

Medication Therapy for Psychiatric Crisis Events *Information Paper*

There are numerous options for emergency department treatment for psychiatric crisis events. Below are a variety of (non-exhaustive) references to assist the emergency physician in medication choices, options, and considerations. While this subcommittee's objective is focused on resources for approaches to medications, it is important to mention that other non-pharmacologic interventions must be considered as first-line along with pharmacotherapy, such as environmental modifications, de-escalation techniques, and many other physician and nursing interventions to treat psychiatric crisis events. Pharmacologic decisions would be based on the patient characteristics and the details of the psychiatric crisis event itself.

General

• Wilson, M, Heller R. "Rapidly Acting Treatment in the ED for Psychiatric Patients" <u>Behavioral Emergencies for Healthcare Providers</u>. Springer 2021.

Clinical Scenario: Agitation

- Holloman GH, Zeller SL. Overview of project BETA: Best practices in evaluation and treatment of agitation. *West J Emerg Med.* 2021;13(1):1-2.
- Zeller SL, Citrome L. Managing agitation associated with schizophrenia and bipolar disorder in the emergency setting. *West J Emerg Med.* 2016;17(2):165-72.
- Wilson MP, Pepper D, Currier GW, et al. The psychopharmacology of agitation: Consensus statement of the American Association for Emergency Psychiatry Project BETA Psychopharmacology Workgroup. *West J Emerg Med.* 2012;13(1):26-34.
- Gottlieb M, Long B, Koyfman A. Approach to the agitated emergency department patient. *J Emerg Med.* 2018 Apr;54(4):447-57.

Clinical Scenario: Hyperactive Delirium

• Gonin P, Beysard N, Yersin B, et al. Excited delirium: A systemic review. *Acad Emerg Med*. 2018;25P:552-65.

Clinical Scenario: Pediatrics

Kendrick JG, Goldman RD, Carr RR. Pharmacologic management of agitation and aggression in a

- pediatric emergency department A retrospective cohort study. *J Pediatr Pharmacol Ther*. 2018 Nov-Dec;23(6):455-59.
- Gerson R, Malas N, Mroczkowski MM. Crisis in the emergency department: The evaluation and management of acute agitation in children and adolescents. *Child Adolesc Psychiatr Clin N Am.* 2018 Jul;27(3):367-86.
- Gerson R, Malas N, Feuer V, et al. Best practices for evaluation and treatment of agitated children and adolescents (BETA) in the emergency department: Consensus statement of the American Association for Emergency Psychiatry. Erratum in West J Emerg Med. 2019 May;20(3):537. West J Emerg Med. 2019 Jul;20(4):688-89.
- Margret CP, Hilt R. Evaluation and management of psychiatric emergencies in children. *Pediatr Ann.* 2018 Aug 1;47(8):e328-33.
- Rudolf F, Hollenbach K, Carstairs KL, et al. A retrospective review of Antipsychotic medications administered to psychiatric patients in a tertiary care pediatric emergency department. *J Pediatr Pharmacol Ther*. 2019 May-Jun;24(3):234-37.
- Yip L, Aeng E, Elbe D. Management of acute agitation and aggression in children and adolescents with pro re nata oral immediate release antipsychotics in the pediatric emergency department. *J Child Adolesc Psychopharmacol*. 2020 Nov;30(9):534-41. Epub 2020 Oct 9.
- Nguyen T, Stanton J, Foster R. Intramuscular Ziprasidone dosing for acute agitation in the pediatric emergency department: An observational study. *J Pharm Pract*. 2018 Feb;31(1):18-21.
- Bregstein JS, Wagh AM, Tsze DS. Intranasal lorazepam for treatment of severe agitation in a
 pediatric behavioral health patient in the emergency department. *Ann Emerg Med*. 2020 Jan;75(1):869. doi: 10.1016/j.annemergmed.2019.05.020. Epub 2019 Jul 4.
- Adimando AJ, Poncin YB, Baum CR. Pharmacological management of the agitated pediatric patient. *Pediatr Emerg Care*. 2010 Nov;26(11):856-60.
- Kennedy SP, Baraff LJ, Suddath RL, et al. Emergency department management of suicidal adolescents. *Ann Emerg Med.* 2004 Apr;43(4):452-60.
- Sorrentino A. Chemical restraints for the agitated, violent, or psychotic pediatric patient in the emergency department: controversies and recommendations. *Curr Opin Pediatr.* 2004 Apr;16(2):201-5.
- Green SM, Roback MG, Krauss B, et al. Predictors of emesis and recovery agitation with emergency department ketamine sedation: an individual-patient data meta-analysis of 8,282 children. *Ann Emerg Med.* 2009 Aug;54(2):171-80.e1-4.
- Donofrio JJ, Horeczko T, Kaji A, et al. Most routine laboratory testing of pediatric psychiatric patients in the emergency department is not medically necessary. *Health Aff (Millwood)*. 2015 May;34(5):812-8.
- Kowalski JM(1), Kopec KT, Lavelle J, et al. A novel agent for management of agitated delirium: A case series of ketamine utilization in the pediatric emergency department. *Pediatr Emerg Care*. 2017 Sep;33(9):e58-62.

- Donofrio JJ, Santillanes G, McCammack BD, et al. Clinical utility of screening laboratory tests in pediatric psychiatric patients presenting to the emergency department for medical clearance. *Ann Emerg Med.* 2014 Jun;63(6):666-75.e3.
- Shihabuddin BS, Hack CM, Sivitz AB. Role of urine drug screening in the medical clearance of pediatric psychiatric patients: Is there one? *Pediatr Emerg Care*. 2013 Aug;29(8):903-6.
- Stewart SE, Manion IG, Davidson S. Emergency management of the adolescent suicide attempter: A review of the literature. *J Adolesc Health*. 2002 May;30(5):312-25.
- Hilt RJ, Woodward TA. Agitation treatment for pediatric emergency patients. J Am Acad Child Adolesc Psychiatry. 2008 Feb;47(2):132-138. *Erratum in J Am Acad Child Adolesc Psychiatry*. 2008 Apr;47(4):478.
- Sherwin TS, Green SM, Khan A, et al. Does adjunctive midazolam reduce recovery agitation after ketamine sedation for pediatric procedures? A randomized, double-blind, placebo-controlled trial. Ann Emerg Med. 2000 Mar;35(3):229-38.
- Duverger P, Picherot G, Champion G, et al. Turbulence in the emergency ward. Agitation of children and adolescents. *Arch Pediatr.* 2006 Jun;13(6):819-22.

Medication: Benzodiazepines

Benzodiazepines have long been used for their sedative and anxiolytic properties, both in monotherapy and in combination with other agents. Many articles referenced in other sections also include benzodiazepine discussion, but, but additional references below.

- Zaman H, Sampson SJ, Beck ALS, et al. Benzodiazepines for psychosis-induced aggression or agitation. Cochrane Database of Systematic Reviews 2017. Issue 12.
- Korczak V, Kirby A, Gunja N. Chemical agents for the sedation of agitated patients in the ED: A systematic review. *Am J Emerg Med.* 2016;34(12):2426-31.
- Deal N, Hong M, Matorin A, et al. Stabilization and management of the acutely agitated or psychotic patient. *Emerg Med Clinics of N Am.* 2015;33(4):739-52.

Medication: Haloperidol and Droperidol

- Adams CE, Bergman H, Irving CB, et al. Haloperidol versus placebo for schizophrenia (Review). Cochrane Database of Systematic Reviews 2013, Issue 11. Art No:CD003082.
- Jhee SS, Zarosky V, Mohaupt SM, et al. Delayed onset of oculogyric crisis and torticollis with intramuscular haloperidol. *Ann Pharmacother*. 2003;37:1434-7.
- Allen MD, Currier GW, Carpenter D, et al. The expert consensus panel for behavioral emergencies. J Psych Prac. 2005;11, Suppl. 1.

- Lai PC, Huang YT. Evidence-Based Review and appraisal of the use of droperidol in the emergency department. *J Emerg Med.* 2015 Jul;49(1):91-7.
- Knott JC, Taylor DM, Castle DJ. Randomized clinical trial comparing intravenous midazolam and droperidol for sedation of the acutely agitated patient in the emergency department. *Ann Emerg Med*. 2006 Jan;47(1):61-7.
- Cole JB, Lee SC, Martel ML, et al. The incidence of QT prolongation and torsades de pointes in patients receiving droperidol in an urban emergency department. *West J Emerg Med.* 2020 Jul 2;21(4):728-36.
- American College of Emergency Physicians. Use of droperidol in the emergency department. Policy statement. Approved Feb. 2021.
- American Academy of Emergency Medicine. Safety of droperidol use in the emergency department. Clinical policy statement. Sept. 2013.

Medication: Second Generation Antipsychotics

• Wilson MP, Minassian A, Bahramzi M, et al. Despite expert recommendations, second-generation antipsychotics are not often prescribed in the emergency department. *J Em Med.* 46(6):808-13.

Medication: Ketamine

- Green SM, Andolfatto G. Let's "Take 'Em Down" with a ketamine blow dart. *Ann Emerg Med.* 2016 May;67(5):588-90.
- Isbister GK, Calver LA, Downes MA, et al. Ketamine as rescue treatment for difficult-to sedate sever acute behavioral disturbance in the emergency department. *Ann Emerg Med.* 2016 May;67(5):581-7.
- Hibbs NT, Kirby SE, Seitz CS. Comparison of the safety and efficacy of ketamine versus olanzapine for sedation of violent agitated patients in a community emergency department. *Ann Emerg Med*. 2012 Oct;60(4S):S147.
- Mankowitz SL, Regenberg P, Kaldan J, et al. Ketamine for rapid sedation of agitated patients in the prehospital and emergency department settings: A systematic review and proportional meta-analysis. *J Emerg Med.* 2018;55(5):670-81.
- Riddell J, Tan A, Bengiamin R, et al. Ketamine as a first-line treatment for severely agitated emergency department patients. *Am J Emerg Med*. 2017;35:1000-4.

ACEP Policies

• American College of Emergency Physicians. Use of Droperidol in the Emergency Department. Policy statement. Approved Feb. 2021.

• American College of Emergency Physicians. Clinical policy: Critical Issues in the Diagnosis and Management of the Adult Psychiatric Patient in the Emergency Department. Clinical Policy Statement. Approved Jan. 2017.

Compiled by members of the Emergency Medicine Practice Committee - May 2021 Reviewed by the Board of Directors – June 2021