MSOS Member Briefing
May 2022

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May 2022

Moderated by: E. Robert Feroli, PharmD, FASHP

MSOS
MEDICATION SAFETY OFFICERS SOCIETY

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Developing A Reliable Scanning Rate for Pharmacy Dispenses
In the Acute Care setting

AUDIENCE: Medication Safety Officer Society (MSOS) Member Briefing

DATE: May 26, 2022

PRESENTERS: Jennifer Matias, PharmD, BCPS, CPPS
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Kaiser Permanente - Pharmacy Quality and Medication Safety

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OUTLINE

BACKGROUND **PROBLEM** **SOLUTION**

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BACKGROUND: About Kaiser Permanente (KP)

Kaiser Permanente exists to provide high-quality, affordable health care services and to improve the health of our members and the communities we serve.

Members	Hospitals	Medical offices[1]
12.5M	39	724

Physicians[2]	Nurses[3]	Employees[4]
23,597	63,847	216,776

- 500+ Pharmacies
  - ✓ **39+ Inpatient Pharmacies**

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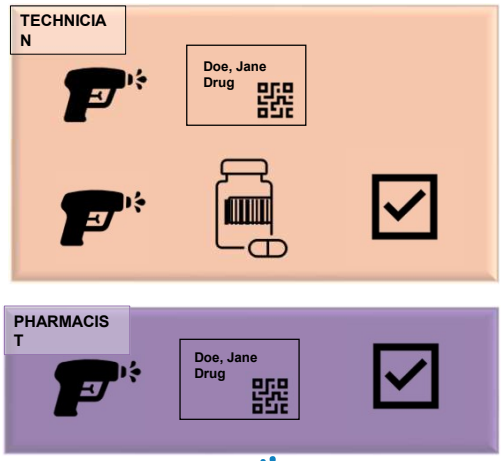
BACKGROUND: Pharmacy Dispense Scanning

WHAT IS IT?

- Technology used during either compounding and/or dispensing a patient-specific medication
- Utilizes barcode scanning to ensure correct medication selected
  - ✓*The BCMA of Pharmacy!*
- Electronically documents information
-
- KP currently uses EPIC's 'Dispense Prep & Check'



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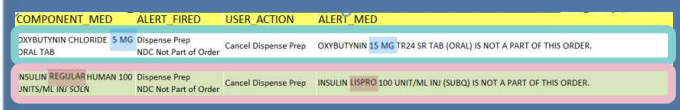
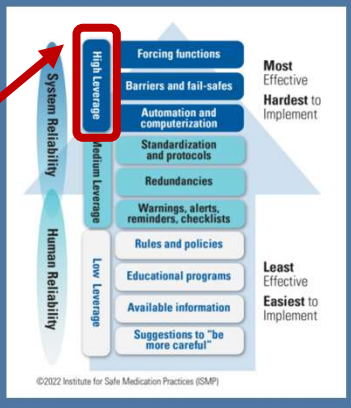
BACKGROUND: Pharmacy Dispense Scanning

WHY IS THIS IMPORTANT TO SAFETY?

- Prevents medication errors
  - ✓Ensures correct product selection
- High leverage error reduction strategy





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PROBLEM: Is Pharmacy Dispense Scanning Being Used?

QUESTION **Is Pharmacy Dispense Scanning Being Used?**

- Medication safety technology only works if used – *think seat belts!*
- Pharmacy leaders interested in setting goals around scanning rates
- Needed to obtain data to understand scanning rates
  - ✓Key to determination of scanning rate was understanding the number of 'dispenses' which would serve as the denominator for the calculation

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PROBLEM: Is Pharmacy Dispense Scanning Being Used?

VENDOR RECOMMENDATION **Use of Labels Printed as 'Dispenses' – Not Reliable**

- This first attempt used the # of labels that printed as a surrogate for 'dispenses' which was very problematic--resulted in a ***falsely*** low scanning rate
  - ✓Many labels print that may not actually be dispensed for a variety of reasons (e.g., unit transfers, PRNs, continuous drips)
  - ✓Previous strategies used were not sustainable or consistent across medical centers (e.g., suppressing label printing, returning labels, data manipulation)

$$\%\ \text{SCANNING RATE} = \frac{\#\ \text{RX Scanned Dispenses}}{\#\ \text{Labels Printed}}$$

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SOLUTION: Is Pharmacy Dispense Scanning Being Used?

DATA ATTEMPT #2 **Narrow Scope to 'Administered Dispenses' - Improved**

- New surrogate for the data – 'Administered Dispenses'
  - ✓ The data linked documented administrations back to pharmacy dispenses to see if it was scanned during preparation
- Note:
  - Scanning rates based on 'Administered Dispenses' would not cover ALL medications dispensed (i.e. not a productivity report), but it does get to the heart of what truly matters → what reached the patient
  - Medications dispensed from ADC or floor stock/units were excluded

WAS MEDICATION ADMINISTERED & DOCUMENTED IN E-MAR?	→	DID MEDICATION LABEL PRINT IN PHARMACY?	→	WAS MEDICATION SCANNED DURING PREPARATION?
✓		✓ Included in denominator		✓ Included in numerator

$$\% \text{ SCANNING RATE} = \frac{\text{\# RX Scanned Dispenses}}{\text{\# Labels Printed that were administered}}$$

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SOLUTION: Administered Dispenses

- Data change improved reliability of the scanning rates by at least 20%
- Much improved trust in the data.
- Vendor recommended scanning rates were neither reliable nor actionable

Now, with reliable scanning rates, able to:
- Set goals around ensuring scanning use
- Target areas for improvement
- Reward and recognize staff that scan consistently

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THANK YOU!! QUESTIONS?

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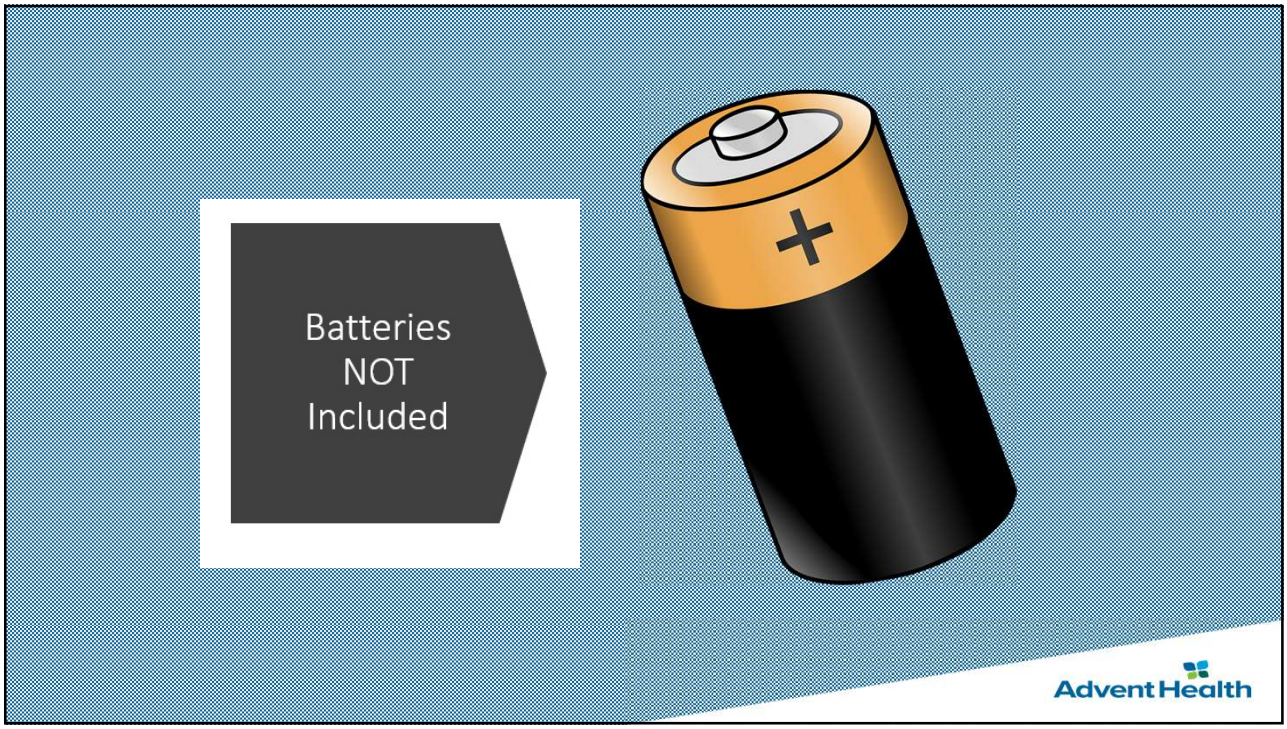

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Central Florida Division

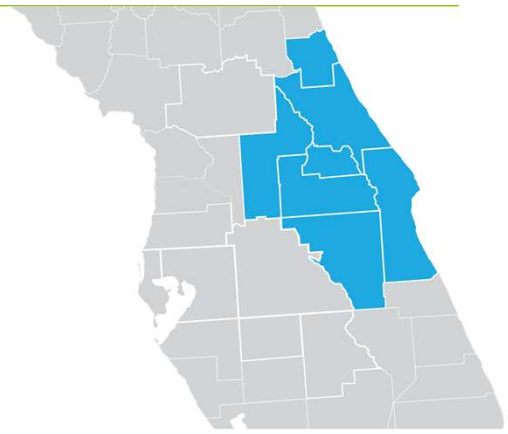
17 Hospitals

2,675,903 Outpatient visits

201,913 Inpatient visits

726,339 Outpatient ED registrations

4,475 Beds



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Compounding Quality Panel

While reviewing documents, variability of spill kit contents was identified

Question regarding which HD spill kits we are purchasing

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PDSA

Plan: Research national organizations' recommendations

Do: Review SOP collect spill kit info from different sites

Study: Pending- upcoming internal audits in Aug/Oct

Act: Pending- present findings

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PDSA: Planning Phase

Reviewed national organizations' recommendations

- American Society of Health System Pharmacists (ASHP)
- Occupational Safety and Health Administration (OSHA)
- Oncology Nursing Society (ONS)
- National Institute for Occupational Safety and Health (NIOSH)
- USP <800>

Comparison and evaluation performed

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Oncology Nursing Society

- All individuals involved in the spill cleanup must don HD tested PPE, including
  - Double gloves
  - Gown
  - Respiratory and face protection
- Contain the spill using plastic-backed absorbent sheets or spill pads
- If possible, obtain assistance from another trained person who can hold the spill waste disposal bag, this will prevent contamination of the bag.
- For spills, wear:
  - Eye/face protection
  - Full face, chemical cartridge respirator or PAPR* if large spill or risk to vapors/gases

SUMMARY:
- Gloves x2
- Gown
- Respiratory protection
- Face protection/shield
- Spill pads/sheet
- Waste disposal bag
- Eye protection

*Powered air purifying respirator

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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.132: This regulation requires employers to ensure that personal protective equipment be "provided, used, and maintained in a sanitary and reliable condition whenever it is necessary……" to prevent injury. This includes protection of any part of the body from hazards through absorption, inhalation, or physical contact.

Spill Kits. Spill kits containing all of the materials needed to clean up spills of HDs should be assembled or purchased (ASHP, 2006). These kits should be clearly labeled, should be kept in or near HD preparation and administrative areas, as well as HD receiving and storage areas where spills may occur. Spill kits should be located on HD transport carts and staff transporting HDs should be trained to manage a spill (ASHP, 2006). The HD-specific SDS should include sections on emergency procedures, including appropriate personal protective equipment. The ASHP recommends that kits include (ASHP, 2006):

Refers to ASHP, ONS, USP

Hazardous Drugs - Controlling Occupational Exposure to Hazardous Drugs | Occupational Safety and Health Administration (osha.gov)

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National Institute for Occupational Safety & Health (NIOSH)

Table 5 (Continued). Personal protective equipment and engineering controls for working with hazardous drugs in healthcare settings*

Formulation	Activity	Double chemo-therapy gloves	Protective gown	Eye/face protection	Respiratory protection	Ventilated engineering control
Spills	Cleaning	yes	yes	yes	yes	N/A

SUMMARY: Gloves, Gown, Eyes, Face, Respirator

NIOSH List of Antineoplastic and Other Hazardous Drugs in Healthcare Settings, 2016 (cdc.gov)

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United States Pharmacopeia (USP) <800>

- Signs must be available for restricting access to the spill area.
- Spill kits containing all the materials needed to clean HD spills must be readily available in all areas where HDs are routinely handled.
- If HDs are being prepared or administered in a non-routine healthcare area, a spill kit and respirator must be available.
- The NIOSH list of antineoplastic and other HDs provides general guidance on PPE
- The entity's SOP must describe the appropriate PPE to be worn
- Appropriate PPE must be worn when handling HDs including during…. Spill Control
- Appropriate eye and face protection must be worn when there is a risk for spills or splashes of HD
- A full-facepiece respirator provides eye and face protection.
- Goggles must be used when eye protection is needed.
- Face shields in combination with goggles provide a full range of protection against splashes to the face and eyes. Face shields alone do not provide full eye and face protection.
- Chemotherapy gloves should be worn for handling all HD

Summary: Eye protection, Face protection, Respirator, HD sign, Gloves, Goggles

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	Gloves x2	Gown	Absorbent pads sheets/towels	Face protection	Eye protection	Respirator	HD sign	Shoe covers	Disposable bags	Disposable scoop	Puncture resistant Cont.	Googles
ASHP	X	X	X	X	X	X		X	X (2)	X	X	X
ONS	X	X	X	X	X	X			X			X
OSHA	X	X		X	X	X		X				X
NIOSH	X	X		X	X	X						
USP <800>	X			X	X	X	X					X

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PDSA: Planning Phase

Review SOP and Spill Kits

- 2 pairs of gloves meeting ASTM standard as chemotherapy gloves (must use sterile if inside of a PEC)
- 1 coated, non-permeable chemotherapy gown
- 1 pair of non-permeable shoe covers
- 3 spill towels
- 2 super absorbent pads to soak up spill
- 2 thick plastic chemo waste bags
- 1 disposable scoop with detachable scraper
- 1 caution sign

Ancillary kit items- to supplement HD kit

- Face shield and goggles
- Puncture resistant container
- Several sized gloves, gowns, shoe covers
- Fit tested N-95 or half face respirator

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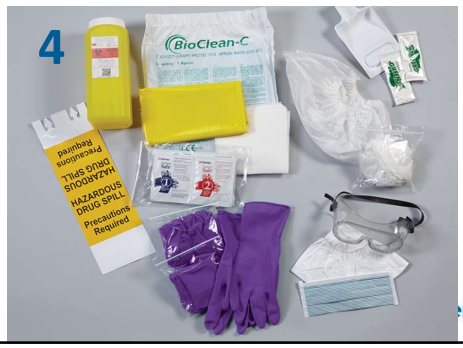

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PDSA: Do Phase

- Added Kit #4 to purchasing list
- Quarterly validation checks

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PDSA: Study/Act Phase

- 4th Quarter audits
- Present findings to Compounding Quality Panel

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Take Aways

Compare current process to available literature

Access current inventory

- Identify variabilities: opportunities for
  - improvements
  - reduce exposure
  - standardization
  - make it easy

Hard-Wire process

- Existing program or Outlook calendar
- Validate / Inspect Kits
- Make sure you're prepared! Don't forget your batteries!

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References

American Society of Health-System Pharmacists. ASHP guidelines on handling hazardous drugs. Am J Health-Syst Pharm. 2006; 63:1172- 93.

Hazardous drugs—handling in healthcare settings (general information chapter 800). In: The United States Pharmacopeia, 39th rev., and The national formulary, 34th ed. First supplement. Rockville, MD: United States Pharmacopeial Convention; 2016.

National Institute for Occupational Safety and Health. NIOSH list of antineoplastic and other hazardous drugs in healthcare settings, 2016. www.cdc.gov/niosh/docs/2016-161/ default.html.

Occupational Safety and Health Administration. Safety and health topics. Hazardous drugs. www.osha.Gov/hazardous-drugs/index. html.

Oncology Nursing Society. Toolkit for Safe Handling of Hazardous Drugs for Nurses in Oncology, 2018. www.ons.org/sites/default/files/2018-06/ONS_Safe_Handling_Toolkit_0.pdf.

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Questions?

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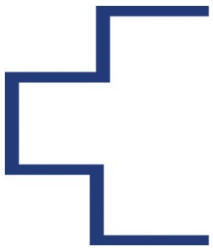

Opioid Portion Control: Applying Human Factors Engineering to Intraoperative Opioid Stewardship

Medication Safety Officer Society Meeting
May 24, 2022

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Background

- Literature suggests that high-dose intraoperative opioids may result in higher rates of respiratory complications during the postoperative period, higher postoperative pain scores, and an increased risk of 30-day hospital readmissions[1-3]
- Medication use evaluation sought to assess the following factors:[1-6]
  - Which patients are at the greatest risk of adverse drug events from intraoperative opioids
  - The dosing threshold for intraoperative opioids above which the risk of respiratory depression becomes elevated
  - Whether higher intraoperative opioid use is associated with higher opioid use during the post-operative period
- Our aim was to develop targeted, evidence-based interventions to mitigate the potential harm to patients

1. Long DR, et al. Br J Anaesth. 2018 May;120(5):1090-1102.
2. Friedrich S, et al. Br J Anaesth. 2019 Jun;122(6):e180-e188.
3. Albrecht E, et al. Acta Anaesthesiol Scand. 2020 Jan;64(1):6-22.
4. Laporta ML, et al. J Basic Med Sci. 2021 Apr 1;21(2):221-228.
5. Grant MC, et al. Anesth Analg. 2020 Dec;131(6):1852-1861.
6. Weingarten TN, et al. J Anesth. 2016 Feb;30(1):116-22.

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Medication Use Evaluation Overview

STUDY DESIGN

- Retrospective study of 171 surgical patients from 1/1/2020 to 3/31/2020 at IAH and IMVH

KEY DEFINITIONS

- Intraoperative period: The time between arriving in the operating room and the procedure being documented as ending
- Immediate post procedural period: The first 24 hours after the procedure was documented as complete
- Signs of respiratory depression: Changes in respiratory function which result in a change in ventilator settings via closed loop control mechanisms. These include respiratory rate <10 breaths/min, tidal volume < 6 mL/kg, spO2 < 90%, EtCO2 > 45 mmHg

INCLUSION CRITERIA

- ≥1 dose of an opioid administered during the intraoperative period
- General anesthesia with ≥1 neuromuscular blocking agent
- Inpatient or observation status following the procedure
- Intraoperative vital signs recorded at intervals no greater than every fifteen minutes
- Age ≥18 years

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Medication Use Evaluation Baseline Characteristics

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Table 1. Baseline Characteristics Stratified by Intraoperative Opioid Use (N = 171)

	MME < 45 (n = 46)	45 ≤ MME < 70 (n = 45)	70 ≤ MME < 90 (n = 47)	MME ≥ 90 (n = 33)	P-value
Patient Characteristics					
Age, average (years)*	69.2	63.2	62.7	57.5	0.001
Female (n)	24 (52%)	20 (44%)	17 (36%)	14 (42%)	0.5
Opioid tolerant€ (n)	0 (0.0%)	2 (4.4%)	3 (6.4%)	3 (9.1%)	0.3
Weight, average (kg)	83.1	81.6	92.7	90.0	0.054
Body mass index (kg/m²)	28.4	28.3	30.8	29.6	0.2
Creatinine clearance (mL/min)*	69.6	79.2	84.0	95.4	<0.001
Respiratory comorbidities£ (n)	15 (33%)	12 (27%)	14 (32%)	13 (39%)	0.7
Procedure Characteristics					
Duration of procedure, average (hours)*	2.2	2.7	3.0	3.7	<0.001
Service line (number of patients)					
Orthopedics	30 (65%)	23 (51%)	24 (51%)	14 (42%)	0.01
Neurosurgery	3 (6.5%)	8 (18%)	11 (23%)	4 (12%)	
Urology	2 (4.3%)	5 (11%)	6 (13%)	7 (21%)	
Colorectal*	7 (15%)	2 (4.4%)	0 (0.0%)	1 (3.0%)	
General surgery	1 (2.2%)	5 (11%)	1 (2.1%)	3 (9.1%)	
Gynecology/obstetrics	2 (4.3%)	1 (2.2%)	3 (6.4%)	0 (0.0%)	
Plastics	0 (0.0%)	0 (0.0%)	2 (4.3%)	2 (6.1%)	
Oral surgery*	0 (0.0%)	1 (2.2%)	0 (0.0%)	2 (6.1%)	
Vascular	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Intraoperative Medication Characteristics					
Opioid medications (number of patients with at least one dose charted as administered)					
Fentanyl	45 (98%)	45 (100%)	46 (98%)	33 (100%)	0.6
Hydromorphone*	12 (26%)	30 (67%)	37 (79%)	28 (85%)	< 0.001
Remifentanil	1 (2.2%)	3 (6.7%)	8 (17%)	3 (9.1%)	0.08
Morphine	1 (2.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0.4
Nonopioid medications (number of patients with at least one dose charted as administered)					
Ketamine*	0 (0.0%)	6 (13%)	4 (8.5%)	9 (27%)	0.002
Midazolam	40 (87%)	38 (84%)	41 (87%)	32 (97%)	0.4
Rocuronium	42 (91%)	39 (87%)	41 (87%)	31 (66%)	0.7
Succinylcholine*	17 (37%)	19 (42%)	31 (66%)	17 (52%)	0.03

* Statistically significant results
€ Defined as taking ≥ 60 MME for at least 7 days based on outpatient fill history
£ Respiratory comorbidities were defined as asthma, chronic obstructive pulmonary disease, and sleep apnea

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Medication Use Evaluation: Results

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Figure 1. Patients with > 2 Signs of Intraoperative Respiratory Depression as per Key Definitions (N = 171)

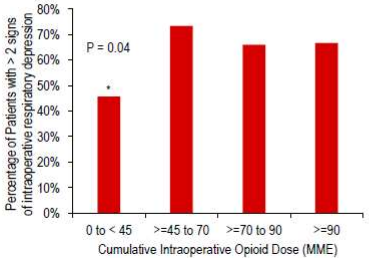
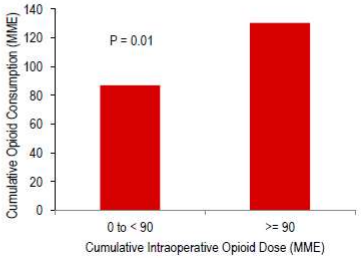


Figure 2. Average Opioid Use in the First 24 hours after the Procedure was Documented as Complete (N = 171)



*Signs of respiratory depression: Respiratory rate <10 breaths/min, tidal volume < 6 mL/kg, spO2 < 90%, EtCO2 > 45 mmHg

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Challenges of Opioid Stewardship in the OR

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- Consolidated one-step workflow process decreases safety checkpoints
  - Dose of the medication is decided at point of care rather than prospectively
  - Lack of prospective review by pharmacist
  - Ease of administering multiple doses in quick succession

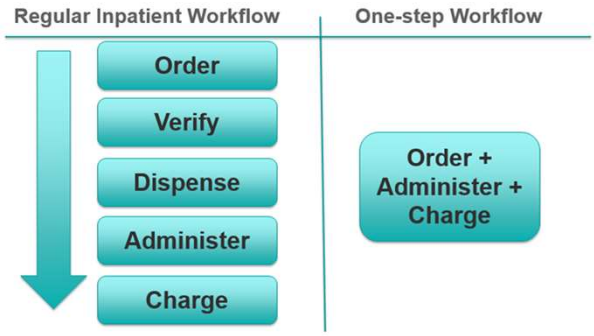

Image adapted from One-Step Medications Setup and Support Guide. EPIC User Web. Updated 03/15/22. Accessed 05/01/22.

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One-Step Ordering Process

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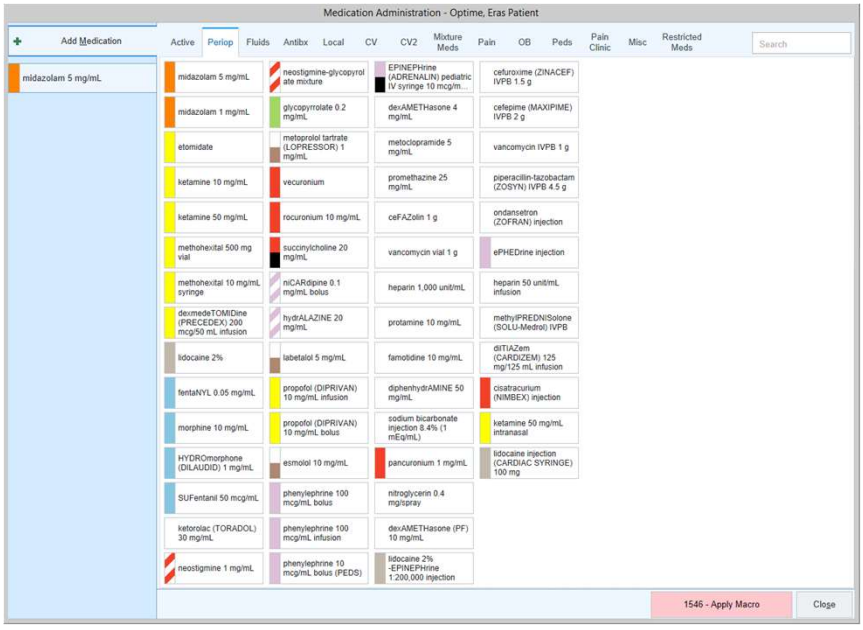

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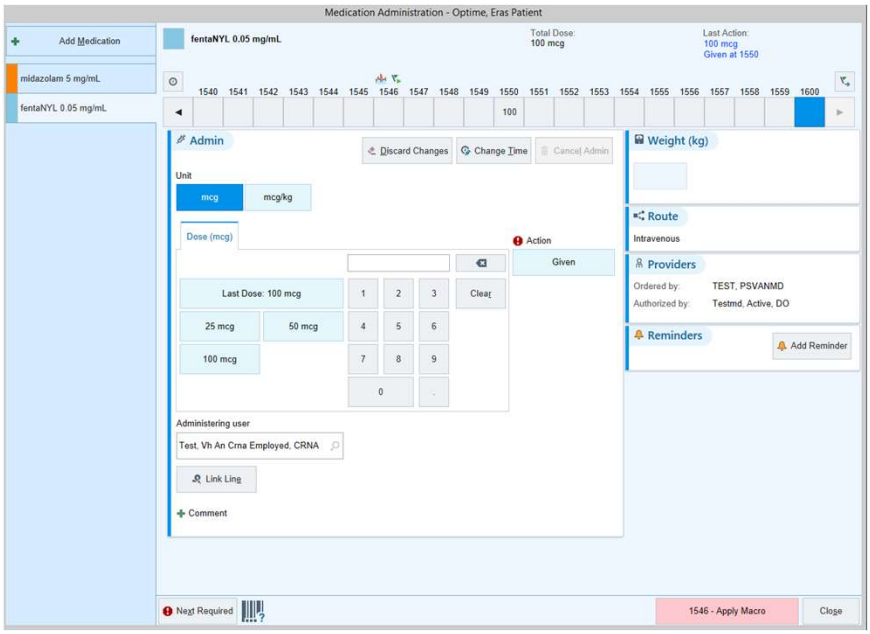
One-Step Ordering Process



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Developing a Human-Factors Solution

Hypothesis:

Changing the fentanyl 100 mcg/mL vials stocked in the anesthesia work stations and automated dispensing machines from 2 mL to 1 mL will decrease intraoperative opioid use

Rationale for intervention development:

- Does not require significant changes to the one-step workflow
- Creates a physical obstacle to administering high single doses of fentanyl
- Forces anesthesia personnel to pause at more frequent intervals between doses
- Aligns maximum suggested dose in the one-step EHR ordering to the maximum available dose physically available

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Hydromorphone Vial Size and Anesthetic Dosing

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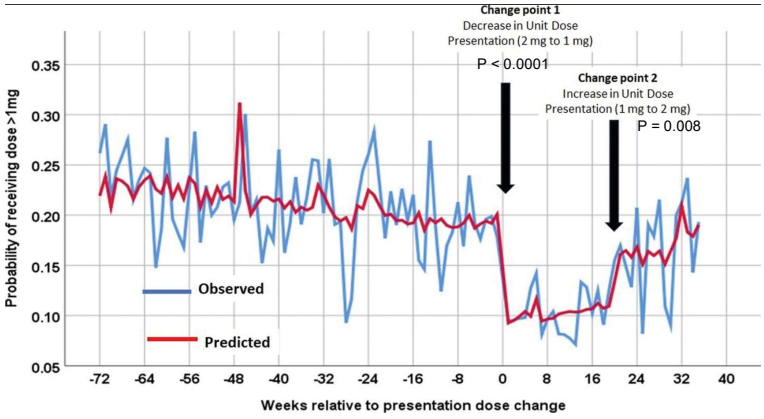
Time series analysis of 15,010 patients who received hydromorphone as part of an anesthetic regimen between 2/2016 and 3/2018

- Changing from 2 mg vials to 1 mg vials **decreased** the probability of receiving a dose > 1 mg (RR = 0.51, 95% CI = 0.40-0.66)
- Changing from 1mg vials to 2 mg vials **increased** the probability of receiving a dose > 1 mg (RR = 1.48, 95% CI = 1.11-1.98)



Ershoff BD, et al. Anesthesiology. 2020 May;132(5):981-991.

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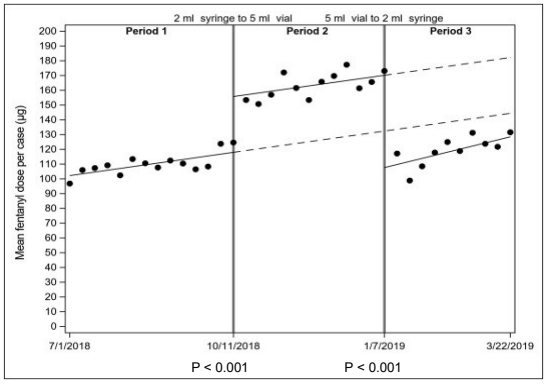
Fentanyl Vial Size and Anesthetic Dosing

INOVA

Cohort study of 17,695 undergoing surgery at a single academic hospital where fentanyl vial sizes were changed due to shortages from 10/11/18 to 01/07/19

- Changing from 2 mL syringes to 5 mL syringes resulted in a **25% weighted increase** in mean total opioid administered ($p < 0.001$)
- Changing back from 5 mL syringes to 2 mL syringes resulted in a **31% weighted decrease** in mean total opioid administered ($p < 0.001$)



Stone A, et al. Br J Anaesth. 2020 Jun;124(6):e219-e221.

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Engaging Stakeholders

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- Presented at regional interdisciplinary opioid stewardship meeting
  - Invited anesthesiology chairs from all sites
  - Naloxone cases in the perioperative space presented at the same meeting
- Key questions from providers
  - How do we know that opioid utilization is causing harm?
  - What other confounders could be contributing to high intraoperative and postoperative opioid use?
  - Would changing vial sizes really work?
- Other important talking points
  - Low impact on anesthesiology workflows
  - May potentially decrease the amount of waste documentation
  - Will continue to use vials (not ampules)
  - Supply of the 1 mL vials is adequate to ensure consistent stocking practices

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Conclusion

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Next Steps

- Currently in-process for go-live for conversion from fentanyl 200 mcg/2 mL to 100 mcg/1 mL

Definition	Category
Number of patients requiring opioid reversal in the perioperative spaces	Outcome
Total dose of fentanyl administered per case	Process
Average of pain scores for patients in the PACU	Balancing

Lessons Learned

- Human-factors engineering based solutions can allow for pharmacy intervention in areas with unique workflows
- Early engagement with key stakeholders with an emphasis on the “why” is critical to generating buy-in

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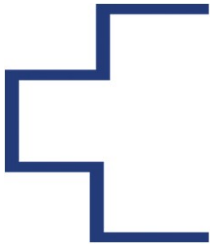

Questions?

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ISMP
Institute for Safe Medication Practices
An ECRI Affiliate

ISMP Update
MSOS Briefing May 2022

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Institute for Safe Medication Practices

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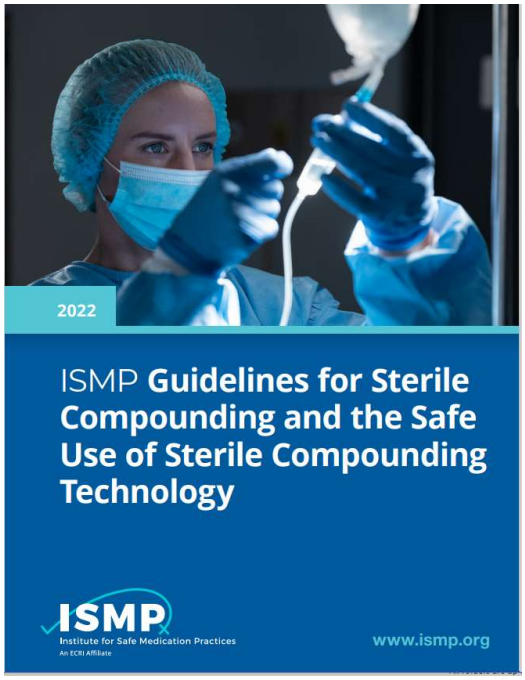
Guidelines for Sterile Compounding and the Safe Use of Sterile Compounding Technology

https://www.ismp.org/news/ismp-releases-updated-sterile-compounding-guidelines



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Webinar: *Sterile Compounding Technology: Pharmacy Technicians Lead the Adoption of Best Practices*

Tuesday, June 7, 2022, 3 – 4 pm ET

State common safety challenges faced by technicians using sterile compounding technology.

Explain the role of the technician in designing a safe workflow plan for sterile compounding technology.

Discuss best practices identified during ISMP's National Sterile Compounding Summit.

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https://www.ismp.org/events/sterile-compounding-technology-pharmacy-technicians-lead-adoption-best-practices

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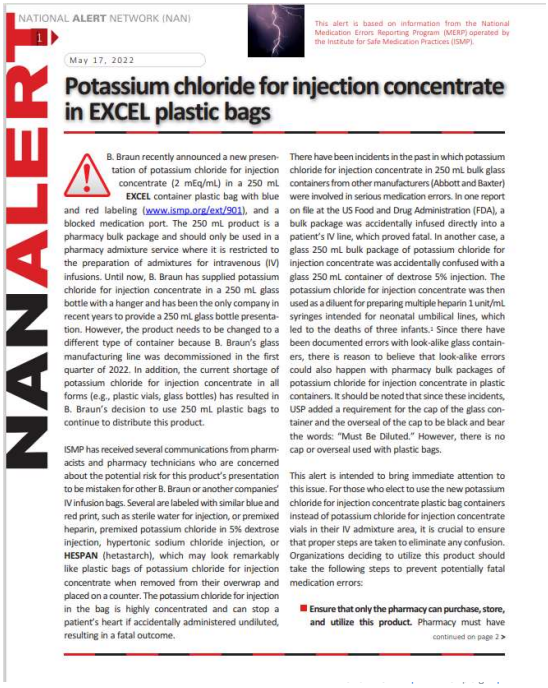
MSOS Member Briefing
May 2022

National Alert Network

May 17th, 2022

https://www.ismp.org/alerts/potassium-chloride-injection-concentrate-excel-plastic-bags



NATIONAL ALERT NETWORK (NAN)

NANALERT 1

May 17, 2022

This alert is based on information from the National Medication Errors Reporting Program (MERP) operated by the Institute for Safe Medication Practices (ISMP).

Potassium chloride for injection concentrate in EXCEL plastic bags

B. Braun recently announced a new presentation of potassium chloride for injection concentrate (2 mEq/mL) in a 250 mL **EXCEL** container plastic bag with blue and red labeling (www.ismp.org/ext/901), and a blocked medication port. The 250 mL product is a pharmacy bulk package and should only be used in a pharmacy admixture service where it is restricted to the preparation of admixtures for intravenous (IV) infusions. Until now, B. Braun has supplied potassium chloride for injection concentrate in a 250 mL glass bottle with a hanger and has been the only company in recent years to provide a 250 mL glass bottle presentation. However, the product needs to be changed to a different type of container because B. Braun's glass manufacturing line was decommissioned in the first quarter of 2022. In addition, the current shortage of potassium chloride for injection concentrate in all forms (e.g., plastic vials, glass bottles) has resulted in B. Braun's decision to use 250 mL plastic bags to continue to distribute this product.

ISMP has received several communications from pharmacists and pharmacy technicians who are concerned about the potential risk for this product's presentation to be mistaken for other B. Braun or another companies' IV infusion bags. Several are labeled with similar blue and red print, such as sterile water for injection, or premixed heparin, premixed potassium chloride in 5% dextrose injection, hypertonic sodium chloride injection, or **HESPAN** (hetastarch), which may look remarkably like plastic bags of potassium chloride for injection concentrate when removed from their overwrap and placed on a counter. The potassium chloride for injection in the bag is highly concentrated and can stop a patient's heart if accidentally administered undiluted, resulting in a fatal outcome.

There have been incidents in the past in which potassium chloride for injection concentrate in 250 mL bulk glass containers from other manufacturers (Abbott and Baxter) were involved in serious medication errors. In one report on file at the US Food and Drug Administration (FDA), a bulk package was accidentally infused directly into a patient's IV line, which proved fatal. In another case, a glass 250 mL bulk package of potassium chloride for injection concentrate was accidentally confused with a glass 250 mL container of dextrose 5% injection. The potassium chloride for injection concentrate was then used as a diluent for preparing multiple heparin 1 unit/mL syringes intended for neonatal umbilical lines, which led to the deaths of three infants.[1] Since there have been documented errors with look-alike glass containers, there is reason to believe that look-alike errors could also happen with pharmacy bulk packages of potassium chloride for injection concentrate in plastic containers. It should be noted that since these incidents, USP added a requirement for the cap of the glass container and the overseal of the cap to be black and bear the words: "Must Be Diluted." However, there is no cap or overseal used with plastic bags.

This alert is intended to bring immediate attention to this issue. For those who elect to use the new potassium chloride for injection concentrate plastic bag containers instead of potassium chloride for injection concentrate vials in their IV admixture area, it is crucial to ensure that proper steps are taken to eliminate any confusion. Organizations deciding to utilize this product should take the following steps to prevent potentially fatal medication errors:

■ **Ensure that only the pharmacy can purchase, store, and utilize this product.** Pharmacy must have

continued on page 2 >

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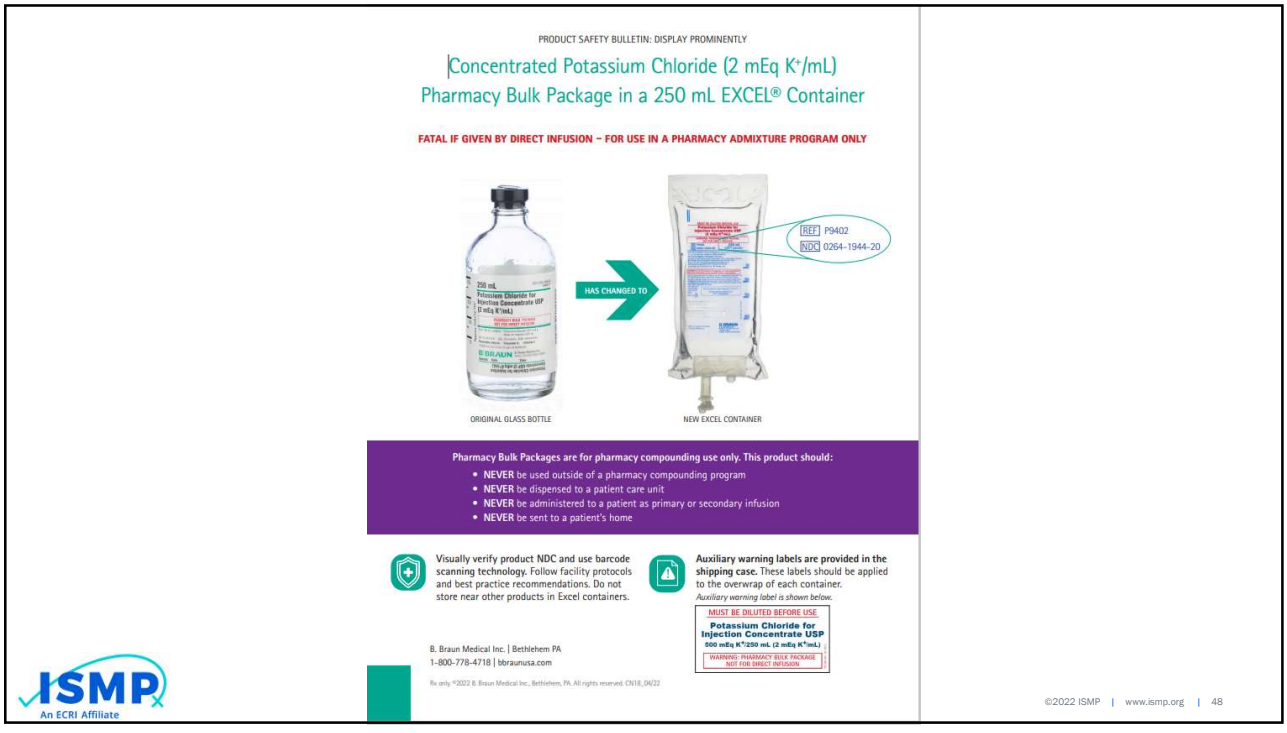

PRODUCT SAFETY BULLETIN: DISPLAY PROMINENTLY

Concentrated Potassium Chloride (2 mEq K^+/mL) Pharmacy Bulk Package in a 250 mL EXCEL® Container

FATAL IF GIVEN BY DIRECT INFUSION – FOR USE IN A PHARMACY ADMIXTURE PROGRAM ONLY

ORIGINAL GLASS BOTTLE

NEW EXCEL CONTAINER

Pharmacy Bulk Packages are for pharmacy compounding use only. This product should:

- **NEVER** be used outside of a pharmacy compounding program
- **NEVER** be dispensed to a patient care unit
- **NEVER** be administered to a patient as primary or secondary infusion
- **NEVER** be sent to a patient's home

Visually verify product NDC and use barcode scanning technology. Follow facility protocols and best practice recommendations. Do not store near other products in Excel containers.

Auxiliary warning labels are provided in the shipping case. These labels should be applied to the overwrap of each container.

Auxiliary warning label is shown below.

MUST BE DILUTED BEFORE USE
Potassium Chloride for Injection Concentrate USP
500 mEq K^+/250 mL (2 mEq K^+/mL)
WARNING: PHARMACY BULK PACKAGE NOT FOR DIRECT INFUSION

B. Braun Medical Inc. | Bethlehem PA
1-800-778-4718 | bbraunusa.com

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Join us in Phoenix for the ASHP Summer Meeting!

Sunday, June 12th 9:45 – 11 am
Come On In, the Water's Fine: Diving into the ISMP Targeted Medication Safety Best Practices

Sunday, June 12th 12:40 – 1:40 pm
Medication Safety Officers Society meeting

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Questions?

- A copy of today's slides will be posted on our website
- Next MSOS Briefing date – July 28, 2022.

MSOS MEDICATION SAFETY OFFICERS SOCIETY

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