Keep Calm and Chill On: Intranasal Versed for Pediatric Anxiolysis in the Community Emergency Department

CONNECTICUT EMERGENCY MEDICAL SERVICES FOR CHILDREN (CT EMSC) ***Ensuring every ill and injured child in Connecticut, no matter where they live, attend school or travel receives appropriate emergency medical care across the continuum***

EMSC Connecticut
Emergency Medical Services for Children

Learning Objectives

Upon completion of this presentation, you will be able to:

- Define pharmacologic anxiolysis
- Identify and calculate recommended pediatric weight based anxiolytic dosing of intranasal (IN) versed
- Describe monitoring parameters required for pediatric patients receiving intranasal versed for anxiolysis
- Demonstrate appropriate administration of intranasal medication using atomizer

Pharmacologic Anxiolysis

Defined as a drug-induced state during which:

- Patient responds normally to verbal commands
- Respiratory and cardiovascular functions are *unaffected*
- Cognitive function and coordination may be impaired

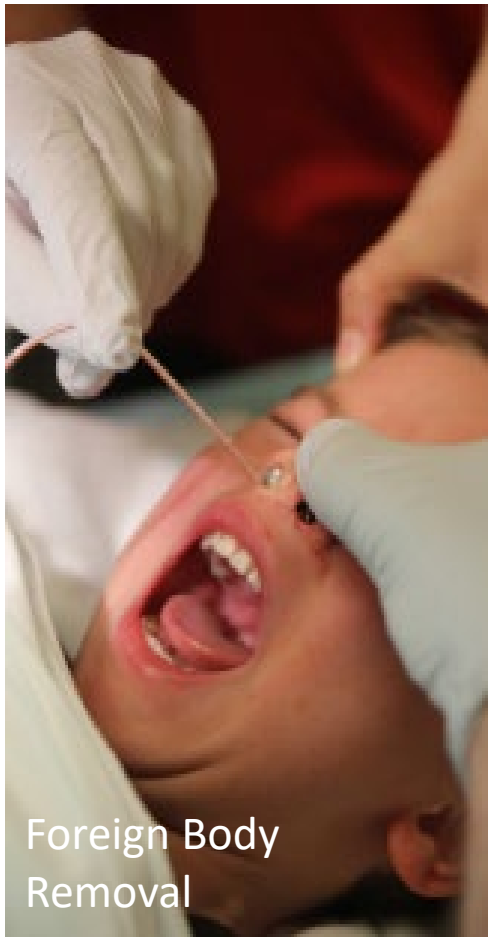
Intranasal (IN) Versed for Pediatric Anxiolysis

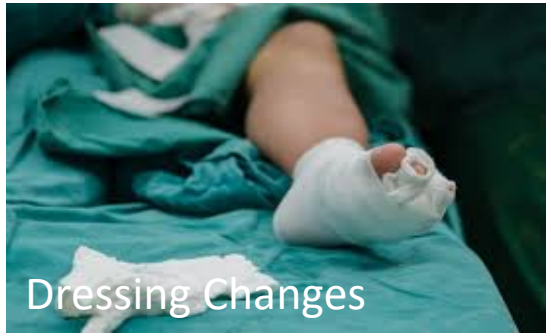
Onset of Action	Fast onset and short acting • Onset: 3-5 minutes • Peak Effect: 35 minutes
Pediatric Dosing	• 0.5mg/kg (max dose=10mg) • Redosing with 0.5mg/kg (max=10 mg) is OK 35 minutes after the initial dose for prolonged procedures
Safety Considerations	• When using more than one agent (IN Versed and opioid), refer to hospital sedation policy
Anxiolysis vs. Analgesia	• Versed does NOT provide analgesia • Utilize LET/LMX/EMLA, Lidocaine, Ibuprofen/ Acetaminophen, oral sucrose as indicated

Why do we like IN Versed for pediatric anxiolysis?

SAFE	Respiratory and cardiovascular functions are unaffected
SIMPLE	Use of IN Versed for anxiolysis in pediatrics is NOT conscious or moderate sedation
EFFECTIVE	A single dose is effective in achieving anxiolysis for the majority of pediatric patients
PATIENT-CAREGIVER SATISFIER	IN Versed causes anxiolysis *and* anterograde amnesia

Indications for Use





Nursing Considerations

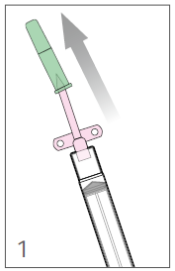
- NO 1:1 nursing observation
- NO cardiac or respiratory monitoring
- NO IV insertion
- NO NPO requirement

Pediatric Administration Tips

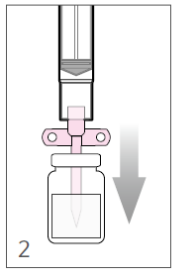
- Have younger patients sit on caregiver's lap
- Draw up additional 0.1 ml to account for atomizer dead space
- Maximum volume=1 ml for each nostril
- Administer IN medication simultaneously in both nares
- Medication will be absorbed quickly through nasal mucosa despite patient trying to "spit" medication out
- Patients may complain of burning sensation. Offer sip of juice after administration
- Place side rails up for safety
- Dim lights and decrease stimulation in the room
- Allow 10 minutes before RN and provider return to room to begin setting up for procedure

Using the MAD Nasal™ Intranasal Mucosal Atomization Device

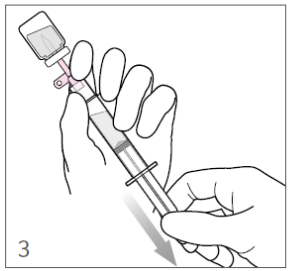
Procedure



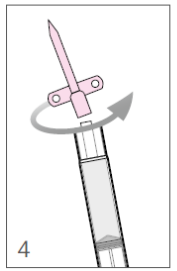
Remove and discard the green vial adapter cap



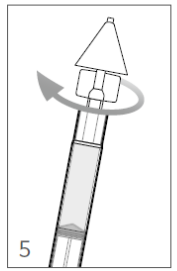
Pierce the medication vial with the syringe vial adapter



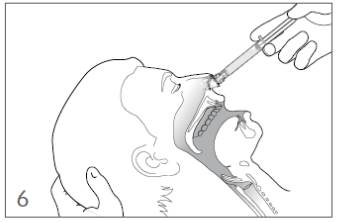
Aspirate the proper volume of medication required to treat the patient (including medication to account for the dead space in the device)



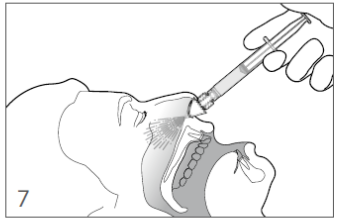
Remove (twist off) the syringe from the vial adapter



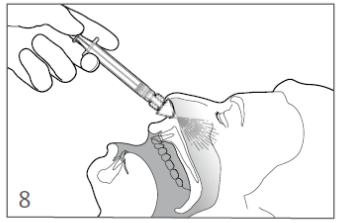
Attach the MAD Nasal Device to the syringe via the luer lock connector



Using the free hand to hold the occiput of the head stable, place the tip of the MAD Nasal Device snugly against the nostril aiming slightly up and outward (toward the top of the ear)



Briskly compress the syringe plunger to deliver half of the medication into the nostril



Move the device over to the opposite nostril and, repeating steps 6 and 7, administer the remaining medication into the nostril if indicated

Preparing the Caregiver

The child will…

- Be awake throughout the procedure
- Appear intoxicated
- Respond to painful interventions
- Not remember the event

Discharge Home

- Child can have something to drink (or popsicle) once procedure is done
- To prevent injuries/falls at home, parents should be advised child should avoid activities requiring concentration or coordination such as climbing stairs unsupervised, running, bike riding, swings, trampolines or swimming upon discharge
- Children can resume normal activities the following day

References

American Society of Anesthesiologists, *Continuum of Depth of Sedation: Definition of General Anesthesia and Levels of Sedation/Analgesia,* Last amended on October 23, 2019.

Lane, Roni D. MD & Schunk, Jeff E. MD (2008). Atomized Intranasal Midazolam Use for Minor Procedures in the Pediatric Emergency Department. *Pediatric Emergency Care, 24 (5),* 300-303.

MAD Nasal™ Device Animation Video: https://www.teleflex.com/usa/en/product-areas/emergency-medicine/intranasal-drug-delivery/mad-nasal-intranasal-device/index