Single Dose Anesthesia Medications: Correct Administration and Narcotic Documentation

Ashley Archer, BSN, RN, CNOR Center Director

The Knoxville Ophthalmology ASC dba: The Eye Surgery Center of East Tennessee

ELEMENT 1: PURPOSE

➢ **Background:**

The Centers for Medicare & Medicaid Services require single-dose medications to be administered only to a single patient per vial. The Ambulatory Surgical Center (ASC) Infection Control Surveyor Worksheet (ICSW) (Part 2 section II - G.a) states "Single dose (single-use) medication vials are used for only one patient."

➢ **Problem:**

During random auditing in January 2018, it was noted on the narcotic log that only 1mg of midazolam was wasted for a whole day of patients. Of the 21 patients, 9 received 3mg midazolam. The vials are 2mg vials. This showed the midazolam vials were being divided into 2 doses and administered to 2 separate patients. The finding was a breach in the Eye Surgery Center's infection prevention policy and could potentially increase exposure risk for our patients and center.

➢ **Purpose:**

The purpose of this quality improvement study is to ensure correct drug administration, narcotic documentation, and infection prevention

ELEMENT 2: GOAL

The Eye Surgery Center's overall goal is to provide safe injection practices to our patient population.

➢ To assist in reaching the overall goal, **100% compliance** with using single-dose vials (SDV) for only one patient is required.

➢ It is expected that all providers and nursing staff work collaboratively to confirm this is occurring. Dividing single dose medication vials is not allowed.

ELEMENT 3: DATA DESCRIPTION

➢ A review of narcotic logs will retrospectively be conducted. February 12th through February 25th logs have been selected for auditing the number of patients that received midazolam.

➢ A focus will be on administration "odd" dosages of midazolam – 1mg, 3mg, or 5mg. A thorough review of each operative day will help the center establish if this was an isolated event or a regularly occurring issue.

➢ Data will be calculated in percentages to compare findings to the goal. A percentage will be calculated with the total number of patients and total number of patients receiving divided vials (odd mg dosages).

ELEMENT 4: EVIDENCE OF DATA COLLECTION

➢ The weeks of February 12th-25th, 2018 were reviewed. A total of 7 surgical days occurred over the 2 week period.

➢ A total of 95 patients' charts and narcotic logs were analyzed to compare data. The information collected focused on administration of either 3mg or 5mg of Midazolam.

➢ Data was collected on a formatted log listing each midazolam dose administered, date, and wastage. (see below)

Narcotic Log Focus Study Data Collection

	Date:	Midazolam 2mg	Midazolam 3mg	Midazolam 5mg	Wastage
1	Feb 12, 2018	✔			
2	Feb 12, 2018		✔		
3	Feb 12, 2018	✔			
4	Feb 12, 2018		✔		

ELEMENT 5: DATA ANALYSIS

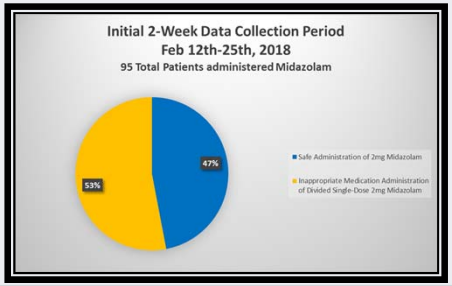
Medication Data:

➢ **Analysis of the data showed that administration of single-dose midazolam vials were divided between 2 patients 53% of the time-frame of Feb 12th- Feb 25th, 2018.**

➢ A total of 95 patients received midazolam. Of that 95, 50 patients received either 3mg or 5mg of midazolam. Only 2 days actually had waste documented totaling only to 5mgs.

➢ The division of single dose vials was frequently occurring and posed a severe risk to the ESC.

➢ The identified sources were anesthesia providers and intraoperative nurses both demonstrating "habits" of waste prevention and inappropriate medication administration.

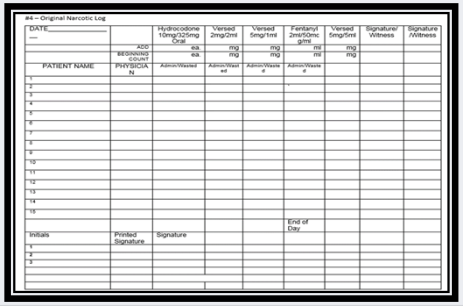


Documentation Data:

➢ Analysis of documentation showed need for improvement. During the audit, it was noted that the medication logging was not adequate.

➢ Anesthesia and nursing staff were not signing narcotics out of the narcotic cabinet. Confusion would occasionally occur during the end-of-day counting.

➢ Correction of narcotic log formatting and redesign would likely help improve documentation compliance. Unnecessary medications were listed on the narcotic log. General structure of the log was not user friendly.



ELEMENT 6: COMPARISON OF DATA TO GOAL

➢ **Data analysis showed the Eye Surgery Center did not meet the goal of 100% compliance with single-dose medication administration. Only 47% compliance was achieved.**

ELEMENT 7: CORRECTIVE ACTION

1) Education of anesthesia providers and nursing staff was completed on Feb 26th, 2018 during employee meeting regarding identified issues. A focus was made on APIC safe injection practices and CMS standards to ensure that medications would be administered correctly.

2) Administration worked collaboratively with anesthesia and nursing staff on updating the narcotic log. With the updates in place, the center hoped to see more adequate documentation and staff accountability. First completion was done 3/12/18 to include:

- Sign-out areas for anesthesia providers, holding area nurses, and operating room nurses to document removal of narcotics from the cabinet.
- Individual waste columns for each medication.
- Removal of unnecessary medications.
- Signature areas with printed name and initials.

3) Re-measurement was then scheduled for March 12-19th.

ELEMENT 8: RE-MEASUREMENT

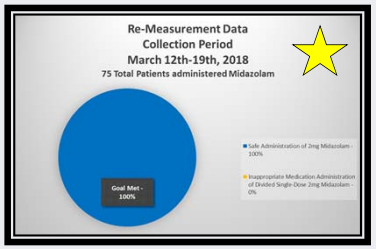
➢ The week of March 12-19th was audited. A total of 75 patients were administered midazolam. The new log was used showing all narcotics were signed out and wasted correctly.

➢ Re-measurement revealed that providers were correctly administering the medication as a single dose medicine showing 100% of the patients were anesthetized correctly using safe injection practices. The goal of the study was met.

➢ Furthermore, visualization of single dose medication administration was witnessed during random, secret auditing in the operating room. Narcotics were locked correctly and 1mg remainder vials of Midazolam were not noted as found historically.

➢ A recommendation was made to update the form to include proper blocks for double witnessing of licensed personnel.

ELEMENT 8: RE-MEASUREMENT *(Cont..)*

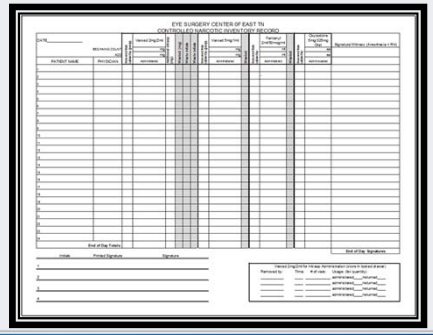


ELEMENT 9: ADDITIONAL CORRECTIVE ACTION AND RE-MEASUREMENT

➢ A final correction was made to the narcotic log. Wastage columns were added and shaded for assisting with usage.

➢ It was put into place on 3/28/18.

➢ Re-measurement was not indicated due to performance goal being met



ELEMENT 10: COMMUNICATION

All anesthesia and registered nurses were actively involved in developing solutions. All use the new log daily.

To ensure no employees were missed, staff in-services were conducted on Feb 26th, 2018 and March 28th, 2018.

A full report of the study was presented to the QAPI committee and Operating Board 2nd Quarter meetings.