PEDIATRIC EMERGENCY ACUTE AGITATION PATHWAY

Patient presents with signs of acute agitation

Initiate de-escalation strategies

Environmental	Behavioral	Psychological	Respect Personal Space	Body Language	Ask What Helps	Other
Reduce stimulation (dim lights, favorite music/TV show)	Child-life, verbal re-direction, distraction, age-appropriate direction, set reasonable limits, explain consequences	1-on-1 verbal support, open ended questions, listen without rushing, remain calm, care for pain/hunger	Keep at least a 2-arm length distance	Keep a calm demeanor, facial expression and posture	Ask about specific techniques, tools that have helped in the past	Reward cooperation Active listening Build empathy

If agitation uncontrolled, MD/RN Swarm, & identify suspected cause. Consider medication therapy based on suspected cause.

Consult pediatric psychology in rare circumstances when patient still agitated after first and second line therapies

Undifferentiated

Mild	Moderate	Severe
Continue de-escalation strategies	Midazolam OR Droperidol OR Olanzapine	Midazolam OR Droperidol

Substance Related

Alcohol or Benzo Intoxication	Opiate Withdrawal
Droperidol	Buprenorphine

Developmental Delay Autism

Mild/Moderate	Severe
Extra home medication dose (e.g., clonidine) OR Olanzapine OR Diphenhydramine	Olanzapine

Use benzodiazepines and intramuscular medications with caution

Delirium Inattention Disorganization

Olanzapine
OR
Droperidol

Use opiates, benzodiazepines, anticholinergics with caution

Primary Psychiatric Problem

Anxiety, PTSD, Catatonia	ODD, Conduct Disorder	Mania, Psychosis
Midazolam	Midazolam OR Olanzapine	Extra home medication dose OR Droperidol

Restraint Use

Restraints should only be used when necessary for patient/staff safety and when less restrictive options have failed. Remove restraints as soon as it is safe to do so.

- Minimum of 5 staff to apply restraints if possible (1 supports head, 4 secure each limb)
- Must have continuous monitoring
- Must reassess q 15 mins (vitals, nutrition/hydration/elimination, readiness to dc restraints)
- Place patient supine with head of bed elevated and free cervical range of motion

- Do not cover patient's face or neck
- AVOID prone positioning
- Use with caution in intoxicated patients (risk of rhabdomyolysis with stimulant ingestion)
- Use with caution in medically compromised and unstable patients
- Must adhere to UNM Hospital Restraint Policy

Staff Safety is Vital
Assess room and patient belongings for safety
1:1 sitter for patients with SI/HI

Medication	Dose	Onset	Dosing Interval PRN	Peak	Soft Max Total	Comments
Midazolam IM	≥50 kg: 5 mg <50 kg: 0.1 mg/kg	5 minutes	5-10 minutes	15-30 minutes	10-20 mg	• IM route most frequently reported in acute agitation • IN route has a comparable time of onset of action to the IV route, but higher doses are needed to offset incomplete absorption from mucosa of nose
Midazolam IN	≥50 kg: 10 mg <50 kg: 0.4 mg/kg	~5.5 minutes	15 minutes	10 minutes	10 mg	
Midazolam IV	≥50 kg: 2 mg <50 kg: 0.05 mg/kg	1-5 minutes	5 minutes	3-5 minutes	5-10 mg	
Droperidol IM/IV	≥100 kg: 5 mg ≥50 kg: 2.5 mg <50 kg: 0.05 mg/kg	IM/IV: 3-10 minutes	10-15 minutes	~30 minutes	10-20 mg	• Published doses range from 0.03-0.07 mg/kg • Risk of QTc prolongation is minimal. Black box warning regarding QTc prolongation is with much higher doses. • No strong evidence to support causal relationship between droperidol and fatal arrhythmias.
Olanzapine IM/IV	≥50 kg: 5 mg <50 kg: 0.1 mg/kg	IM: 15 minutes IV: 5-10 minutes	15 minutes x 2 doses	IM 15-45 min	30 mg (including PO doses)	• IV or IM seems to be effective in acute agitation • **Avoid use within 1 hour of a benzodiazepine due to risk of respiratory depression**
Olanzapine PO	2.5 – 10 mg PO/ODT	PO 20 min	4-6 hours	PO 5-6 hr	10-20 mg	• Can cause respiratory depression
Ketamine IV (10 mg/mL)	≥50 kg: 1 mg/kg	1 minute	1x dose	5 minutes	n/a	▪ Use appropriate concentration for route of administration ▪ Emergence reactions may occur
Ketamine IM (100 mg/mL)	50-59 kg: 150 mg (1.5 mL) 60-79 kg: 200 mg (2 mL) 89-99 kg: 250 mg (2.5 mL) ≥100 kg: 300 mg (3 mL)	3-4 minutes	1x dose	5-30 minutes	n/a	
Haloperidol	0.025-0.075 mg/kg IM (usual range 0.5 – 5 mg/dose)	IM 15-30 min	20-30 minutes x 2 doses	IM 20-30 min	15-40 kg: 6 mg >40 kg: 15 mg	• Causes hypotension and QT prolongation. • Can also cause extra-pyramidal symptoms (treated with diphenhydramine)
Lorazepam	0.05 – 0.1 mg/kg PO/IM/IV (usual range 0.5 – 2 mg/dose)	IM 15-30 min	4 hours	IM: 1-2 hr IV: 10 min	Child: 4 mg Adolescent: 6-8 mg	• Can cause delirium and disinhibition in younger and developmentally delayed children

1. 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; Gerson et. al.; West J Emerg Med. 2019;20(2)409–418.
2. Evaluation and Management of Children and Adolescents With Acute Mental Health or Behavioral Problems. Part I: Common Clinical Challenges of Patients With Mental Health and/or Behavioral Emergencies; Chun et. al.; Pediatrics 2016 Sep;138(3):e20161570. doi: 10.1542/peds.2016-1570.
3. Practice parameter for the prevention and management of aggressive behavior in child and adolescent psychiatric institutions, with special reference to seclusion and restraint; Masters et. al; J Am Acad Child Adolesc Psychiatry. 2002 Feb;41(2 Suppl):4S-25S. doi: 10.1097/00004583-200202001-00002.
4. Ann & Robert H. Lurie Children's Hospital of Chicago Acute Agitation in the Emergency Department pathway.
5. Ramsden SC, Pergjika A, Janssen AC, et al. A systematic review of the effectiveness and safety of droperidol for pediatric agitation in acute care settings. Acad Emerg Med. 2022;29(12):1466-1474. doi:10.1111/acem.14515

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Preferred

During Shortages or Refractory Agitation