


|   |                                   |                                    |
|---|-----------------------------------|------------------------------------|
|  | <b>M07.1 - MIDAZOLAM (VERSED)</b> |                                    |
|   | Version date: 2025-02-04          | Effective date: 2025-04-30 (07:00) |
| <b>ERS HIGH-ALERT MEDICATION (A03)</b>  |                                   |                                    |

| INDICATIONS  |
|--|
| <ul style="list-style-type: none"> <li>• Active seizures (table A)</li> <li>• Chemical restraint, alcohol or benzodiazepine withdrawal, or stimulant toxicity (table B)</li> <li>• Advanced airway maintenance (table C)</li> <li>• Sedation for procedure (table D)</li> <li>• Procedural sedation &amp; analgesia (table E)</li> </ul> |

| WARNINGS  |
|---|
| <b>ABSOLUTE CONTRAINDICATIONS</b> <ul style="list-style-type: none"> <li>• Hypersensitivity to midazolam</li> <li>• Respiratory depression</li> </ul> |
| <b>USE WITH CAUTION:</b> <ul style="list-style-type: none"> <li>• Uncorrected hypotension / hypoperfusion / shock</li> </ul>                          |

| TABLE A: SEIZURES <sup>1</sup>  |                 |
|---|-----------------|
| INTRANASAL <sup>2</sup>   | PCP / ICP / ACP |
| <b>ADULTS / ADOLESCENTS:</b> <ul style="list-style-type: none"> <li>• Administer 5 mg</li> <li>• Repeat once in 10 minutes if required (use the alternate nostril)</li> </ul> <b>INFANTS / CHILDREN:</b> <ul style="list-style-type: none"> <li>• Administer 0.2 mg/kg</li> <li>• Maximum per dose = 5 mg</li> <li>• Repeat once in 10 minutes if required (use the alternate nostril)</li> </ul> |                 |
| INTRAMUSCULAR <sup>2</sup>  | PCP / ICP / ACP |
| <b>ADULTS / ADOLESCENTS:</b> <ul style="list-style-type: none"> <li>• Administer 5 mg</li> <li>• Repeat once in 15 minutes if required</li> </ul> <b>INFANTS / CHILDREN:</b>  |                 |

- Administer 0.2 mg/kg
- Maximum per dose = 5 mg
- Repeat once in 15 minutes if required

INTRAVENOUS (INTRAOSSEOUS)

PCP / ICP / ACP

**ALL AGES:**

- Administer 0.05 to 0.1 mg/kg by slow push over 1 minute
- Maximum per dose = 5 mg
- Repeat every 5 minutes as required

**TABLE B: CHEMICAL RESTRAINT / ALCOHOL OR BENZODIAZEPINE WITHDRAWAL / STIMULANT TOXICITY**

INTRAMUSCULAR

PCP / ICP / ACP

**ADULTS / ADOLESCENTS:**

- 5 mg
- Repeat every 15 to 30 minutes as required
- Maximum per hour = 20 mg<sup>3</sup>

INTRAVENOUS (INTRAOSSEOUS)

PCP / ICP / ACP

**ADULTS / ADOLESCENTS:**

- Administer 0.05 to 0.1 mg/kg by slow push over 1 minute
- Maximum per dose = 5 mg
- Repeat every 10 to 15 minutes as required
- Maximum per hour = 20 mg<sup>3</sup>

**TABLE C: FOR ADVANCED AIRWAY MAINTENANCE**

INTRAVENOUS (INTRAOSSEOUS)

PCP / ICP / ACP

**ALL AGES:**

- Administer 0.05 to 0.1 mg/kg (maximum per dose = 5 mg)
- Administer by slow push over 1 minute
- Repeat every 5 minutes as required

**TABLE D: SEDATION FOR PROCEDURE**

| INTRAVENOUS (INTRAOSSEOUS)   | ICP / ACP |
|--|-----------|
| <p><b>ALL AGES:</b></p> <ul style="list-style-type: none"> <li>• Administer 0.05 to 0.1 mg/kg by slow push over 1 to 2 minutes</li> <li>• Maximum per dose = 5 mg</li> <li>• Repeat once in 5 minutes if required</li> </ul> |           |

**TABLE E: PROCEDURAL SEDATION & ANALGESIA <sup>4</sup>**



| INTRAVENOUS (INTRAOSSEOUS)   | ACP |
|--|-----|
| <p><b>ALL AGES:</b></p> <ul style="list-style-type: none"> <li>• Administer 0.05 to 0.1 mg/kg by slow push over 1 to 2 minutes</li> <li>• Maximum per dose = 5 mg</li> <li>• Titrate 0.05 mg/kg every 3 to 5 minutes as required to achieve desired level of sedation and analgesia</li> </ul> |     |

**NOTES**

1. Respiratory depression and hypotension are common in the post-seizure period. Continuously monitor respiratory and cardiac status. Providers must be prepared to manage the airway, support ventilations, and treat hypotension as required.
2. Because of the unpredictability of seizures, administering medications by the intravenous (IV) route is preferred in patients who are actively seizing. If IV access is delayed or unavailable, intramuscular (IM) or intranasal (IN) midazolam (to a maximum of 2 doses) can be a temporizing measure, until vascular access is obtained.
3. Chemical restraint with midazolam carries substantially more risk in the elderly compared to younger patients. Midazolam may have more pronounced respiratory and central nervous system effects, especially if the patient is frail, compromised, or cognitively impaired. Consider smaller individual and cumulative doses and slower administration.
4. A paramedic with the advanced (ACP) work scope can combine midazolam (for its sedative and amnestic properties) with fentanyl (for its analgesic effects). One or both agents can be titrated to achieve an appropriate level of sedation and analgesia. When combining multiple CNS depressing agents, consider smaller individual and cumulative doses.

**LINKS**

- A03 - High Alert Medications
- A13 - Procedural Sedation & Analgesia

| APPROVED BY   |   |
|---|---|
|  |  |
| Provincial Medical Director   | Provincial Associate Medical Director   |

| VERSION CHANGES (refer to X08 for change tracking)   |
|--|
| <ul style="list-style-type: none"><li>• Addition of advanced work scope</li><li>• Addition of PSA to indications</li></ul> |