MSOS Member Briefing
January 2022

MSOS Member Briefing
January 2022

Moderated by: E. Robert Feroli, PharmD, FASHP

MSOS
MEDICATION SAFETY OFFICERS SOCIETY

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Multi-Chamber Bag Parenteral Nutrition (MCB-PN)

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American Society for Parenteral and Enteral Nutrition

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What is MCB-PN?

ASPEN Definition: Standardized, Commercially Available Parenteral Nutrition products are formulations available from a manufacturer. These products require fewer compounding steps before administration.

- Examples: multi-chamber bags containing concentrated amino acids (with or without electrolytes) plus concentrated dextrose with or without lipid injectable emulsions
- For ease and purposes of this presentation, we will call these products Multi-Chamber Bag Parenteral Nutrition or **MCB-PN**
- Avoid the term “premixed” as mixing and additives are required

Kochevar M, et al. A.S.P.E.N. Statement on parenteral nutrition standardization. JPEN 2007;31:441-8

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Two Chamber Bag

http://www.baxtermedicationdeliveryproducts.com/nutrition/clinimix.html

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Three-Chamber Bag

DEXTROSE

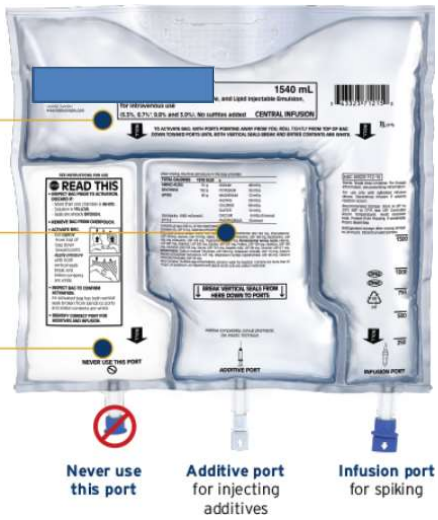
Provides a moderate dose of carbohydrates

AMINO ACIDS AND ELECTROLYTES

A source of essential and nonessential amino acids and balanced electrolytes

LIPIDS [redacted]

A reliable source of lipids used worldwide for 50 years; registered in the US since 1975



Never use this port

Additive port for injecting additives

Infusion port for spiking

http://kabivenusa.com

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MCB-PN Products

Characteristics	2 Chamber	3 Chamber
Venous Access Route	Peripheral or Central*	Peripheral or Central*
Chambers	Amino Acid + Dextrose	Amino Acid + Dextrose + ILE
Volume	1000 mL and 2000 mL	Varies
Electrolytes	With or Without	With
Amino Acid Concentration	2.75% to 8%**	34 g to 85 g per bag
Dextrose Concentration	5% to 25%**	100 g to 250 g per bag

*Depends on osmolarity

**Macronutrient concentrations varies based upon formulation

http://www.baxtermedicationdeliveryproducts.com/nutrition/clinimix.html
http://kabivenusa.com

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Original Communication

A Parenteral Nutrition Use Survey With Gap Analysis

Joseph I. Boullata, PharmD, RPh, BCNSP[1]; Peggi Guenter, PhD, RN[2]; and Jay M. Mirtallo, MS, RPh, BCNSP, FASHP[3]

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Volume 37 Number 2
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DOI: 10.1177/0148607112464781
jpen.sagepub.com
hosted at
online.sagepub.com
SAGE

- A survey was completed in 2011
- 21% of respondents to this survey reported using MCB-PN with many due to ongoing parenteral nutrient product shortages
- The use of MCB-PN was greater in those with a census <200 (35.1%) or with ≤5 PN (29.7%)

Boullata J, et al. A Parenteral Nutrition Use Survey With Gap Analysis. *JPEN* 2013;37:212-222

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MCB-PN Use in the United States

- American Society of Health-System Pharmacists published data

Methods of Compounding Nutrition Support Preparations	2011 ASHP Data n=559	2014 ASHP Data n=425	2017 ASHP Data n=693
MCB-PN	36%	43%	44.8%
Automated Compounding Method	20.4%	16.8%	14.3%
Gravity Method	17.4%	10.4%	7.7%
Outsourced	14.6%	18.6%	19.5%
No PN Prepared	11.6%	11.2%	13.6%

Pederson CA, et al. ASHP national survey of pharmacy practice in hospital settings: dispensing and administration-2011. *Am J Health-System Pharm.* 2012;69:768-85.

Pederson CA, et al. ASHP national survey of pharmacy practice in hospital settings: dispensing and administration-2014. *Am J Health-System Pharm.* 2015;72:1119-37.

Schneider PJ, et al. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration-2017. Am J Health Syst Pharm. 2018 Jun 14. pii: ajhp180151. doi: 10.2146/ajhp180151. [Epub ahead of print]

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MCB-PN Safety Issues

- Assessment
  - ≫Fixed amount in each bag
  - ≫May not meet all individual patient needs
- Prescribing and Labeling
  - ≫Ordering will be different from compounded PN
  - ≫Potentially two systems of ordering PN required
  - ≫Be aware of labeling and how contents are reported
- Order Review
  - ≫MCB-PN alone is **not** a complete PN product
  - ≫Individualized additives
  - ≫Compatibility and stability review

Ayers P, Adams S, Boullata J, Gervasio J, Holcombe B, Kraft MD, Marshall N, Neal A, Sacks G, Seres DS, Worthington P; American Society for Parenteral and Enteral Nutrition. A.S.P.E.N. parenteral nutrition safety consensus recommendations. JPEN J Parenter Enteral Nutr. 2014 Mar-Apr;38(3):296-333.

Boullata JI, Gilbert K, Sacks G, Labossiere RJ, Crill C, Goday P, Kumpf VJ, Mattox TW, Plogsted S, Holcombe B; American Society for Parenteral and Enteral Nutrition. A.S.P.E.N. clinical guidelines: parenteral nutrition ordering, order review, compounding, labeling, and dispensing. JPEN J Parenter Enteral Nutr. 2014 Mar-Apr;38(3):334-77.

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MCB-PN Safety Issues

- Preparation
  - ≫Overwrap must be removed
  - ≫Activation must be done in laminar flow hood
  - ≫There must be complete activation
  - ≫Multivitamin and multi-trace elements inappropriately withheld
- Administration
  - ≫Infusion rate based upon amino acid delivered
  - ≫Potential for waste or need for multiple bags to meet needs
  - ≫Potential risk to lose additives

Ayers P, Adams S, Boullata J, Gervasio J, Holcombe B, Kraft MD, Marshall N, Neal A, Sacks G, Seres DS, Worthington P; American Society for Parenteral and Enteral Nutrition. A.S.P.E.N. parenteral nutrition safety consensus recommendations. JPEN J Parenter Enteral Nutr. 2014 Mar-Apr;38(3):296-333.

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Summary

- MCB-PN may not meet the needs of every patient.
- Ensure that rate is calculated to provide appropriate amino acid.
- There is no data to support the use of MCB-PN as a “base” for compounded PN.
- MCB-PN must be activated in sterile environment (laminar flow hood) before use.
- Hang time should be the same as compounded PN.

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ASPEN Resources

- ASPEN Parenteral Nutrition Resources Page
  - ≫ https://www.nutritioncare.org/PNResources/

  - ≫ This page has ASPEN Recommendations, Guidelines, and Educational Resources related to PN.
  - ≫ Under Educational Resources there is a MCB-PN Educational Video Series.

- **Multi-Chamber Bag Parenteral Nutrition (MCB-PN) Series**: Addresses the appropriate use of multi-chamber bag parenteral nutrition. (Sponsored by Fresenius Kabi) *2018*
  - Part 1: **Introduction,Indications, and Decision Tool**
  - Part 2: **Prescribing and Order Review**
  - Part 3: **Preparing, Labeling,and Dispensing**
  - Part 4: **Administration and Monitoring**

https://www.nutritioncare.org/pnresources/

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References

- Kochevar M, et al. A.S.P.E.N. Statement on parenteral nutrition standardization. JPEN 2007;31:441-8
- Boullata J, et al. A Parenteral Nutrition Use Survey With Gap Analysis. *JPEN* 2013;37:212-222
- Pederson CA, et al. ASHP national survey of pharmacy practice in hospital settings: dispensing and administration-2011. *Am J Health-System Pharm*. 2012;69:768-85.
- Pederson CA, et al. ASHP national survey of pharmacy practice in hospital settings: dispensing and administration-2014. *Am J Health-System Pharm*. 2015;72:1119-37.
- Schneider PJ, et al. ASHP national survey of pharmacy practice in hospital settings: Dispensing and administration-2017. Am J Health Syst Pharm. 2018 Jun 14. pii: ajhp180151. doi: 10.2146/ajhp180151. [Epub ahead of print]
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Questions

Please reach out with any questions.

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Continuously Inhaled Epoprostenol Safeguards for Adults

January 27, 2022

Sammy Burton, PharmD, FISMP
Medication Safety Pharmacist – Smart Pumps

Cleveland Clinic

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Cleveland Clinic Health System

- Main campus
  - 1400-bed academic medical center
- 12 regional hospitals throughout northeast Ohio
- 5 additional hospitals in Florida

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Background

Historically dispensed inhaled epoprostenol in a mini-bag plus and administered via **dedicated** BodyGuard infusion pumps.

BodyGuard infusion pumps were recalled in early 2020.

Due to time and resource constraints, our only viable replacement option was the Baxter infusion pump (the same pumps used within the system to administer large volume intravenous medications).

****Safety Risk:** If inhaled epoprostenol is inadvertently administered via the intravenous route, it can be fatal.

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Prescribing Safeguards

- Restricted to adult Intensive Care Units (ICUs)
- Must be ordered by an ICU staff physician, pulmonary staff physician, or ICU Fellow using the order set

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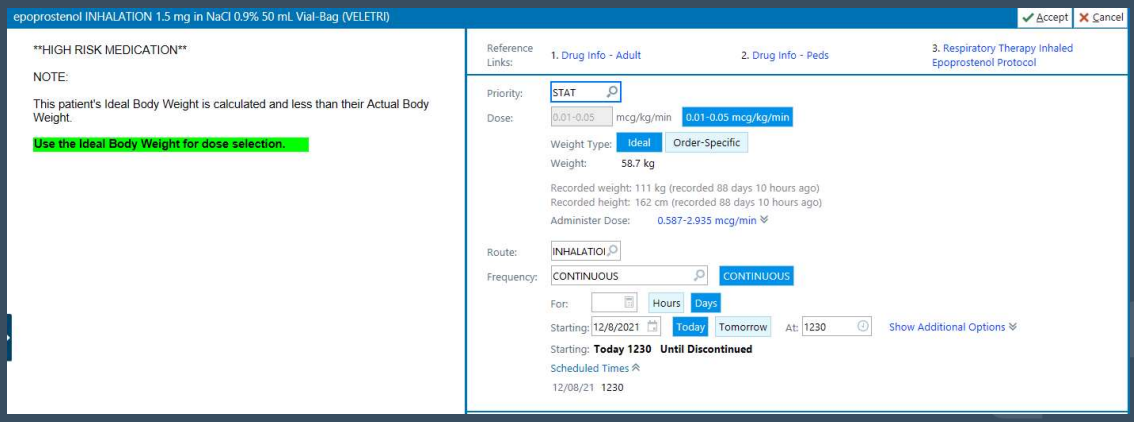
Prescribing Safeguards (Continued)



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Dispensing Safeguards

- Labeling:
  - "For INHALATION only" on batched label
  - For inhalation auxiliary label on outer protect from light bag
- Pyxis storage:
  - Stocked in only the areas where administered
  - "for inhalation" included in the file name
  - NOT available on override
  - Cubie versus matrix pocket
  - Added the following alert:

NOTICE:
This product is for INHALATION only.
Mix vial contents with mini-bag plus prior to administration. Administer via RT pump only.

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Administration Safeguards

- Administration limited to RT only
- **Dedicated** RT pumps with RT-specific library
  - Library only contains two medications:
    - albuterol
    - epoprostenol

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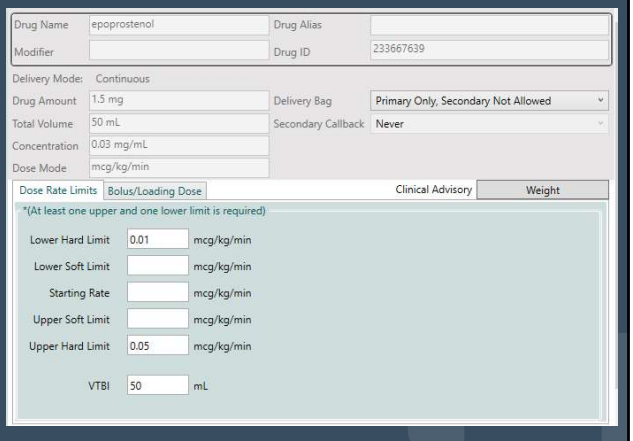
Administration Safeguards (Continued)

- Drug library build
  - One standardized concentration: 1.5 mg/50 mL
  - HARD lower and upper dose-rate limits
  - HARD lower weight limit of 45 kg
  - Auto keypad lock
  - mL/hr programming disabled



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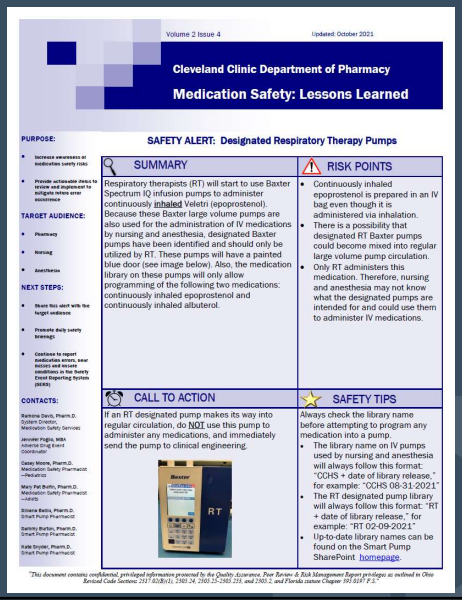
Education

- Hands-on education for RT
- Lessons Learned flyer sent out to pharmacy, nursing, and anesthesia



Volume 2 Issue 4 — Updated: October 2021

Cleveland Clinic Department of Pharmacy

Medication Safety: Lessons Learned

PURPOSE:

- Increase awareness of medication safety risks
- Provide actionable item(s) to review and implement to mitigate future error occurrence

TARGET AUDIENCE:

- Pharmacy
- Nursing
- Anesthesia

NEXT STEPS:

- Share this alert with the target audience
- Promote daily safety huddles
- Continue to report medication errors, near misses and unsafe conditions in the Safety Event Reporting System (SERS)

CONTACTS:

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Jennifer Foglia, MBA Adverse Drug Event Coordinator

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Mary Pat Boffin, Pharm.D. Medication Safety Pharmacist –Adults

Silviana Balica, Pharm.D. Smart Pump Pharmacist

Sarbjit Bhatia, Pharm.D. Smart Pump Pharmacist

Kate Snyder, Pharm.D. Smart Pump Pharmacist

SAFETY ALERT: Designated Respiratory Therapy Pumps

SUMMARY

Respiratory therapists (RT) will start to use Baxter Spectrum IQ infusion pumps to administer continuously inhaled Veletri (epoprostenol). Because these Baxter large volume pumps are also used for the administration of IV medications by nursing and anesthesia, designated Baxter pumps have been identified and should only be utilized by RT. These pumps will have a painted blue door (see image below). Also, the medication library on these pumps will only allow programming of the following two medications: continuously inhaled epoprostenol and continuously inhaled albuterol.

RISK POINTS

- Continuously inhaled epoprostenol is prepared in an IV bag even though it is administered via inhalation.
- There is a possibility that designated RT Baxter pumps could become mixed into regular large volume pump circulation.
- Only RT administers this medication. Therefore, nursing and anesthesia may not know what the designated pumps are intended for and could use them to administer IV medications.

CALL TO ACTION

If an RT designated pump makes its way into regular circulation, do NOT use this pump to administer any medications, and immediately send the pump to clinical engineering.

SAFETY TIPS

Always check the library name before attempting to program any medication into a pump.

- The library name on IV pumps used by nursing and anesthesia will always follow this format: "CCHS + date of library release," for example: "CCHS 08-31-2021."
- The RT designated pump library will always follow this format: "RT + date of library release," for example: "RT 02-09-2021."
- Up-to-date library names can be found on the Smart Pump SharePoint homepage.

"This document contains confidential, privileged information protected by the Quality Assurance, Peer Review & Risk Management Report privileges as outlined in Ohio Revised Code Sections 2317.02(B)(1), 2305.24, 2305.25-2305.251, and 2305.2, and Florida statute Chapter 395.0197 F.S."

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Safety Challenges

- Baxter pump tubing does not directly connect to Aerogen cup
  - Requires use of an adaptor
  - RT uses different Baxter tubing than nursing that does NOT have any injection ports
- Potential to add/move pumps to the incorrect distribution group, which would result in incorrect library on pump
  - Conduct routine monitoring of pumps assigned to respiratory distribution group
  - Requests submitted to vendor to limit this capability to certain users and automate monitoring

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Key Takeaways

- Inadvertent intravenous administration of continuously inhaled epoprostenol can lead to significant patient harm.
- The implementation of safeguards throughout the medication use process can help mitigate this risk.
- If an entirely different pump for inhaled administration cannot be implemented, distinguishing the same pump with visual cues and with a specific library is another option to help prevent wrong route administration.
- Ongoing evaluation of the process and safeguards implemented is important to address any new or missed safety concerns.

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Questions?

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Medication Safety Topic:
Utilizing the EMR to assure safe paralytic infusion practices

Mara Weber PharmD
OhioHealth Medication Safety Pharmacist

BELIEVE IN WE™ OhioHealth

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Situation

- **What is happening:**
  - **COVID**
    - **Increasing critical care patients** outside large tertiary institutions
    - **Increasing number** of patients on **paralytic infusions**
    - **Increasing number** of patients **transitioning to compassionate care**

How to assure best practices with paralytics in high risk/high emotion situations and low familiarity?

BELIEVE IN WE OhioHealth

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Solution

– **Initiation**
- Infusions locked down to order set
- Sedation & Analgesia embedded
- Change in RASS orders
- Nursing Orders

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Solution

– **Withdrawal of Care**
- **Piece less familiar**
- **How to screen/emphasize risk?**
  – Get guideline to teams/providers in the moment?

OhioHealth Critical Care Work Team Paralytic Guideline

Drug	Time to Wait to Reassess TOF prior to extubation if on INFUSION	T ½ (min)	Renal/hepatic Adjustment	Time for 95% recovery after one bolus dose
Atracurium	60 min	20	Not Required	60 to 70 min
Cisatracurium	60 min	22-29	Not required	25 to 93 min
Rocuronium	7 hours (or longer in renal/hepatic failure)	84-144 4.3 hours in hepatic failure; 2.4 hours in renal failure	May need dose reduced in hepatic dysfunction;	30 min
Vecuronium	210 min (or longer in renal/hepatic failure)	65-75 Note: Active metabolite with 50-80% activity of parent drug which can result in prolonged paralysis	May need dose reduced in hepatic dysfunction	45-65 min

OhioHealth

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Solution

– Using Technology in Place

- **Compassionate Care order set for ICU**
  - Pre-existing order set
  - Not widely known outside larger facilities
- **Integrate look back technology to screen for any paralytic in past 12 hours**
- **Integrate practice guideline into actual orders**
- **Socialize & Emphasize the intent/use of the order set**

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Patient NOT on Paralytic

CareConnect has found NO active neuromuscular blocker infusions, and NO neuromuscular blocker MAR activity in the last 12 hours.
If you believe a neuromuscular blocker infusion was just recently discontinued, or bolus given, and the patient needs Train of Four assessment before releasing extubation orders, select the first option.

○ User believes there is an active neuromuscular blocker infusion, or one was just recently discontinued.

☑ CareConnect does NOT find an active Neuromuscular blocker infusion.

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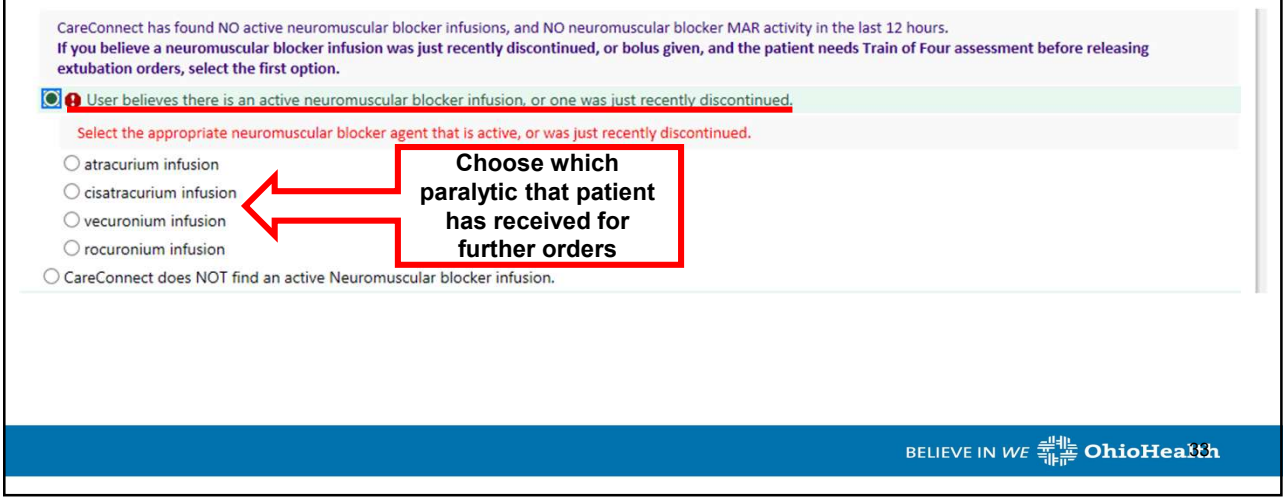
Provider Feels Patient Has had a Paralytic



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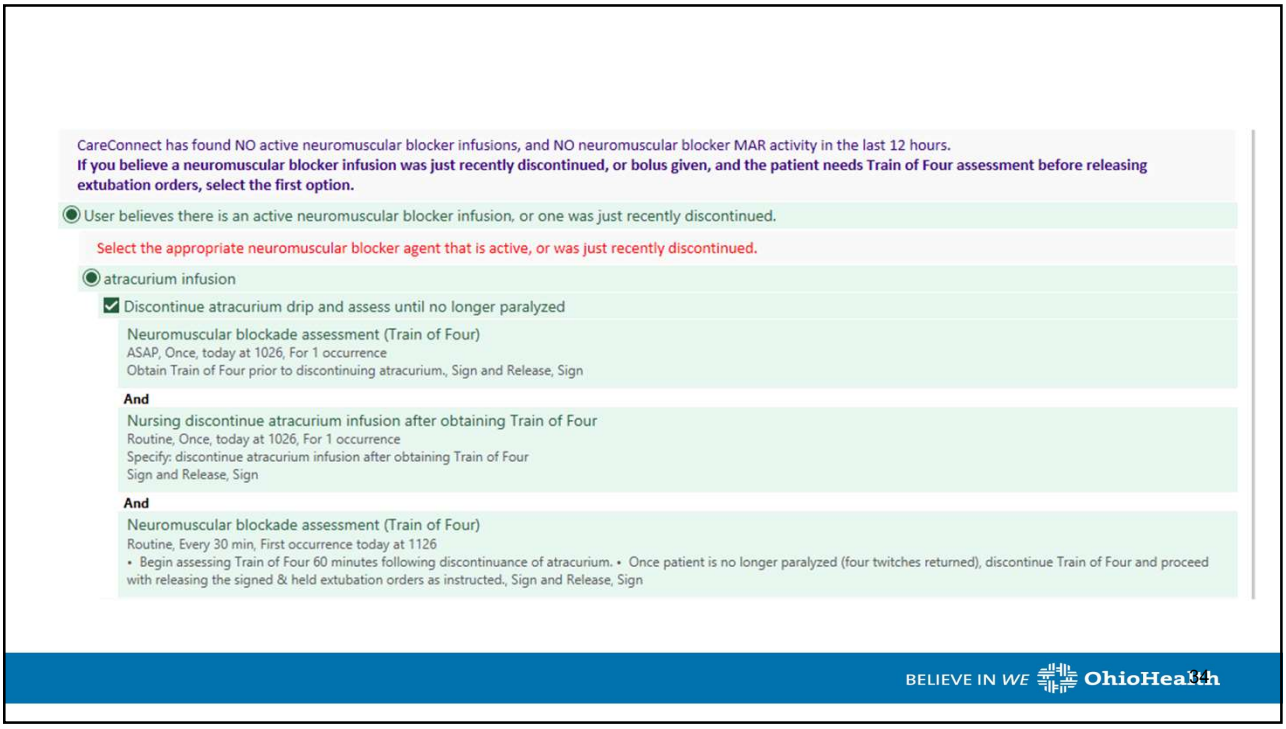

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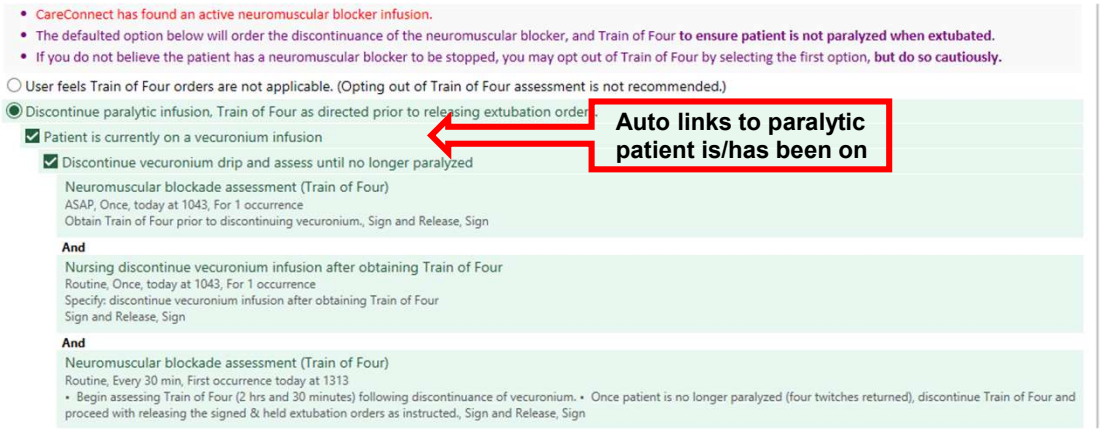
Patient IS/HAS been on a paralytic drip



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A FAITH-BASED, NOT-FOR-PROFIT HEALTHCARE SYSTEM

RIVERSIDE METHODIST HOSPITAL + GRANT MEDICAL CENTER + DOCTORS HOSPITAL
GRADY MEMORIAL HOSPITAL + DUBLIN METHODIST HOSPITAL + DOCTORS HOSPITAL–NELSONVILLE
HARDIN MEMORIAL HOSPITAL + MARION GENERAL HOSPITAL + REHABILITATION HOSPITAL + O'BLENESS HOSPITAL
MEDCENTRAL MANSFIELD HOSPITAL + MEDCENTRAL SHELBY HOSPITAL + WESTERVILLE MEDICAL CAMPUS
HEALTH AND SURGERY CENTERS + PRIMARY AND SPECIALTY CARE + URGENT CARE + WELLNESS
HOSPICE + HOME CARE + 28,000 PHYSICIANS, ASSOCIATES & VOLUNTEERS

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ISMP
Institute for Safe Medication Practices
An ECRI Affiliate

ISMP Update
MSOS Briefing January 2022

Michael R. Cohen, RPh, MS, ScD (hon.), DPS (hon.), FASHP
President Emeritus
Institute for Safe Medication Practices

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Leadership Changes at ISMP

- Rita K. Jew, PharmD, MBA, BCPPS, is now President
- Mike Cohen, RPh, MS, ScD (hon.), DPS (hon.), is now President Emeritus

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ISMP Medication Safety Summits

- Sterile Compounding Guidelines
  - **Posting for public comment in February**
- Perioperative Medication Safety Summit
  - **Data collection ending February 11, 2022**
  - **Posting for public comment in April**

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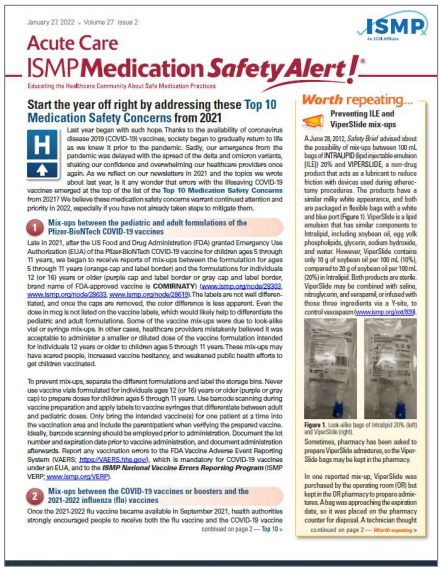
ISMP Top 10 Medication Errors and Hazards for 2021



January 27, 2022 :: Volume 27 Issue 2

Acute Care
ISMP Medication Safety Alert!®
Educating the Healthcare Community About Safe Medication Practices

Start the year off right by addressing these Top 10 Medication Safety Concerns from 2021

Last year began with such hope. Thanks to the availability of coronavirus disease 2019 (COVID-19) vaccines, society began to gradually return to life as we knew it prior to the pandemic. Sadly, our emergence from the pandemic was delayed with the spread of the delta and omicron variants, shaking our confidence and overwhelming our healthcare providers once again. As we reflect on our newsletters in 2021 and the topics we wrote about last year, is it any wonder that errors with the lifesaving COVID-19 vaccines emerged at the top of the list of the **Top 10 Medication Safety Concerns** from 2021? We believe these medication safety concerns warrant continued attention and priority in 2022, especially if you have not already taken steps to mitigate them.

1 Mix-ups between the pediatric and adult formulations of the Pfizer-BioNTech COVID-19 vaccines

Late in 2021, after the US Food and Drug Administration (FDA) granted Emergency Use Authorization (EUA) of the Pfizer-BioNTech COVID-19 vaccine for children ages 5 through 11 years, we began to receive reports of mix-ups between the formulation for ages 5 through 11 years (orange cap and label border) and the formulations for individuals 12 (or 16) years or older (purple cap and label border or gray cap and label border, brand name of FDA-approved vaccine is **COMIRNATY**) (www.ismp.org/node/28302, www.ismp.org/node/28653, www.ismp.org/node/28619). The labels are not well differentiated, and once the caps are removed, the color difference is less apparent. Even the dose in mcg is not listed on the vaccine labels, which would likely help to differentiate the pediatric and adult formulations. Some of the vaccine mix-ups were due to look-alike vial or syringe mix-ups. In other cases, healthcare providers mistakenly believed it was acceptable to administer a smaller or diluted dose of the vaccine formulation intended for individuals 12 years or older to children ages 5 through 11 years. These mix-ups may have scared people, increased vaccine hesitancy, and weakened public health efforts to get children vaccinated.

To prevent mix-ups, separate the different formulations and label the storage bins. Never use vaccine vials formulated for individuals ages 12 (or 16) years or older (purple or gray cap) to prepare doses for children ages 5 through 11 years. Use barcode scanning during vaccine preparation and apply labels to vaccine syringes that differentiate between adult and pediatric doses. Only bring the intended vaccine(s) for one patient at a time into the vaccination area and include the parent/patient when verifying the prepared vaccine. Ideally, barcode scanning should be employed prior to administration. Document the lot number and expiration date prior to vaccine administration, and document administration afterwards. Report any vaccination errors to the FDA Vaccine Adverse Event Reporting System (VAERS; https://VAERS.hhs.gov/), which is mandatory for COVID-19 vaccines under an EUA, and to the ***ISMP National Vaccine Errors Reporting Program*** (ISMP VERP; www.ismp.org/VERP).

2 Mix-ups between the COVID-19 vaccines or boosters and the 2021-2022 influenza (flu) vaccines

Once the 2021-2022 flu vaccine became available in September 2021, health authorities strongly encouraged people to receive both the flu vaccine and the COVID-19 vaccine

continued on page 2 — Top 10 >

Worth repeating...

Preventing ILE and ViperSlide mix-ups

A June 28, 2012, *Safety Brief* advised about the possibility of mix-ups between 100 mL bags of INTRALIPID lipid injectable emulsion (ILE) 20% and VIPERSLIDE, a non-drug product that acts as a lubricant to reduce friction with devices used during atherectomy procedures. The products have a similar milky white appearance, and both are packaged in flexible bags with a white and blue port (Figure 1). ViperSlide is a lipid emulsion that has similar components to Intralipid, including soybean oil, egg yolk phospholipids, glycerin, sodium hydroxide, and water. However, ViperSlide contains only 10 g of soybean oil per 100 mL (10%), compared to 20 g of soybean oil per 100 mL (20%) in Intralipid. Both products are sterile. ViperSlide may be combined with saline, nitroglycerin, and verapamil, or infused with those three ingredients via a Y-site, to control vasospasm (www.ismp.org/ed/609).

Figure 1. Look-alike bags of Intralipid 20% (left) and ViperSlide (right).

Sometimes, pharmacy has been asked to prepare ViperSlide admixtures, so the ViperSlide bags may be kept in the pharmacy.

In one reported mix-up, ViperSlide was purchased by the operating room (OR) but kept in the OR pharmacy to prepare admixtures. A bag was approaching the expiration date, so it was placed on the pharmacy counter for disposal. A technician thought

continued on page 2 — Worth repeating >

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ISMP Top 10 Medication Errors and Hazards for 2021

1. Mix-ups between different formulations of the Pfizer-BioNTech COVID-19 vaccine.
2. Mix-ups between COVID-19 vaccines or boosters and influenza (flu) vaccine.
3. EPINEPHrine administered instead of COVID-19 vaccine.
4. Preparation errors with Pfizer-BioNTech COVID-19 vaccine.
5. Errors and delays with hypertonic sodium chloride.
6. Errors with discontinued or paused infusions.
7. Infection transmission with shared glucometers, fingerstick devices, and insulin pens.
8. Adverse glycemic event errors.
9. Organizations lacking a medication safety officer.
10. Failure to increase error reporting.

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New Targeted Medication Safety Best Practices for 2022-2023

Three new practices added for 2022-2023

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Goals

- To identify, inspire, and mobilize widespread adoption of consensus-based "Best Practices" for specific medication safety issues that continue to cause harmful and even fatal errors.

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Background

- Initiated in 2014
- Updated every 2 years
- 14 total
  - **One in archived status**
  - **One (#12) was incorporated into another (#15)**
- Targeted for the hospital setting; however applicable to other healthcare settings
- Source:
  - **ISMP's National Medication Errors Reporting Program (MERP)**
  - **ISMP's National Vaccine Errors Reporting Program (VERP)**
  - **Cases from literature, media reports, ECRI**

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Process

- MERP and VERP review
- ISMP professional staff brainstorming session
- Best Practice Expert Advisory Panel brainstorming session
- In depth review of specific events and recommendations
- Formulation of Best Practice statements
- ISMP professional staff review
- Best Practice Expert Advisory Panel approval
- ISMP Board of Directors approval

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Team

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Problem: Medication safety concerns with oxytocin

- Accidental ordering of oxytocin instead of OxyContin (oxycodone hydrochloride)
- Mix-ups between Pitocin (Par Pharmaceutical) and Pitressin (former brand of vasopressin) vials
- Administration of unlabeled oxytocin infusion bags and infusion rate confusion
- Inadvertent bolus doses from leftover drug in tubing of infusion that has been stopped
- Others

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New Best Practice

Safeguard against errors with oxytocin

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Problem: Barcode Medication Administration often not used outside of hospital inpatient areas

- ISMP has received error reports in which emergency department patients, in absence of barcode scanning, have been administered the wrong drug or a drug was given to the wrong patient
- Leapfrog Hospital Survey
  - **45% fully meet Leapfrog's standard for barcode medication administration**
  - **Scan both a patient's wristband and medication when administering at least 95% of the time**
  - **Achieved by 70% of hospitals**
- ISMP: Often limited to 'inpatient' areas but not transient clinical areas, procedural areas, or temporary patient duration (e.g., emergency department, perioperative areas, infusion clinics, dialysis centers, radiology, labor and delivery areas, catheterization laboratory, outpatient areas).

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New Best Practice

Maximize the use of barcode verification prior to medication and vaccine administration by expanding use beyond inpatient care areas

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Problem: Events continue to happen with medications known to be 'high-alert'

- Management plans rely on low-leverage risk-reduction strategies
- Often the common strategy is focused on identification
  - **Increase awareness**
  - **Education**
  - **Adding auxiliary labels to container**
- Another common strategy is to require independent double checks but too often these are overused
- Rarely do strategies span the entire medication use process

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New Best Practice

Layer numerous strategies throughout the medication use process to improve safety with high-alert medications

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Questions?

- A copy of today's slides will be posted on our website
- Next MSOS Briefing date – March 24, 2022.

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