



NUMBERED NOTICE

Number: **22-03**
 Date: 05/17/2022
 From: Ben Weston, MD, MPH, Medical Director
 To: All EMS Providers
 Subject: Milwaukee County OEM Midazolam Formulary Change
 Purpose: Directive

Situation

ALL OEM and Fire Department Agency EMS services within Milwaukee County will change the concentration of Midazolam (Versed) utilized for all patient encounters beginning on June 1, 2022.

Background

Historically, EMS services within Milwaukee County have utilized Midazolam (Versed) to treat seizures, perform procedural sedation, and provide post airway sedation. Administration route options for delivery of medication now include IV, IO, IN, and IM. The concentrations previously utilized were 2mg per 2ml OR 5mg per 5ml of which both are 1mg per 1ml of medication. Midazolam formularies have historically varied among Milwaukee County EMS providers depending on the agency, with some agencies utilizing multiple formularies.

Assessment

The previous concentrations have led to suboptimal medication treatment for seizure patients.

- Adult seizure patients receiving IM dosing required multiple medication draws and 2 IM injections to receive adequate dosing
- Adult seizure patients receiving IV dosing sometimes required multiple medication draws to receive adequate dosing
- Adult seizure patients receiving IN dosing were unable to absorb an adequate dose of medication due to relatively low concentrations of Midazolam (Versed)
- Shared service responses include agencies with different formularies providing joint patient treatment which can lead to patient safety events

Plan

ALS services within Milwaukee County will transition to the utilization of 5mg per 1ml of Midazolam (Versed) formulary only to solve the identified issues. ALS providers should recognize important concepts.

- This change does not affect the dose, only the volume of medication administered
- Adult seizure patients receiving IM administration can receive full 10mg dosing in one IM injection site
- Patients receiving IN administration of Midazolam can receive the full dose volume via single nostril
- Smaller syringes are recommended specifically in the pediatric population to ensure appropriate dosing

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The above information is reviewed and compiled by the MCW Division of EMS Medicine

