment. This emphasize precautionary measures are necessary to reduce the risk of treatment-induced manic switch in the context of bipolar disorder.

References: 1. Tran, N. N., Hutto, S., Thompson, L. R., & Hawkins, A. (2023). Transcranial Magnetic Stimulation in Bipolar II Disorder Treatment: A Case Report. *Cureus*, 15(9), e45918. <https://doi.org/10.7759/cureus.45918>

2. Miuli, A., Sepede, G., Stigliano, G., Mosca, A., Di Carlo, F., d'Andrea, G., Lalli, A., Spano, M. C., Pettoruso, M., Martinotti, G., & di Giannantonio, M. (2021). Hypomanic/ manic switch after transcranial magnetic stimulation in mood disorders: A systematic review and meta-analysis. *World journal of psychiatry*, 11(8), 477–490.
3. Kar, S. K., Singh, A., & Dwivedi, A. N. (2023). Mania triggered by intermittent theta burst stimulation-A case study. *Indian journal of psychiatry*, 65(9), 980–982. https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_438_23
4. Gold AK, Ornelas AC, Cirillo P, Caldieraro MA, Nardi AE, Nierenberg AA, Kinrys G. (2019). Clinical applications of transcranial magnetic stimulation in bipolar disorder. *Brain Behav*;9:e01419. doi: 10.1002/brb3.1419
5. Dolberg OT, Schreiber S, Grunhaus L. Transcranial magnetic stimulation-induced switch into mania: a report of two cases. (2001) *Biol Psychiatry*;49:468–470. doi: 10.1016/s0006-3223(00)01086-6.
6. Ozten E, Sayar GH, Karamustafalioglu O. Hypomanic shift observed during rTMS treatment of patients with unipolar depressive disorder: four case reports. *Ann Gen Psychiatry* (2013);12:12. doi: 10.1186/1744-859X-12-12.
7. Nahas Z, Kozel FA, Li X, Anderson B, George MS. Left prefrontal transcranial magnetic stimulation (TMS) treatment of depression in bipolar affective disorder: a pilot study of acute safety and efficacy (2003). *Bipolar Disord*;5:40–47. doi: 10.1034/j.1399-5618.2003.00011.x

Abstract 2025-07

Type of Research: Case Study

Title: Ketamine-Assisted Buprenorphine Induction for Kratom-Induced Opioid Withdrawal

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Introduction: Kratom use has an estimated prevalence of 10-16 million individuals in the United States [1, 2, 3]. Kratom has stimulant effects at low doses and analgesic effects at high doses [4]. Kratom's effects are mainly mediated mitragynine, a component of kratom, and 7-hydroxymitragynine, the active metabolite of mitragynine. These partial mu-opioid receptor agonists interact with adrenergic, serotonergic, and dopaminergic systems [5]. Currently, kratom withdrawal management is extrapolated from opioid withdrawal protocols. However, concerns exist about suboptimal treatment, production of opioid tolerance, and iatrogenic opioid dependence when initiating buprenorphine for kratom withdrawal [6]. Ketamine, an NMDA receptor antagonist, has emerging evidence for managing opioid withdrawal and facilitating buprenorphine induction in patients with fentanyl or methadone exposure [7]. A pilot case series used sub-dissociative doses of ketamine to help facilitate outpatient buprenorphine initiation, resulting in reduced spontaneous and precipitated withdrawal [8]. Based on this series, a protocol was developed for ketamine-assisted buprenorphine induction (KABI) in fentanyl withdrawal (Engeriser et al, unpublished manuscript, July 2025). This KABI protocol was successfully applied to kratom withdrawal.

Description: Patient is a 46-year-old male with past psychiatric history significant for opioid use disorder and alcohol use disorder who presents for mixed kratom and alcohol withdrawal management. Patient has used kratom daily since 2019 with one year of sobriety following rehabilitation in 2021 and in 2024. Concurrently, patient escalated alcohol consumption to 7-12 beers daily over the past three months.

Patient was admitted with COWS 6 and CIWA 4. On follow-up day 1, COWS was 12 and CIWA was 11, alcohol withdrawal management was continued and opioid withdrawal management was delayed. Overnight, patient received ativan per CIWA protocol and then on follow-up day 2, COWS was 1 and CIWA was 0. On follow-up day 3, COWS was 14 and CIWA was 0, so KABI was initiated, resulting in COWS of 3 in 30 minutes after ketamine and COWS of 0 in 30 minutes after suboxone then discharged.

Discussion and Conclusion: This case supports KABI for kratom withdrawal, which produced rapid symptom relief and a smooth transition to maintenance therapy. Ketamine's NMDA antagonism is hypothesized to reduce central sensitization and hyperalgesia while potentiating buprenorphine μ -opioid receptor signaling [7, 9, 10]. By reducing concerns for precipitated withdrawal, this protocol additionally addresses apprehensiveness that often prevents treatment initiation.

- References:**
1. Swogger, M. T., Smith, K. E., Garcia-Romeu, A., Grundmann, O., Veltri, C. A., Henningfield, J. E., & Busch, L. Y. (2022). Understanding kratom use: A guide for healthcare providers. *Frontiers in Pharmacology*, 13, 801855. <https://doi.org/10.3389/fphar.2022.801855>
 2. Covvey, J. R., Vogel, S. M., Peckham, A. M., & Evoy, K. E. (2020). Prevalence and characteristics of self-reported kratom use in a representative US general population sample. *Journal of Addictive Diseases*, 38(4), 506–513. <https://doi.org/10.1080/10550887.2020.1788914>
 3. Williams, R. S., & Nikitin, D. (2020). The internet market for kratom, an opioid alternative and variably legal recreational drug. *The International Journal on Drug Policy*, 78, 102715. <https://doi.org/10.1016/j.drugpo.2020.102715>
 4. Warner, M. L., Kaufman, N. C., & Grundmann, O. (2016). The pharmacology and toxicology of kratom: From traditional herb to drug of abuse. *International Journal of Legal Medicine*, 130(1), 127–138. <https://doi.org/10.1007/s00414-015-1279-y>
 5. Hanapi, N. A., Chear, N. J., Azizi, J., & Yusof, S. R. (2021). Kratom alkaloids: Interactions with enzymes, receptors, and cellular barriers. *Frontiers in Pharmacology*, 12, 751656. <https://doi.org/10.3389/fphar.2021.751656>
 6. Henningfield, J. E., Chawarski, M. C., Garcia-Romeu, A., Grundmann, O., Harun, N., Hassan, Z., McCurdy, C. R., McMahon, L. R., Sharma, A., Shoaib, M., Singh, D., Smith, K. E., Swogger, M. T., Vicknasingam, B., Walsh, Z., Wang, D. W., & Huestis, M. A. (2023). Kratom withdrawal: Discussions and conclusions of a scientific expert forum. *Drug and Alcohol Dependence Reports*, 7, 100142. <https://doi.org/10.1016/j.dadr.2023.100142>
 7. Shen, M. R., Campbell, D. E., Kopczynski, A., Maddams, S., Rosenblum, N., Nigam, K., & Suzuki, J. (2025). Ketamine in treating opioid use disorder and opioid withdrawal: A scoping review. *Frontiers in Psychiatry*, 16, 1552084. <https://doi.org/10.3389/fpsyt.2025.1552084>
 8. Grande, L. A., Hutch, T., Jack, K., Mironov, W., Iwuoha, J., Muy-Rivera, M., Grillo, J., Martin, S. A., & Herring, A. (2024). Ketamine-assisted buprenorphine initiation: A pilot case series. *Addiction Science & Clinical Practice*, 19(1), 60. <https://doi.org/10.1186/s13722-024-00494-2>
 9. Gupta, A., Devi, L. A., & Gomes, I. (2011). Potentiation of μ -opioid receptor-mediated signaling by ketamine. *Journal of Neurochemistry*, 119(2), 294–302. <https://doi.org/10.1111/j.1471-4159.2011.07361.x>
 10. Mizobuchi, Y., Miyano, K., Manabe, S., et al. (2022). Ketamine improves desensitization of μ -opioid receptors induced by repeated treatment with fentanyl but not with morphine. *Biomolecules*, 12(3), 426. <https://doi.org/10.3390/biom12030426>

Abstract 2025-08

Type of Research: Case Study

Title: Simplified Lithium Loading Strategies for Rapid Initiation and Early Maintenance

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Introduction: Rapid attainment of therapeutic lithium levels is critical for acute stabilization during manic episodes in bipolar disorder. Two simplified inpatient lithium loading strategies can be used for rapid initiation and early maintenance: (1) a weight-based, extended-release (ER) loading protocol with level-guided transition to once-nightly (QHS) maintenance dosing, and (2) a single-dose "test-dose" loading of a 600 mg Lithium dose with a 24-hour level to predict the maintenance dose using the Cooper's nonogram.

Objectives: This report aims to present an implementable inpatient lithium loading protocol and to summarize pharmacologic, safety, and operational considerations to facilitate clinical adoption.

Description: A 21-year-old female with schizoaffective disorder, bipolar type, and persistent mania despite multiple antipsychotics was initiated on lithium loading. She received a total of 2,100 mg over three divided ER doses. Due to hydration issues, the scheduled 12-hour lithium level was delayed; maintenance dosing continued at 900 mg QHS, with a subsequent level of 1.1 mEq/L confirming therapeutic range.

Methods/Protocol: Inpatients undergoing acute mood stabilization received 30 mg/kg total lithium as three ER doses (~10 mg/kg each), not exceeding 2,400 mg in females or 3,000 mg in males, scheduled in the late afternoon and evening. A 12-hour trough lithium level guided maintenance dosing: >1.0 mEq/L → 900 mg QHS; <1.0 mEq/L → 1,200 mg QHS; pending results → 900 mg QHS. ER formulations were preferred to minimize GI effects, transitioning to immediate-release for maintenance. Monitoring included serial troughs and routine metabolic panels.

Discussion and Conclusion: Safety Considerations: Baseline labs, ECG, and contraindication screening were essential. Drug interactions and renal function were closely monitored. Toxicity prompted immediate cessation and reassessment.

Conclusion: A weight-based, capped, three-dose ER lithium loading protocol with a protocolized 12-hour trough and straightforward QHS dosing provides a practical, tolerable, and monitorable inpatient strategy for rapid lithium initiation, emphasizing safety and operational feasibility.

References: Fountoulakis KN et al. *Eur Neuropsychopharmacol.* 2022;54:100–115.

Malhi GS et al. *Aust NZ J Psychiatry.* 2021;55(1):7–117.

- Wingård L et al. *Eur Neuropsychopharmacol*. 2019;29:691–700.
- Rhee TG et al. *Am J Psychiatry*. 2020;177:706–715.
- Poranen J et al. *Acta Psychiatr Scand*. 2022;146:583–593.
- Malhi GS et al. *Bipolar Disord*. 2021;23:7–10.
- Fornaro M et al. *Am J Psychiatry*. 2020;177:76–92.
- NICE/MHRA Drug Safety Update. 2022.
- Zhang L et al. *Eur J Obstet Gynecol Reprod Biol*. 2016;202:26–31.
- Meyer JM, Stahl SM. *The Lithium Handbook*. Cambridge Univ Press, 2023.
- Schou M. *Lithium Treatment of Mood Disorders*. 6th ed. Karger.

Abstract 2025-09

Type of Research: Original Research

Title: Dose-Dependent Psychiatric Toxicity of Kratom (*Mitragyna speciosa*): Implications for Alabama and the Deep South: A Systematic Review and Meta-Analysis

Presenting Author: Rommy Cedeno, PGY1, North Alabama Shoals Hospital

Additional Author(s): Sai Tejaswi, M.D., Karthika Govindan, M.D., Muhammad Farooq, M.D., Prathyusha Bande, M.D., Surbhi Batra, M.D., Ali Pervaiz, M.D., Praveen Narahari, M.D.

Introduction: Kratom (*Mitragyna speciosa*), a Southeast Asian plant increasingly used in the United States, is often promoted as a “natural” aid for pain and opioid withdrawal. Nevertheless, the psychiatric risks of this substance are still inadequately understood, even though its use is increasing in regions that are already highly stressed by the opioid crisis. However, the psychiatric consequences of this transition have never been systematically quantified. This dual nature has fueled a contentious and fragmented regulatory response in the southern United States, where the opioid epidemic has had a profound impact. In states like Alabama, where it is classified as a Schedule I controlled substances, like heroin and LSD, kratom is now illegal. Understanding these risks is essential for clinicians and policymakers, particularly in Alabama, where regulation of kratom remains fragmented and highly contested.

Methods: A systematic search of major academic databases (including PubMed, Scopus, and PsycINFO) was conducted for all literature published through September 2025. Search terms included “kratom,” “mitragynine,” “dose,” “psychosis,” “mania,” and “dependence.” Studies that provided enough information for dose categorization and reported on psychiatric outcomes were included. Based on established pharmacological thresholds in the literature, consumption was stratified into “low-dose” (<5 grams/day), associated with stimulant effects, and “high-dose” (≥5 grams/day), where opioid-like sedative and analgesic effects predominate. The Newcastle-Ottawa Scale was used to evaluate the included studies' methodological quality. Important findings for the meta-analysis included the prevalence of psychotic symptoms and the frequency of severe dependence necessitating intervention. Pooled Odds Ratios (OR) were calculated using a random-effects model.

Results: This meta-analysis included data from 15 studies involving over 8,000 individuals, identified a distinct, dose-dependent increase in risk. The high-dose cohort had a significantly higher aggregated prevalence of reported psychotic symptoms (4.8%; 95% CI, 2.5–7.1%) than the low-dose cohort (0.4%; 95% CI, 0.1–0.9%), as evidenced by an Odds Ratio (OR) of 12.5 (95% CI, 7.2–21.7; $p < 0.001$) and low statistical heterogeneity ($I^2 = 22\%$). Similarly, the incidence of developing physical dependence requiring clinical intervention was markedly elevated in the high-dose group. The qualitative data consistently showed that low-dose use is characterized by stimulatory effects, while high-dose use is primarily associated with sedation, withdrawal symptoms, and serious psychiatric and dependence-related complications.

Discussion and Conclusion: Our findings establish a critical, evidence-based mandate: assessing the quantity of kratom consumed is essential for patient safety. This meta-analysis confirms that high-dose use is strongly associated with psychosis and severe dependence. Therefore, integrating specific dose inquiries into routine substance use screenings is a crucial and immediate step toward accurate risk stratification and effective harm reduction. This is especially crucial for patients who are self-managing pain or opioid use disorder, a reality particularly pertinent in Alabama, where the debate surrounding kratom continues to be contentious.

- References:** 1. Boyer, E. W., Babu, K. M., Adkins, J. E., McCurdy, C. R., & Halpern, J. H. (2008). Self-treatment of opioid withdrawal using kratom (*Mitragyna speciosa* korth). *Addiction*, 103(6), 1048–1050. <https://doi.org/10.1111/j.1360-0443.2008.02209.x>
2. Eastlack, S. C., Cornett, E. M., & Kaye, A. D. (2020). Kratom—Pharmacology, clinical implications, and legal status: A comprehensive review. *Pain and Therapy*, 9(1), 55–69. <https://doi.org/10.1007/s40122-020-00151-x>
3. Grundmann, O. (2017). Patterns of kratom use and health impact in the US—Results from an online survey. *Drug and Alcohol Dependence*, 176, 63–70. <https://doi.org/10.1016/j.drugalcdep.2017.03.007>
4. Le, D., Gogjol, A., & Bhalala, U. S. (2021). Kratom-induced psychosis and treatment: A case report. *Cureus*, 13(9), e18191. <https://doi.org/10.7759/cureus.18191>
5. Niciu, M. J., & Henter, I. D. (2021). Kratom-induced psychosis and withdrawal: A case report. *American Journal of Psychiatry*, 178(3), 273. <https://doi.org/10.1176/appi.ajp.2020.20091350>
6. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
7. Palamar, J. J. (2021). Past-year kratom use in the U.S.: Estimates from a nationally representative sample. *American Journal of Preventive Medicine*, 61(2), 240–245. <https://doi.org/10.1016/j.amepre.2021.02.021>
8. Post, S., Spiller, H. A., Chounthirath, T., & Smith, G. A. (2019). Kratom exposures reported to United States poison control centers: 2011–2017. *Clinical Toxicology*, 57(10), 847–854. <https://doi.org/10.1080/15563650.2018.1562282>
9. Shah, K., Tankersley, W., & Mekala, H. (2021). Kratom: An emerging issue and need for regulations in the United States. *Primary Care Companion for CNS Disorders*, 23(1), 20r02770. <https://doi.org/10.4088/PCC.20r02770>

10. Singh, D., Müller, C. P., & Vicknasingam, B. K. (2014). Kratom (*Mitragyna speciosa*) dependence, withdrawal symptoms and craving in regular users. *Drug and Alcohol Dependence*, 139, 132–137. <https://doi.org/10.1016/j.drugalcdep.2014.03.017>
 11. Stanciu, C. N., Gnanasegaram, S. A., Ahmed, S., & Penders, T. (2019). Kratom withdrawal: A systematic review with case series. *Journal of Psychoactive Drugs*, 51(1), 12–18. <https://doi.org/10.1080/02791072.2018.1552332>
 12. Veltri, C., & Grundmann, O. (2019). Current perspectives on the impact of Kratom use. *Substance Abuse and Rehabilitation*, 10, 23–31. <https://doi.org/10.2147/SAR.S164261>
- Wells, G. A., Shea, B., O'Connell, D., Peterson, J., Welch, V., Losos, M., & Tugwell, P. (2000). The Newcastle-Ottawa Scale (NOS) for assessing the quality of nonrandomised studies in meta-analyses. The Ottawa Hospital Research Institute. http://www.ohri.ca/programs/clinical_epidemiology/oxford.asp_

Abstract 2025-10

Type of Research: Case Study

Title: Refractory First-Episode Psychosis in an Adolescent Patient with Cerebral Palsy and Chronic Hydrocephalus

Presenting Author: Rosa Alex Somers, OMS-3, Edward Via College of Osteopathic Medicine

Additional Author(s): Dr. Maria Hamilton MD (University of South Alabama Psychiatry), Dr. Sajan Sheth DO (University of South Alabama Psychiatry), Sydney Sheppard OMS-3 (Alabama College of Osteopathic Medicine)

Introduction: Children with cerebral palsy (CP) carry a high burden of psychiatric comorbidity (often ADHD/anxiety), whereas psychotic disorders are uncommon. Maternal polysubstance use during pregnancy, familial history of serious mental illness, and adverse childhood experiences may sensitize stress-diathesis pathways to psychosis. Concomitantly, neurodevelopmental vulnerabilities in CP and chronic hydrocephalus (CH) may converge to lower the threshold for psychosis and infer treatment resistance.

Description: A previously high-functioning 14-year-old girl with spastic cerebral palsy and chronic hydrocephalus (stable midline shift) presented with abrupt onset of psychosis and aggression requiring hospitalization. Phenomenology included grandiose, erotomaniac, and persecutory delusions, hyper-religiosity, ideas of reference, looseness of associations, auditory hallucinations, and cognitive decline, with mixed mood symptoms. Collateral confirmed excellent premorbid academics and relationships. Early history included removal from biological parents for polysubstance use/serious mental illness and subsequent adoption at age 4. Comprehensive medical evaluations, including head CT, broad laboratory and toxicology testing, and infectious studies, were unrevealing. A concurrent urinary tract infection was treated without improvement in mental status. Despite a 3-week trial of olanzapine with appropriate titration at an outside hospital, there was minimal improvement. Lithium was initiated for mood instability and antipsychotic augmentation. Although developing, leading differential diagnoses are bipolar I disorder, mixed episode, with psychotic features vs schizoaffective disorder.

Discussion and Conclusion: This case highlights an unusual convergence of lifelong neurodevelopmental injury (CP and CH) and severe familial adversity (maternal polysubstance use, serious mental illness, early removal/adoption) at the onset of first-episode psychosis (FEP) in the absence of an acute stressor. Evidence from hydrocephalus studies shows reduced dendritic arborization, decreased PSD-95/synaptophysin, and ventricular enlargement with cortical/hippocampal compression. Interestingly, these changes parallel schizophrenia-associated pathology. The patient's abrupt, severe, and antipsychotic-nonresponsive presentation despite no new structural changes or other organic etiology, suggests a lowered threshold for psychosis. Clinically, framing this presentation as medically complicated FEP supports

rapid mood stabilization, close monitoring for antipsychotic non-response, and early augmentation strategies. While rare, this case underscores the importance of maintaining high suspicion for psychosis, rather than attributing new behavioral changes to baseline disability in patients with CP or hydrocephalus.

References: Bjorgaas HM, Hysing M, Elgen I, et al. Psychiatric disorders among children with cerebral palsy at school starting age. *Res Dev Disabil*. 2012;33(4):1287–1293. doi:10.1016/j.ridd.2012.02.02

Carlsson M, Olsson I, Hagberg G, Beckung E. Behaviour in children with cerebral palsy with and without epilepsy. *Dev Med Child Neurol*. 2008;50(10):784–789. doi:10.1111/j.1469-8749.2008.03090

Foster T, Rai AIK, Weller RA, Dixon TA, Weller EB. Psychiatric complications in cerebral palsy. *Curr Psychiatry Rep*. 2010;12(2):116–121. doi:10.1007/s11920-010-0096-8

Glantz LA, Lewis DA. Decreased dendritic spine density on prefrontal cortical pyramidal neurons in schizophrenia. *Arch Gen Psychiatry*. 2000;57(1):65–73. doi:10.1001/archpsyc.57.1.65

Hu, H., Xia, Y., Li, Y., & Wang, Y. (2021). Synaptic remodeling in chronic hydrocephalus. *Frontiers in Aging Neuroscience*, 13, 640569. <https://doi.org/10.3389/fnagi.2021.640569>

Hagmann P, et al. Synaptic loss in schizophrenia: a meta-analysis and systematic review of synaptic protein and mRNA measures. *Mol Psychiatry*. 2019

Parkes J, White-Koning M, Dickinson HO, Thyen U, Arnaud C, Beckung E, et al. Psychological problems in children with cerebral palsy: a cross-sectional European study. *J Child Psychol Psychiatry*. 2008;49(4):405–413. doi:10.1111/j.1469-7610.2007.01845.

Satterthwaite TD, Wolf DH, Calkins ME, et al. Structural brain abnormalities in youth with psychosis spectrum symptoms. *JAMA Psychiatry*. 2016;73(5):515–524. doi:10.1001/jamapsychiatry.2015.3463

Sigurdardottir, S. et. al. "Behavioural and emotional symptoms of preschool children with cerebral palsy: A population-based study." *Developmental Medicine and Child Neurology*, vol 52, no 11, 2010, pp. 1056–1061

Voorman JM, Dallmeijer AJ, van Eck M, Schuengel C, Becher JG. Social functioning and communication in children with cerebral palsy: association with disease characteristics and personal and environmental factors. *Dev Med Child Neurol*. 2010;52(5):441–447. doi:10.1111/j.1469-8749.2009.03399.

Abstract 2025-11

Type of Research: Case Study

Title: Differentiating Between Catatonia and Neuroleptic Malignant Syndrome

Presenting Author: Alina Teslenko, PGY-3, University of South Alabama

Additional Author(s): Alexandra McNeil, DO, PGY-2, University of South Alabama Psychiatric Residency. Marianne Saitz, DO, University of South Alabama Psychiatric Residency; Kevin Putinta, MD, University of South Alabama Psychiatric Residency

Introduction: This case report is an attempt to illustrate the thought that NMS and catatonia may belong to a spectrum of the same illness, where NMS could be thought of as a severe subtype of catatonia.

The investigation of this fact is important as there is still a significant overlap between the two syndromes and certain common factors can be causative for both (ex. use of neuroleptics), yet there are some principal differences in symptomatology and the consequences of non-treatment (ex. catatonia may go untreated for years, whereas NMS can be rapidly lethal).

Description: A 41-year-old male with a medical history of Crohn's Disease and a psychiatric history of a now antiquated Mood Disorder Not Otherwise Specified (NOS), on Wellbutrin and Zoloft, and occasional Ativan for sleep. He was found at home, covered in his own feces and with AMS, lying on the floor for an unknown period, and subsequently brought to the ED in an increasingly agitated condition. Laboratory workup revealed increasing CK and elevated WBC and AST/ALT levels, as well as he demonstrated signs of autonomic instability. Along with many doses of various benzodiazepine agents, he was given two doses of Haldol by the ED, which culminated in the development of profound lead-pipe rigidity, diaphoresis, and declining mental status. He required acute stabilization with Ativan, followed by the addition of Depakote, and was ultimately discharged home in an improved and stable condition 14 days later. No dantrolene was used.

Discussion and Conclusion: There is a great overlap between the symptoms of NMS and catatonia, and both will worsen with the administration of neuroleptics, making differentiation extremely difficult. Some consider the two to lie on a single spectrum. Our case report is yet another illustration to this claim, demonstrating profound worsening of the patient's symptoms after Haloperidol, and subsequent resolution of the symptoms with Ativan. While no dantrolene was used and he stabilized on a benzodiazepine only, the fact that he developed lead-pipe rigidity after the administration of Haloperidol makes us suspect that he initially presented in the state of excited catatonia and progressed towards developing NMS after exposure to a potent FGA.

References: [1] Sahoo, M. K., Agarwal, S., & Biswas, H. (2014). Catatonia versus neuroleptic malignant syndrome: the diagnostic dilemma and treatment. *Industrial psychiatry journal*, 23(2), 163–165. <https://doi.org/10.4103/0972-6748.151703>

- [2] Sienaeert, P., Dhossche, D. M., Vancampfort, D., De Hert, M., & Gazdag, G. (2014). A clinical review of the treatment of catatonia. *Frontiers in psychiatry*, 5, 181.
<https://doi.org/10.3389/fpsyt.2014.00181>
- [3] Buciuc AG, Traugott P, Danger CR. An Unusual Presentation of Serotonin Syndrome and Subsequent Catatonia in a Patient With a Family History of Huntington's Disease. *Cureus*. 2023;15(9):e45356. Published 2023 Sep 16. doi:10.7759/cureus.45356
- [4] Desai, S., Hirachan, T., Toma, A., & Gerolemou, A. (2021). Malignant Catatonia Versus Neuroleptic Malignant Syndrome. *Cureus*, 13(6), e15818.
<https://doi.org/10.7759/cureus.15818>

Abstract 2025-12

Type of Research: Case Study

Title: Peduncular Hallucinosis: Examining the Overlap of Neurology and Psychiatry with a Rare Case

Presenting Author: Bhargavi Nagendra, PGY-3, North Alabama Medical Center

Additional Author(s): Emmy Graham, PGY-3, North Alabama Medical Center; Shanthi Gatla, MD; Praveen Narahari, MD; Shanthi Gatla, MD

Introduction: Peduncular hallucinosis (PH) is a rare neurological condition characterized by vivid, complex visual hallucinations that often retain a lifelike quality with preserved reality testing. (1)

Description: A 60-year-old Caucasian female with a history of coronary artery disease, sick sinus syndrome, and dysautonomia presented with recurrent visual hallucinations over 10 days. Her hallucinations included vivid depictions of strange animals, costumed humans, progressed to distressing scenes involving dead animals and children. Of note, hallucinations were associated with dehydration, dysautonomia, and postural hypotension. Mental status examination revealed an alert, fully oriented patient with fair insight into the phenomenon and showed no signs of cognitive impairment evidenced by MMSE score of 25. Physical examination was positive for orthostatic hypotension. Imaging studies, including CT, CTA, and abdominal/pelvic scans, ruled out vascular occlusions or aneurysms.

Patient was treated with enteric-coated aspirin and Northera to reduce possible repetitive ischemic injury due to postural drop. Although evidence is limited, Haloperidol 5 mg/day) was cautiously introduced due to its lower risk of postural hypotension, reducing hallucinatory intensity and distress despite limited evidence of antipsychotic efficacy in PH.

Discussion and Conclusion: Peduncular hallucinosis (PH) was first described by Jean Lhermitte in 1922, who also linked it to lesions in the midbrain and pons. (3) Other etiologies include involvement of ARAS affecting sleep wake cycle.

The patient's preserved insight and ability to distinguish reality from hallucinations align with peduncular hallucinosis rather than primary psychiatric disorders. (3) Fluctuating blood pressure and dehydration may contribute to cerebral hypoperfusion, resulting in disrupted visual processing in the brainstem especially the retinogeniculocalcarine (RGC) pathways. (7) While delirium was considered due to confusion during hallucinations, the chronic nature of her symptoms and intact cognitive function argues against it. (8)

This case report is limited by the absence of advanced neuroimaging, such as MRI, to confirm midbrain or thalamic lesions, and lacks long-term follow-up data to assess the sustained efficacy of interventions like haloperidol and Northera. This case highlights the importance of considering organic causes in elderly patients and calls for further investigation into the pathophysiology of PH through imaging and autonomic testing.

- References:** 1. Penney L, Galarneau D. Peduncular hallucinosis: a case report. *Ochsner J* 2014;14:450–2.
2. Benke T. Peduncular hallucinosis: a syndrome of impaired reality monitoring. *J Neurol* 2006;253:1561–71.
3. Lhermitte J. Syndrome de la calotte Du pedoncule cerebral. les troubles psycho-sensoriels dans les lesions Du mesocephale. *Rev Neurol* 1922;38:1359–65.
4. Galetta KM, Prasad S. Historical trends in the diagnosis of peduncular hallucinosis. *J Neuroophthalmol* 2018;38:438–41.
5. Vertrungo R, Vella A, Mascalchi M, Alessandria M, D'Angelo RG, allassi, Ret.al Peduncular hallucinosis: a polysomnographic and spect study of a patient and efficacy of serotonergic therapy. *Sleep Med* 2009;10(10):1158-1160.
6. Mocelin ,R Walterfang M, Velakoulis D. Neuropsychiatry of compelx visual hallucinations. *Aust NZJ Psychiatry* 2006;40(9):742-751.
7. Spiegel DR, Lybeck B, Angeles .V A possible case fo peduncular hallucinosis ni a patient with Parkinson's disease successfully treated with quetiapine. *J Neu- ropsychiatry Clin Neurosci* 2009;21(2):225-226.
8. Folstein ME, Folstein SE, McHugh PR. "Mini-mental state". Apractical meht- od for grading hte cognitive state of patients for hte clinician. *J Psychiatr Res* 1975;12(3):189-198.

Abstract 2025-13

Type of Research: Case Study

Title: Dissociative Identity Disorder Masked by Acute THC-Induced Psychosis

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Additional Author(s): Tarak Vasavada, MD (Huntsville Hospital Psychiatry Department)

Introduction: Dissociative identity disorder (DID) is characterized in the DSM-5-TR by the presence of two or more distinct personalities, dissociative amnesia, identity disturbance, and severe childhood trauma. Acute substance intoxication, particularly with tetrahydrocannabinol (THC), can complicate recognition of chronic dissociative disorders by inducing psychosis and dissociative-like symptoms. Cannabis intoxication has long been linked with hallucinations, paranoia, delusions, dissociation, and disorganized thought, with some individuals experiencing prolonged psychosis following high-dose ingestion.

Description: A 24-year-old female presented to the emergency department after a suicide attempt in response to a command hallucination from her phone. She reported auditory hallucinations and exhibited disorganized speech with bizarre somatic and religious content. Urine drug screening was positive only for THC. Her mother reported recent cannabis initiation following abuse by a roommate and ingestion of an edible three days earlier, after which she was found on the bathroom floor, frightened and paranoid. The patient was suspicious of her mother and boyfriend.

During hospitalization, psychosis rapidly improved, and hallucinations and delusions resolved. However, she continued to make self-referential comments (e.g., “I am a dog”) and described her initial episode as an out-of-body merging with her boyfriend, whom she saw as caring for her. She also disclosed emotional, physical, and sexual abuse in childhood.

A two-week follow-up phone call was performed due to concern that her “merging” was depersonalization masked by psychosis. The patient then elaborated on distinct identities experienced since childhood: a protective male, a nurturing female caretaker, a comfort-oriented dog, and several shy personalities preferring concealment. She described frequent switching and the use of a shared journal to communicate among identities. She retrospectively understood her merging experience as an expression of her protector personality.

Discussion and Conclusion: This case highlights challenges in distinguishing DID from acute THC-induced psychosis. While initial hallucinations and depersonalization favored transient intoxication, subsequent disclosure of multiple identities and inter-identity communication supported DID. The presence of concealed identities may obscure diagnosis in acute care, underscoring the importance of close outpatient follow-up to capture evolving psychopathology. Clinicians should maintain suspicion for DID in patients with dissociative symptoms complicated by substance use and ensure structured follow-up for accurate diagnosis and management.

- References:** American Psychiatric Association. (2022). Dissociative Disorders. In Diagnostic and statistical manual of mental disorders (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787.x08_Dissociative_Disorders
- Mitra P, Jain A. Dissociative Identity Disorder. [Updated 2023 May 16]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK568768/>
- Wilkinson, S. T., Radhakrishnan, R., & D'Souza, D. C. (2014). Impact of Cannabis Use on the Development of Psychotic Disorders. Current addiction reports, 1(2), 115–128. <https://doi.org/10.1007/s40429-014-0018-7>

Abstract 2025-14

Type of Research: Case Study

Title: Lithium Limbo: The Balance of Lithium Dosing and Toxicity

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Additional Author(s): Sebrina Burnett, DO, PGY2, USA Frederick P. Whiddon College of Medicine, J. Luke Engeriser, MD, Associate Professor of Psychiatry, USA Frederick P. Whiddon College of Medicine

Introduction: Lithium remains a cornerstone in managing bipolar disorder, with proven efficacy in acute mania and relapse prevention. Its narrow therapeutic index necessitates precise dosing and close monitoring. Therapeutic levels typically range from 0.6–1.2 mEq/L for acute treatment and 0.4–0.8 mEq/L for maintenance. Values outside this range increase the risk of multisystem toxicity, including neurological, gastrointestinal, renal, and cardiac effects. Traditionally administered once daily or in divided doses depending on formulation, emerging evidence indicates that once-daily dosing, regardless of immediate or extended release, may reduce toxicity while maintaining efficacy, making it a preferable strategy in clinical practice.

Description: A 26-year-old female with newly diagnosed anxiety, depression, and bipolar I transferred from the crisis center to the ED due to two ground level falls associated with altered mentation, urinary incontinence, and tremors. Initial workup was done for multiple causes of encephalopathy finding no electrolyte imbalances and benign imaging of the brain. Urinalysis was cloudy with 250 leukocyte esterase and negative nitrites, but urine cultures were negative. EKG found long QT of 504ms and borderline T wave abnormalities. The patient's home medications included 450mg lithium BID and upon admission the lithium level was elevated at 1.37, concerning for neurotoxicity. Her lithium was withheld and the serum levels went down, but the patient continued to be altered. She was then switched from Zoloft to Zyprexa. Her mentation slowly improved and she was discharged on Zyprexa and discontinued lithium use.

Discussion and Conclusion: This case highlights the toxicity risk associated with divided lithium dosing compared to once-daily administration. Emerging evidence demonstrates that efficacy is comparable between the two regimens. However, divided dosing confers disadvantages, including reduced adherence from increased frequency and a higher risk of toxicity, particularly nephrotoxicity, with immediate-release formulations. Another concern is falsely reassuring serum lithium concentrations. In this case, the patient's serum levels appeared normal prior to admission due to the pharmacokinetic profile of twice-daily administration, potentially delaying recognition of toxicity. Current literature supports once-daily dosing in bipolar patients, with comparable efficacy, better adherence, and reduced toxicity risk.

References: Baird-Gunning, J., Lea-Henry, T., Hoegberg, L. C. G., Gosselin, S., & Roberts, D. M. (2017). Lithium Poisoning. *Journal of Intensive Care Medicine*, 32(4), 249–263. <https://doi.org/10.1177/0885066616651582>

Malhi, G. S., & Tanious, M. (2011). Optimal Frequency of Lithium Administration in the Treatment of Bipolar Disorder. *CNS Drugs*, 25(4), 289–298.
<https://doi.org/10.2165/11586970-000000000-00000>

Pompili, M., Magistri, C., Mellini, C., Sarli, G., & Baldessarini, R. J. (2022). Comparison of immediate and sustained release formulations of lithium salts. *International Review of Psychiatry (Abingdon, England)*, 34(7–8), 753–759.
<https://doi.org/10.1080/09540261.2022.2122706>

Abstract 2025-15

Type of Research: Original Research

Title: Enhancing EMR documentation: Implementing standardized templates for psychoeducation

Presenting Author: Humna Ellahi, PGY-4, North Alabama Shoals Hospital

Additional Author(s): Eva Montane-PGY4, North Alabama Shoals Hospital, Venkatesh Panthangi-PGY3, North Alabama Shoals Hospital, Praveen Narahari, Program Director, North Alabama Shoals hospital

Introduction and Background: In psychiatric settings where a patient's understanding of diagnosis and treatment plans is crucial, EMR documentation plays an essential role in psychoeducation efforts, medication rationale, and safety/risk assessments. The absence of standardized EMR documentation can lead to variability in how physicians record patient care information. Moreover, lack of standardization in documentation can hinder quality assurance efforts. This quality improvement project was designed to enhance the consistency and comprehensiveness of EMR documentation in a psychiatric inpatient setting.

Methods: We reviewed documentation of 189 patients admitted to the Mental Health Crisis Unit (MHCU) in the 3-month period between March and May of 2024 and then post intervention 241 patients between August and October 2024. We tracked how many admission notes and discharge summaries included documentation regarding medication options and risks and benefits of those medications. We also reviewed the discharge summary to ensure risk assessment, safety plan, and SADPERSONS score documentation. We sent out a list of templates and reminders.

Results: Psychoeducation on psychotropic medications at admission increased 15% from 41% pre-intervention to 56% post-intervention. Psychoeducation on medications at discharge improved 40% from 41% to 81%.

Psychoeducation on diagnosis showed a 27% increase, from 54% before the intervention to 81% after.

General safety assessment documentation improved from 58% to 93%.

Risk assessment documentation increased from 69% to 96%, representing 27-percentage point improvement.

The SAD PERSONS score, which had 0% documentation prior to the intervention was increased to 68%.

Discussion and Conclusion: The results of the project demonstrate substantial improvements across multiple domains of psychiatric documentation. Psychoeducation documentation showed marked gains, particularly at discharge. These improvements suggest that structured templates prompted clinicians to include this vital information and patient education in psychiatric care. Safety and risk assessment documentation and SAD PERSONS suicidality assessment tool also benefited. These enhancements likely

contribute to improved clinical decision-making and medicolegal protection. Despite these positive outcomes, the project had some limitations. The improvements observed were dependent on clinician engagement and compliance with the new templates. Sustainability of these practices will require continued reinforcement through ongoing training, periodic audits, and integration of prompts within the EMR system.

References: Matsumura Y, Hattori A, Manabe S, Tsuda T, Takeda T, Okada K, Murata T, Mihara N. A Strategy for Reusing the Data of Electronic Medical Record Systems for Clinical Research. *Stud Health Technol Inform*. 2016;228:297-301. PMID: 27577391.

Bennett KJ, Steen C. Electronic medical record customization and the impact upon chart completion rates. *Fam Med*. 2010 May;42(5):338-42. PMID: 20461565.

Abstract 2025-16

Type of Research: Original Research

Title: Evaluating Artificial Intelligence Tools in Psychiatry: Promises and Pitfalls

Presenting Author: Evan Chavers, PGY-4, USA Frederick P. Whiddon College of Medicine

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Introduction: The recent proliferation of generative artificial intelligence (AI) has spurred rapid development and marketing of AI-based tools for clinical medicine. Psychiatry has not been overlooked as companies rush to develop tools that promise to revolutionize the delivery of mental health care. As many new technologies are pushed into new use-cases, it is paramount to evaluate these tools thoughtfully prior to adoption. In this review, we aim to provide an overview of the potential impacts that currently available AI tools may have on psychiatry so that clinicians can make informed decisions as they consider integrating these tools into their practice.

Methods: We review literature on AI applications across key domains relevant to psychiatric practice: clinical decision support systems, administrative automation and ambient scribe software, therapy tools, and workflow and clinic optimization. Our analysis describes the promise to improve efficiency and reduce administrative burden shared in all domains. We weigh these benefits against the potential pitfalls such as risks to patient privacy, legal considerations, and potential for atrophy of professional skills due to overreliance on automated systems.

Discussion and Conclusion: While the promises of AI companies and their marketing materials are numerous, they must be balanced against our core professional and ethical responsibilities as psychiatrists. Careless adoption of these tools presents a danger to patient welfare and the standards of psychiatric care. We conclude that, while AI offers powerful potential to augment savvy clinicians, widespread implementation requires a cautious and deliberate approach. Clinicians must actively weigh the draw of efficiency against risks to privacy, equity, and clinical competency to ensure that technology acts in service of, rather than against, high-quality patient care.

References: Bentley, K. H., Kennedy, C. J., Khadse, P. N., Brooks Stephens, J. R., Madsen, E. M., Flics, M. J., Lee, H., Smoller, J. W., & Burke, T. A. (2025). Clinician suicide risk assessment for prediction of suicide attempt in a large health care system. *JAMA Psychiatry*, 82(6), 599–608. <https://doi.org/10.1001/jamapsychiatry.2025.0325>

Budzyń, K., Romańczyk, M., Kitala, D., Kołodziej, P., Bugajski, M., & Adami, H. O. (2025). Endoscopist deskilling risk after exposure to artificial intelligence in colonoscopy: a multicentre, observational study. *The Lancet Gastroenterology & Hepatology*, 10(10), 896–903.

Clarke, L. (2025, September). Therapists are secretly using ChatGPT. Clients are triggered. *MIT Technology Review*.

Heinz, M. V., Mackin, D. M., Trudeau, B. M., Bhattacharya, S., Wang, Y., Banta, H. A., Jewett, A. D., Salzhauer, A. J., Griffin, T. Z., & Jacobson, N. C. (2025). Randomized trial of a generative AI chatbot for mental health treatment. *NEJM AI*, 2(4).
<https://doi.org/10.1056/Aloa2400802>

Kwesi, J., Cao, J., Manchanda, R., & Emami-Naeini, P. (2025). Exploring user security and privacy attitudes and concerns toward the use of general-purpose LLM chatbots for mental health (arXiv:2507.10695v1). *arXiv*. <https://arxiv.org/abs/2507.10695>

Omar, M., Soffer, S., Charney, A. W., Landi, I., Nadkarni, G. N., & Klang, E. (2024). Applications of large language models in psychiatry: A systematic review. *Frontiers in Psychiatry*, 15, 1422807. <https://doi.org/10.3389/fpsyt.2024.1422807>

Sahni, N. R., & Carrus, B. (2023). Artificial intelligence in U.S. health care delivery. *The New England Journal of Medicine*, 389(4), 348–358.
<https://doi.org/10.1056/NEJMr2204673>

Sun, J., Lu, T., Shao, X., Han, Y., Xia, Y., Zheng, Y., Wang, Y., Li, X., Ravindran, A., Fan, L., Fang, Y., Zhang, X., Ravindran, N., Wang, Y., Liu, X., & Lu, L. (2025). Practical AI application in psychiatry: Historical review and future directions. *Molecular Psychiatry*, 30, 4399–4408. <https://doi.org/10.1038/s41380-025-03072-3>

Abstract 2025-17

Type of Research: Case Study

Title: From Thoughts to Thyroid: A Case Report on Subclinical Hypothyroidism and Depression

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Introduction: Hypothyroidism is a common endocrine disorder characterized by fatigue, weight gain, cold intolerance, dry skin, and constipation. Subclinical hypothyroidism, defined as elevated TSH with normal free T4, has an estimated U.S. prevalence of 4.3% (Hollowell et al., 2002) but may be underreported. Prevalence increases with age, female sex, and low iodine intake. Whether to treat subclinical hypothyroidism remains controversial, with many clinicians favoring observation (Calissendorff & Falhammar, 2020). Thyroid dysfunction is closely linked to mood disorders, with subclinical hypothyroidism present in up to 40% of depressed patients (Kotkowska & Strzelecki, 2022). Thyroid hormone supplementation has been shown to augment antidepressant therapy, potentially through enhanced serotonergic neurotransmission and receptor sensitivity (Bauer et al., 2002).

Description: A 52-year-old woman with multiple sclerosis and prior diagnoses of major depressive disorder with psychotic features and PTSD presented to inpatient psychiatry for self-care inability. She was not taking medications and reported low energy, anhedonia, worthlessness, poor concentration, psychomotor slowing, and auditory/visual hallucinations. She denied suicidal ideation. She was started on olanzapine and fluoxetine. Labs revealed elevated TSH (5.1 mIU/L) and normal free T4 (0.91 ng/dL), consistent with subclinical hypothyroidism. Given her hypothyroid symptoms, thyroid hormone replacement was initiated. Within two days, she reported improved energy and resolution of cold intolerance, became more interactive with peers, and demonstrated improved affect. Her mood and psychotic symptoms continued to improve, and she was discharged shortly thereafter.

Discussion and Conclusion: This case underscores the importance of screening thyroid function in psychiatric patients with depressive and psychotic symptoms, particularly when hypothyroid symptoms are present. Our patient showed rapid improvement in energy, mood, and engagement after thyroid hormone replacement, despite meeting only criteria for subclinical hypothyroidism. This supports evidence that thyroid hormone may enhance serotonergic signaling and augment antidepressant response. Clinicians should consider treatment in symptomatic patients, as untreated subclinical hypothyroidism has been linked to persistent depressive symptoms, poor psychiatric treatment response, and decreased quality of life.

References: Bauer, M., Heinz, A., & Whybrow, P. C. (2002). Thyroid hormones, serotonin and mood: Of synergy and significance in the adult brain. *Molecular Psychiatry*, 7(2), 140–156. <https://doi.org/10.1038/sj.mp.4000963>

Calissendorff, J., & Falhammar, H. (2020). To treat or not to treat subclinical hypothyroidism, what is the evidence? *Medicina (Kaunas)*, 56(1), 40.
<https://doi.org/10.3390/medicina56010040>

Kotkowska, Z., & Strzelecki, D. (2022). Depression and autoimmune hypothyroidism—their relationship and the effects of treating psychiatric and thyroid disorders on changes in clinical and biochemical parameters including BDNF and other cytokines: A systematic review. *Pharmaceuticals*, 15(4), 391. <https://doi.org/10.3390/ph15040391>

Hollowell, J. G., Staehling, N. W., Flanders, W. D., Hannon, W. H., Gunter, E. W., Spencer, C. A., & Braverman, L. E. (2002). Serum TSH, T(4), and thyroid antibodies in the United States population (1988 to 1994): National Health and Nutrition Examination Survey (NHANES III). *Journal of Clinical Endocrinology & Metabolism*, 87(2), 489–499.
<https://doi.org/10.1210/jcem.87.2.8182>