

Classification

Sedative, benzodiazepine

LA County Prehospital Indications

Behavioral / Psychiatric Crisis / Severe Agitation: patients requiring restraints for patient and provider safety
Cardiac Dysrhythmia: sedation prior to and/or during synchronized cardioversion or transcutaneous pacing
Sedation and amnestic agent for patients receiving manual/mechanical ventilation if already intubated
Seizure – Active

Other Common Indications (Not authorized for EMS administration in LA County)

None

Adult Dose

Behavioral / Psychiatric Crisis

5mg (1mL) IM/IN/IV, repeat x1 in 5 min prn, maximum total dose prior to Base contact 10mg

Cardiac Dysrhythmia - sedation prior to synchronized cardioversion / transcutaneous pacing

5mg (1mL) slow IV/IO push/IM/IN, may repeat x1 in 5 min prn, maximum total dose prior to Base contact 10mg

Seizure - Active

10mg (2mL) IM/IN, contact Base for additional dosing, **or**

5mg (1mL) IV/IO, repeat x1 in 2 min prn if existing vascular access, maximum total dose prior to Base contact 10 mg

Severe agitation with ALOC

5mg (1mL) IM/IN/IV, repeat x1 in 5 min prn, **or**

10mg (2mL) IM/IN single dose considering size of patient and level of risk, maximum total dose prior to Base Contact 10mg

For all indications, with Base Contact may repeat as above up to a maximum total dose of 20mg

Pediatric Dose

Behavioral / Psychiatric Crisis / Severe Agitation

0.1mg/kg (5mg/mL) IV or **0.2mg/kg (5mg/mL) IM/IN**, dose per [MCG 1309](#), repeat x1 in 5 min, maximum single dose 5mg, maximum total dose prior to Base contact 10mg (Severe agitation with ALOC who pose an IMMEDIATE RISK, may administer prior to Base Contact. Behavioral/ Psychiatric Crisis require a Base order prior to midazolam administration.)

Cardiac Dysrhythmia - sedation prior to synchronized cardioversion / transcutaneous pacing

0.1mg/kg (5mg/mL) IV/IO or **0.2mg/kg (5mg/mL) IM/IN**, dose per [MCG 1309](#), repeat dosing every 5 min prn per Base order, maximum single dose 5mg

Seizure - Active

0-11 months (Gray, Pink)

0.2mg/kg (5mg/mL) IM/IN, dose per [MCG 1309](#)

Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

12-16 months (Red if age unknown)

1.25 mg or 0.25mL IM/IN repeat x1 in 2 min prn

Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

17 months – 5 years (Purple, Yellow, White if age unknown)

2.5 mg or 0.5mL IM/IN repeat x1 in 2 min prn

Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

6-11 Years (Blue, Orange, Green if age unknown)

5mg or 1mL IM/IN repeat x1 in 2 min prn

Repeat x1 in 2 min prn, up to 2 doses prior to Base contact

≥12 years (Longer than the length-based tape if age unknown)

10 mg or 2mL IM/IN repeat x1 in 2 min prn,
Single dose prior to Base contact

May repeat **Midazolam** as above, maximum total of 3 doses or 20 milligrams, whichever is less

Mechanism of Action

Binds to receptors at several sites within the CNS, potentiates GABA receptor system which produces anxiolytic, anticonvulsant, muscle relaxant, and amnesic effects.

Pharmacokinetics

Onset 3-5 min IV, 15-20 min IM, 6-14 min IN
Duration 1-6 hours IV/IM

Contraindications

Respiratory depression
Shock / Poor perfusion (see prehospital considerations)

Interactions

Risk of respiratory or central nervous system depression, increases when used with diphenhydramine, fentanyl, morphine, or other opiate or sedative medications

Adverse Effects

Hypotension
Respiratory depression / arrest

Prehospital Considerations

- Closely monitor respiratory and cardiac function after administration
- Caution in patients with suspected intoxication as midazolam can increase the risk for respiratory depression
- For patients with severe agitation and violent behavior, IM/IN administration is recommended over IV for the initial dose for the safety of EMS personnel.
- If available, waveform EtCO₂ monitoring should be instituted after administration.
- For patients who are poorly perfusing and require sedation for safety (e.g., prevent inadvertent extubation) or require a painful procedure (e.g., transcutaneous pacing), one should use judgment in consultation with Base.