



## A Simple Solution to Safeguarding Sedation Medications

Eileen Weinmann\*

Safe-Design Medical Solutions, Inc. 314 Sunnyland Ave. Pittsburgh, PA 15227, USA

\*Corresponding author: Eileen Weinmann, Safe-Design Medical Solutions, Inc. 314 Sunnyland Ave. Pittsburgh, PA 15227, USA, Tel: 412-874-6448; E-mail: [sedationnurse@gmail.com](mailto:sedationnurse@gmail.com)

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### Introduction

Universally, sedation and anesthesia providers are challenged with the task of effectively securing sedation and anesthesia medications from the time of preparation until time of administration. When sedation or anesthesia is provided in a setting such as an operating room or an organized sedation space, the medications are generally considered to be secured by virtue of the controlled space. Securing sedation medications can become problematic with “off-site” sedation or anesthesia, such as in the MRI setting, oncology unit, dental clinic and other areas. The Joint Commission defines medications being secure as: “In a locked container, in a locked room or under constant surveillance”. [1] Anesthesia and sedation providers must maintain medication safety and integrity, though they’re not permitted to carry the medications on their person. Patient safety and quality of care are likely to be in jeopardy if the integrity of sedation medications is not maintained, and medications are not readily available for immediate use.

Sedation and anesthesia providers may opt to place medications in their pockets with the goal in mind to ensure the security of the medications. There is a concern that carrying medications in one’s pocket will result in the user’s body heat of altering the integrity of the medications. The Joint Commission has been known to site users for placing medication in their pockets. Most manufacturers’ warnings state that certain medications must be maintained at room temperature in order to preserve efficacy of the medications. The U.S. Pharmacopeia mandates a controlled room temperature for medication, indicating that a medication temperature is maintained thermostatically that encompasses the usual customary working environment of 22-25°C (68-77°F) [2] Another concern is that placing medications in one’s pocket may also result in the medication inadvertently being expelled from the syringe, or the provider sustaining a needle stick. Also, pocketing medications can increase the possibility or suspicion of diversion of controlled substances. According to the Centers for Medicare and Medicaid Services, quantities of medications should be dispensed with ways which minimize diversion and potential adverse events, while meeting the needs of the patient [3].

Alternatively, in many hospitals sedation medications are carried in emesis basins, graduated cylinders, cardboard boxes, bio-hazard bags or plastic zipper bags. The open containers can prove problematic in keeping the medications secure; there are almost certain distractions from the workplace that can impede the providers’ focus on the security of medications. Commonly the sedation provider is called to assist in a patient transfer, take a phone call or various other tasks. When medications are not on their person, the provider is not able to simultaneously assist in patient care and maintain “constant surveillance” of their medications. These distractions could easily lead to medications falling on the floor, or when left unattended allowing

for unauthorized diversion of the controlled substances. In addition, after a sedation procedure is completed there are often unused medications that require proper waste, but due to patient care needs immediate waste is not always possible.

The Joint Commission maintains medications should be properly and safely stored [4] and emergency medications and/or supplies, if any, should be consistently available, controlled, and secured. [5] Medication storage is designed to assist in maintaining medication integrity, promote the availability of medications when needed, minimize the risk of medication diversion, and reduce the potential dispensing errors. [6] With good reason the standards of TJC and the Federal Government are high, and they are very clear. Practices currently in use are likely the result of health care providers trying to balance what is expected of them, and safely care for their patients. The expectations have proven to be a difficult challenge with no practical solution available, and the professionals often struggle for a safe alternative. The health care provider is charged with the task of deciding how to secure and protect the medications used. Regrettably these challenges potentially increase stress, frustration, ineffectualness and inherent workplace risks for the sedation providers.

As part of a process improvement, an insulated cross-body satchel (patent-pending) was designed for carrying prepared syringes, vials of medication and various supplies. The satchel has an insulated layer that has been proven to protect medications from the user’s body heat. Utilizing inter-departmental collaboration, the pilot hospital tested medication in the satchel for temperature stability. A thermostatically measured vial of liquid was placed in one of the syringe slots, and the satchel was worn by various users for 2-6 hour increments for a total of 47 hours. The temperature of the liquid remained in the range of 22-24°C while the satchel was worn, which meets the range required for maintaining thermostatic medication integrity by the US Pharmacopoeia. It is constructed of a lightweight coated fabric that repels liquid, protects medications from light and is made from MRI safe material and is cleaned with an anti-bacterial wipes between use. “Based on analysis of its data, as well as review of the literature for new technologies and best practices, the hospital identifies opportunities for improvement in its medication management system.” [7]

The satchel earned a prestigious Patient Safety Award for improving hospital and patient safety at the pilot hospital, and was accepted into Quality Week of that same year.

Based on a survey at the pilot hospital, users expressed 90% satisfaction with medication security, 100% satisfaction that medications are readily available and 100% satisfaction with “hands free” patient care. The satchel is being used in hospitals in several states in the US, and it has been stated by the FDA that no filing for approval for use is necessary as the medication satchel is not considered a device.

The use of the satchel enables health care professionals to facilitate a safer environment in the health care setting by maintaining a secure area for the controlled substances. The medication can remain safely inside the satchel until proper waste of unused substances is possible. The concerns of losing track of medications, or getting a needle stick from the traditional methods of securing medications are essentially non-existent. The sedation providers are more organized and prepared, and as a result their confidence, comfort and ability to focus on patient care are all increased. The satchel supports compliance of the safe medication handling standards set by the Department of Health (DOH)/TJC. TJC does not endorse any medication carry devices, but allows each individual hospital to determine their own method of meeting the standards set by the agency. There was a risk assessment done regarding the use of the satchel at the pilot hospital, and the satchel was accepted as a standard of care for use at the pilot hospital for sedation professionals. Satchels have been provided for the use primarily to RN's and MD's on the sedation service for use in MRI, CT, Procedure Center, Dental Clinic and Hem/Onc Clinic. Satchels have also been put into use by nurses on the anesthesia pain service within the operating room.

In our ever increasingly complex health care environment, there is now a simple, yet safe and effective solution to securing and safeguarding one's medications.

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