



## Section 14: Appendix 2: Medical Procedures

### SECTION 14: MUCOSAL ATOMIZATION DEVICE (MAD)

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P	PARAMEDIC	P

#### INDICATIONS

- Used for atomizing topical solutions across the nasopharyngeal and oropharyngeal mucous membranes.
- For use when administering the following medications:
  - **Naloxone** (Narcan) for opiate overdoses.
  - **Glucagon** (Glucagen) for hypoglycemia.
  - **Versed** (Midazolam) for seizures or sedation

#### PROCEDURE

1. Disconnect MAD from the included syringe and/or retrieve a needleless syringe.
2. Attach needle to syringe.
3. Fill syringe with the desired volume of solution and eliminate remaining air.
4. Remove needle and dispose of appropriately.
5. Connect the MAD to the syringe.
6. Place the MAD tip in the nostril or oropharyngeal cavity.
7. Compress the syringe plunger to spray atomized solution into the nasal or oropharyngeal cavity.
8. Re-use the MAD on the same patient as needed, then discard.

#### KEY POINTS

The following are some of the benefits of IN (Atomized) drug delivery for the patient and provider:

- Eliminated the risk of a contaminated needle stick to the EMS provider.
- Simple and convenient for the EMS provider.
- Less frightening for children.
- Disposable.
- Discomfort is minimized for the patient.
- Serum levels of many IN administered medications are comparable to injected medications and much improved over rectal and oral routes.

Studies have shown that the most effective method to deliver a medication through the IN route is to atomize it across the nasal mucosa. Atomized particles (10 to 50 microns) adhere to the nasal mucosa over a large surface area, preventing waste and improving absorption of the medication. Administer half the dose in each nostril to increase the surface area, and further improve absorption.

