

Michigan
General Procedures
Adult & Pediatric Emergency Protocol
Medication Shortage

Date: October 31, 2011

Page 1 of 3

Medication Shortage

- Medical Control Authorities choosing to adopt this emergency protocol may do so by selecting this check box. Per Administrative Rule 325.22206 Rule 207 (5) an emergency protocol shall remain in effect for 60 days unless approved by the department.

Purpose: The purpose of this emergency protocol is to address the Benzodiazepine & Fentanyl shortages. This protocol authorizes the substitution of the Benzodiazepine & Fentanyl options previously selected by Medical Control Authority that are currently on file with the State of Michigan.

The Michigan Protocols for Adult & Pediatric Treatment call for the selection of one (1) Benzodiazepine medication. This protocol allows for selecting all options. The Adult & Pediatric Cardiac protocols allow for multiple selections, this protocol allows for an MCA to make further selections in the event the options selected are affected by the medication shortage. The Narcotic options in the state protocols also allow for multiple selections, this protocol allows for an MCA to make further selections in the event the options selected are affected by the medication shortage.

The following Michigan protocols are affected by the **Benzodiazepine** medication shortage:

ADULT PROTOCOLS:

Obstetrical Emergencies
Seizures
Bradycardia
Tachycardia
Narrow Complex Tachycardia
Wide Complex Tachycardia

PEDIATRIC PROTOCOLS:

Seizures
Bradycardia
Narrow Complex Tachycardia
Wide Complex Tachycardia

PROCEDURES:

Patient Sedation

ADULT TREATMENT

Benzodiazepine:
(Select Options)

- Diazepam 2 - 10 mg (0.1 mg/kg) IV/IO or 2 - 10 mg (0.5 mg/kg) rectally
- Midazolam 2 - 5 mg (0.05 mg/kg) IV/IO/IM
- Lorazepam 1 - 4 mg (0.1 mg/kg) IV/IO

ADULT CARDIAC

Sedation: (Select Options)
(Titrate to minimum amount necessary)

- Midazolam 1-5 mg (0.05 mg/kg) IV/ IO titrated slowly, may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Diazepam 5-10 mg (0.1 mg/kg) IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 0.3 mg/kg.
- Lorazepam 1-2 mg (0.1 mg/kg, max 4 mg/dose) IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 8 mg.
- Fentanyl 50-100 mcg (1 mcg/kg) IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 3 mcg/kg.

MCA Name
MCA Board Approval Date
MDCH Approval Date
MCA Implementation Date

Section 5-33

Michigan
General Procedures
Adult & Pediatric Emergency Protocol
Medication Shortage

Date: October 31, 2011

Page 2 of 3

PEDIATRIC TREATMENT

Medication:
(Select Options)

- Diazepam - 0.1 mg/kg IV/IO or 0.5 mg/kg rectally (maximum individual dose 10 mg)
- Midazolam - 0.05 mg/kg IV/IO, 0.1 mg/kg IM (maximum individual dose 5 mg)
- Lorazepam - 0.1 mg/kg, max single dose 4 mg, may repeat in 5 minutes if seizure activity continues; not to exceed 0.2mg/kg total (maximum of 8mg)

PEDIATRIC CARDIAC

Sedation :
(Select Options)

(Titrate to minimum amount necessary)

- Midazolam - 0.05 mg/kg IV/IO titrated slowly, may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Diazepam - 0.1 mg/kg IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 0.3 mg/kg.
- Lorazepam - 0.1 mg/kg, max single dose 4 mg IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 8 mg.
- Fentanyl - 1 mcg/kg IV/IO titrated slowly, may repeat once in 5 minutes to a maximum of 2 mcg/kg.

PROCEDURES

Adult Sedation: (Select Options)
(Titrate to minimum amount necessary)

- Midazolam - 1-5 mg (0.05 mg/kg) IV/ IO titrated slowly, may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Diazepam - 5-10 mg (0.1 mg/kg) IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 0.3 mg/kg.
- Lorazepam - 1-2 mg (0.1 mg/kg, max 4 mg/dose) IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 8 mg.
- Fentanyl - 50-100 mcg (1 mcg/kg) IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 3 mcg/kg.

Pediatric Sedation: (Select Options)
(Titrate to minimum amount necessary)

- Midazolam - 0.05 mg/kg IV/ IO titrated slowly, may repeat once in 5 minutes to a maximum of 0.1 mg/kg.
- Diazepam - 0.1 mg/kg IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 0.3 mg/kg.
- Lorazepam - 0.1 mg/kg, max 4 mg/dose IV/ IO titrated slowly, may repeat every 5 minutes to a maximum of 8 mg.
- Fentanyl - 1 mcg/kg IV/IO titrated slowly, may repeat every 5 minutes to a maximum of 3 mcg/kg.

Michigan
General Procedures
Adult & Pediatric Emergency Protocol
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Page 3 of 3

The following Michigan protocols are affected by the **Fentanyl** medication shortage:

ADULT:

Abdominal Pain (Non-traumatic)
Burns
Hypothermia/Frostbite
Soft Tissue and Orthopedic Injuries
Chest Pain/ACS

PEDIATRIC:

Burns

PROCEDURES:

Pain Management
Pain Management Supplement

ADULT

NARCOTIC ANALGESIC OPTIONS

(Select Options)

- Fentanyl - 50 – 100 mcg (1 mcg/kg) IV, may repeat every 5 minutes until maximum of 3 mcg/kg.
- Morphine Sulfate - 2 – 5 mg (0.05 mg/kg) IV, may repeat dose every 5 minutes until maximum of 20 mg.

PEDIATRIC

NARCOTIC ANALGESIC OPTIONS

(Select Options)

- Fentanyl - 1 mcg/kg IV/IO, may repeat every 5 minutes until maximum of 2 mcg/kg
- Morphine Sulfate - 0.05 mg/kg IV, may repeat dose every 5 minutes until maximum of 20 mg.

PROCEDURES

NARCOTIC ANALGESIC OPTIONS

(Select Options)

- Fentanyl - 1 mcg/kg IV/IO may repeat every 5 minutes until maximum of 3 mcg/kg, pediatric maximum of 2 mcg/kg
- Morphine Sulfate - 0.05 mg/kg IV may repeat dose every 5 minutes until maximum of 20 mg. For pediatric patients administer Morphine Sulfate 0.05 mg/kg IV.