Guidelines for the Use of MIDAZOLAM (Versed®)

Recommended Neonatal Dose, Route, and Interval

A. Sedation:

- **Intermittent IV boluses**: 0.05 - 0.15 mg/kg/dose IV push over at least 5 minutes. Repeat every 2-4 hours prn. May also be given IM.
- **Continuous IV infusion**: 0.01-0.06 mg/kg/hour (10 to 60 mcg/kg/hour), titrate to effect.
- **Oral**: 0.25 mg/kg per dose using versed oral syrup

B. Anticonvulsant:

- **Loading dose**: 0.15 mg/kg (150 mcg/kg) IV given **over at least 5 minutes**, followed by
- **Maintenance infusion**: 0.06 to 0.4 mg/kg per hour (1 to 7 mcg/kg/minute)

Chief Indications

- Sedation during mechanical ventilation / procedures
- Treatment of refractory seizures

Possible Adverse Reactions:

1. Respiratory depression and respiratory arrest (particularly with excessive doses or rapid IV infusions)
2. Hiccoughs, CNS depression, myoclonic jerks
3. Hypotension, bradycardia
4. **Antidote**: Flumazenil 0.01 mg/kg/dose IV push. May repeat every minute for up to 4 more doses.

Contraindications & Precautions

- Hypersensitivity to midazolam. May see cross-sensitivity with other benzodiazepines.
- CNS depression, uncontrolled pain, severe hypotension
- Abrupt discontinuation after prolonged use may precipitate withdrawal or seizures.
- Rapid IV injection may result in hypotension, respiratory depression or seizures.

Nursing Implications

- Midazolam provides no pain relief. Agitation may be due to pain and infant should be assessed for need of pain medication.
- Monitor respiratory status, blood pressure, and level of sedation.
- Onset of sedation: PO within 10-20 minutes, IM within 5 minutes, IV within 1-5 minutes
- Peak sedation: IM 15-30 minutes, IV 5-7 minutes

References:

1. Neofax 2010