Treatment of Agitation in ER Pediatric Patients

Cause of agitation	Autism/DD and/or ADHD	Delirium	Anxiety or Trauma/PTSD	Mania/Psychosis or ODD/CD	Etiology unknown or unknown substance ingestion
Non-pharmacological Interventions: 1. Address discomfort/pain 2. Offer food, games or music (use senses) → consider Child Life *OR* Decrease stimulation if needed (dim lights and sounds)					
	1 - PO Clonidine 2- PO Olanzapine or Risperdal 3- IM Olanzapine	1 – PO Olanzapine or Risperdal 2 – IM Olanzapine	1 – PO Hydroxyzine 2 – PO/IM/IV Lorazepam	1 – Additional dose of home antipsychotic 2 – PO Olanzapine 3 - IM Olanzapine	1 – PO/IM/IV Lorazepam 2 – IM Olanzapine
	AVOID: Antihistamines or Benzodiazepines due to paradoxical reactions or disinhibition	*AVOID: Anticholinergics and Benzodiazepines*			
Last Resorts: Soft Restraints, Ketamine, or Dexmedetomidine – consult Psychiatry and consider Critical Care consultation					

*Always offer PO over IM/IV
*Recommendations are NOT a substitute for individualized agitation treatment plan
*Consult Psychiatry for complete evaluation and patient specific pharmacotherapy recommendations
*Patients already on antipsychotics might need higher doses of Olanzapine or Risperidone

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Medications and Dosing:

Clonidine: PO ≤ 4yo: 1-5 mcg/kg/dose 5yo and up: 0.05-0.1 mg/dose Frequency: q8hrs NTE: 0.2mg/day for <40kg; 0.4 mg/day for >41kg	**Risperidone: PO** 2.5-5kg: 0.1-0.15mg/dose 5.1-10kg: 0.2-0.25mg/dose 10.1-20kg: 0.3-0.4mg/dose 20.1-40kg: 0.4-0.8mg/dose >40.1kg: 0.5-1mg/dose Frequency: q12hrs NTE: 1mg/dose for <20kg; 2.5mg/dose for >20kg
Hydroxyzine: PO Avoid in <6yo 7-12yo/44kg: 0.05mg/kg/dose; max 25mg/dose 12yo and up: 25-50mg/dose Frequency: q6hrs NTE: 200mg/day	
Olanzapine: PO/IM *Avoid IM/IV benzodiazepine within 1 hour of IM Olanzapine dosing *ODT is not sublingually absorbed *Do not use IV Olanzapine PO: time to onset ~45-60 mins, time to peak = 4 hours IM: time to onset = 15 mins, time to peak = 45 mins *IM plasma concentrations are 5x higher than PO Avoid in <5yo 6-12yo: 1.25-2.5mg/dose 13yo and up: 5-10mg/dose Frequency: q6hrs NTE: 20mg/day from all sources or 3 total doses of IM	**Lorazepam**: **PO/IM/IV** *Avoid IM/IV Lorazepam within 1 hour of IM Olanzapine dosing *May use IM/IV if unable to take PO <12yo/44kg: 0.05-0.1mg/kg/dose; max 2mg/dose 12+yo/>44kg: 0.5-2mg/dose Frequency: q4hrs NTE: 4mg/dose for <44kg; 8mg/day for >44kg

Abbreviations: ADHD – attention deficit hyperactivity disorder; CD – conduct disorder; DD – developmental delay; NTE – not to exceed; ODD – oppositional defiant disorder; PTSD – post traumatic stress disorder

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Table 1: BARS (Behavioral Activity Rating Scale)

Scoring Agitation
1= Difficult or unable to rouse
2= Asleep but responds normally to verbal or physical contact
3= Drowsy, appears sedated
4= Quiet and awake (normal level of activity)
5= Signs of overt (physical or verbal) activity, calms down with instructions 6= Extremely or continuously active, not requiring restraint
7= Violent, requires restraint

BARS is scored when there is a question around patient agitation such as when there are known predictors of agitation including substance intoxication or withdrawal, history of violence, involuntary status, acute psychosis, acute mania or mental status changes. Nurses perform the BARS evaluation on intake and repeat every two hours for patients who are 5 or higher on the BARS. If the patient scores a 4 or 3, there is no need to reassess unless patients show signs of agitation. The BARS scale can be partnered with a recommended medication list to help provide adequate sedation while limiting the use of physical restraints, minimizing length-of-stay and supporting patient & provider safety.

Both non-pharmacological and pharmacological interventions should be used together while treating a pediatric patient experiencing agitation. The goal of medication in the treatment of the agitated youth is to calm the patient enough for evaluation without causing excessive sedation and to target the underlying cause of distress.

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Approved by the Pediatric Evidence-Based Outcomes Center Team. The approved Pediatric ED agitation protocol developed by psych at DCMC has now been approved to be the Ascension National Pediatric ER agitation protocol.

Revision History

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