



John J. Barthelmes
Commissioner

State of New Hampshire
Department of Safety
Division of Fire Standards and Training and Emergency Medical Services
Richard M. Flynn Fire Academy
98 Smokey Bear Blvd, Concord, New Hampshire
Mailing Address: 33 Hazen Drive, Concord, New Hampshire 03305-0002



Perry E. Plummer
Director

New Hampshire EMS Information Bulletin 16

DATE: July 27, 2012
SUBJECT: Diltiazem Dosing & Management of Excited Delirium
TO: NH EMS Providers, Medical Directors, EMS Unit Leaders, and EMS Hospital Coordinators
FROM: Tom D'Aprix, MD, Chair, Medical Control Board

At the Medical Control Board meeting dated July 19, 2012 several urgent medication changes were discussed and agreed upon.

Diltiazem:

Problem:

Currently, there is **no** maximum dose for diltiazem in the 2011 protocols. There have been several cases of patients receiving doses of greater than 50mg as a bolus and consequently some of these patients have become transiently hypotensive.

Research:

There is no literature that clearly defines a maximum dose; however, there is clearly increased risk of adverse effect with higher doses. Most physicians agree that if a patient does not respond to a bolus dose of 20mg that they are unlikely to respond to higher bolus dose.

Solution:

For all protocols involving the use of diltiazem, the MCB has approved a maximum dose of 20mg IV per bolus. Caution should be used and lower doses should be considered in the elderly.

Excited Delirium:

Problem:

We are seeing increased numbers of patients exhibiting excited delirium and finding that current doses of medications listed in the Behavioral Emergencies protocols are not effective.

Research:

There are published protocols from various institutions that suggest various doses of benzodiazepines and atypical antipsychotics. None stand out as the "best."

Solution:

The MCB has chosen to adopt the following protocol as advised by the Northern New England Poison Center for cases of excited delirium:

- Midazolam 5mg IV/IM/IN every 10 minutes as needed.
- If agitation continues after the second dose of midazolam, then consider:
 - Haloperidol 10 mg IM every 10 minutes.
 - Contact medical control if more than 10 mg of midazolam or 20 mg of haloperidol is needed.

The 2013 edition of the NH EMS Protocols will reflect these changes.

Emergency Medical Services – Fire Training and Certification – Fire Academy

Business: (603) 223-4200

Fax: (603) 271-4567

Toll Free: 1-800-371-4503

TDD Access: 1-800-735-2964

<http://www.nh.gov/safety/divisions/fstems/index.html>