A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting

A lunch symposium conducted at the 2022 Texas Society of Health-System Pharmacists Annual Seminar

Friday May 13, 2022 - 12:00pm to 1:30pm

AGENDA	
12:00 PM - 12:10 PM	**Introduction and Overview** Rita K. Jew, PharmD, MBA, BCPPS, FASHP President, Institute for Safe Medication Practices (ISMP)
12:10 PM - 12:30 PM	**Behind the Closed Doors: The Status of Medication Safety in Perioperative Settings** Julie Boytim, DNP, CRNA Performance Anesthesia Services
12:30 PM – 12:55 PM	**Understanding the National Aggregate Results from the 2021 Perioperative Assessment** Rita K. Jew PharmD, MBA, BCPPS, FASHP President, Institute for Safe Medication Practices (ISMP)
12:55 PM - 1:15 PM	**Advancing Technologies for the Safe Use of Medication in the Perioperative Setting: The Future is Now** Gee Mathen, Director, Pharmacy Clinical Applications & Technical Services, Texas Children's Hospital
1:15 PM – 1:30 PM	**Question and Answer Session**
1:30 PM	**Adjourn**

CONTINUING EDUCATION INFORMATION

This CE activity is jointly provided by ProCE, LLC and the Institute for Safe Medication Practices (ISMP). ProCE is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education. ACPE Universal Activity Number 0221-9999-21-277-L05-P/T has been assigned to this knowledge-based live CE activity (initial release date 12-7-21). This activity is approved for 1.5 contact hours (0.15 CEU) in states that recognize ACPE providers. This CE activity is provided at no cost to participants. Successful completion of the online post-test and evaluation at www.ProCE.com no later than June 10, 2022 is required to receive CE credit. CE credit will be automatically uploaded to NABP/CPE Monitor upon completion of the post-test and evaluation. No partial credit will be given.

FACULTY INFORMATION

Rita K. Jew PharmD, MBA, BCPPS, FASHP
President, Institute for Safe Medication Practices, Horsham, PA

Rita K. Jew, Pharm.D., MBA, BCPPS, FASHP is President at the Institute for Safe Medication Practices (ISMP). She has more than 30 years of experience leading pharmaceutical care services. Prior to joining ISMP, she served as Principal of RKJ Health Partners, where she provided consulting services related to medication safety, pharmacy operations, pharmacy finance, specialty pharmacy, and sterile compounding. She also provided coaching and leadership training and advised technology start-ups. Before starting her own consulting business, Dr. Jew held leadership positions at well-known acute care institutions, including University of California San Francisco (UCSF) Health, Children's Hospital of Orange County, and Children's Hospital of Philadelphia.

Learn more about Rita here: https://www.ismp.org/staff/rita-jew-pharmd-mba-bcpps-fashp

Julie Boytim, DNP, CRNA
Performance Anesthesia Services

Dr. Boytim's doctoral research focused on an interdisciplinary approach to improving perioperative medication safety. Her doctoral work was completed in collaboration with The Institute for Safe Medication Practices (ISMP) with a focus on the prevalence of medication errors in the perioperative area. Dr. Boytim continues to seek opportunities to improve medication practices through presentations and publications. She has shared her work at local, state, and national conferences.

Gee Mathen
Director Application and Technical Services
Texas Children's Hospital – Pharmacy Department, Houston, TX

Gee Mathen is the Director of Application and Technical Services for Texas Children's Hospital Pharmacy Department, where he has devoted over 28 years of his career to improving patient safety with the use of technology. He has extensive experience in pharmacy and technology systems. His recent activities include leading the hospital in standardizing automated dispensing technology along with planned implementation of IV robotics and inventory robotics.

Mathen has worked closely with other pharmacy leaders across the country as well as vendors to advocate and improve the use of technology in the medication management process. Mathen has been the user group President for Cerner Megasource, BDM and GE Centricity. He has also served as the Secretary for Omnicell's Thought Leadership Group. Mathen has worked closely with Epic to help develop the Ambulatory module (WAM), TPN interface, and the compounding and repackaging module.

Mathen takes great pride in leading a team of twenty people who are dedicated every day to ensuring that Texas Children's is the safest it can be from a medication management perspective.

DISCLOSURE

It is the policy of ISMP and ProCE, LLC to ensure balance, independence, objectivity and scientific rigor in all of its continuing education activities. Faculty must disclose to participants the existence of any significant financial interest or any other relationship with the manufacturer of any commercial product(s) discussed in an educational presentation.

The speakers listed below have no relevant commercial and/or financial relationships to disclose:
Julie Boytim, DNP, CRNA
Gee Mathen

The speakers listed below disclosed potential conflicts of interest*:
Rita K. Jew, Pharm.D., MBA, BCPPS, FASHP

**Conflicts identified were resolved with a peer review process.*

Please note: The opinions expressed in this activity should not be construed as those of the CE provider. The information and views are those of the faculty through clinical practice and knowledge of the professional literature. Portions of this activity may include unlabeled indications. Use of drugs and devices outside of labeling should be considered experimental and participants are advised to consult prescribing information and professional literature.

OVERVIEW

In the perioperative setting, medication errors frequently occur in all phases of perioperative care and are a common cause of morbidity and mortality. When medication errors occur, they are often the result of the complexity of care combined with the fast-paced and fragmented nature of perioperative service delivery.

This symposium will focus on the daily challenges of ensuring medication safety in the high-risk perioperative or procedural setting, highlighting the national aggregate findings and practice gaps identified using ISMP's Medication Safety Self Assessment for Perioperative Settings, and providing highlights of the draft consensus best practice statements developed at ISMP's national perioperative summit. This program will discuss challenges faced during the implementation of best practices and advancing technologies in the perioperative setting, as well as resources and plans for addressing these obstacles.

OBJECTIVES

The target audience for this activity includes pharmacists and pharmacy technicians in health-system settings. At the completion of this symposium, the participant will be able to:

1. Identify current national safety challenges with medication management in U.S. perioperative and procedural settings
2. Highlight the practice risks discovered by inpatient and ambulatory surgical and procedural sites participating in the ISMP Medication Safety Self Assessment for Perioperative Settings
3. Examine the ISMP best practice guidance draft, action plans, and resources developed for hospitals and ambulatory surgical centers to begin the transformation towards meaningful medication safety improvements
4. Recognize first-hand barriers and challenges faced during the early adoption and implementation of safe medication practices in perioperative and procedural settings

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A Lunch Symposium Conducted at the 2022 TSHP Annual Seminar

This symposium is funded through an educational grant from **Pfizer**.

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CE Activity Information & Accreditation

ACPE

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Gee Mathen

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Online Evaluation and Statement of Completion

- **www.ProCE.com**
- Login with username and password
- Deadline: June 10, 2022

Attendance Code = ??????

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Objectives

Following completion of this activity, participants will be able to:

1. Identify current national safety challenges with medication management in U.S. perioperative and procedural settings
2. Highlight the practice risks discovered by inpatient and ambulatory surgical and procedural sites participating in the ISMP Medication Safety Self Assessment for Perioperative Settings
3. Examine the ISMP best practice guidance draft, action plans, and resources developed for hospitals and ambulatory surgical centers to begin the transformation towards meaningful medication safety improvements
4. Recognize first-hand barriers and challenges faced during the early adoption and implementation of safe medication practices in perioperative and procedural settings

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Behind Closed Doors: The Status of Medication Safety in Perioperative Settings

Julie Boytim, DNP, RN, CRNA

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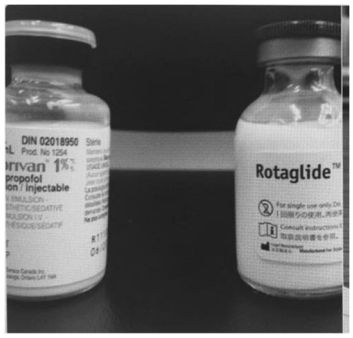

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The Process

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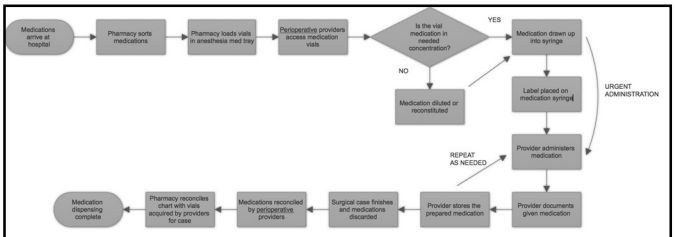

PROCESS EXAMPLE: HOW MANY STEPS?

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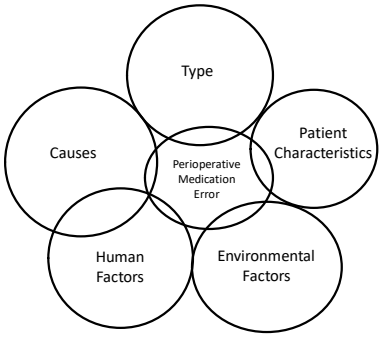
CONTRIBUTING FACTORS



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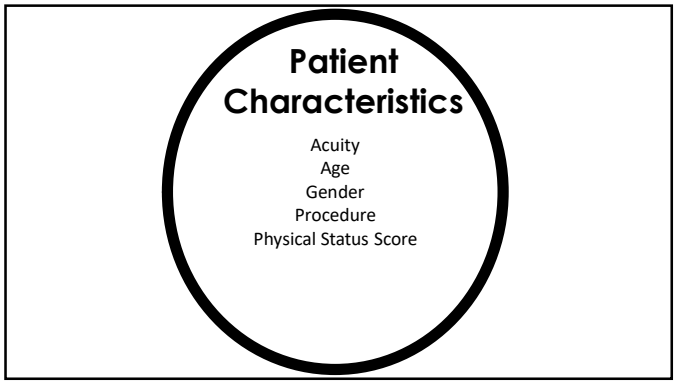

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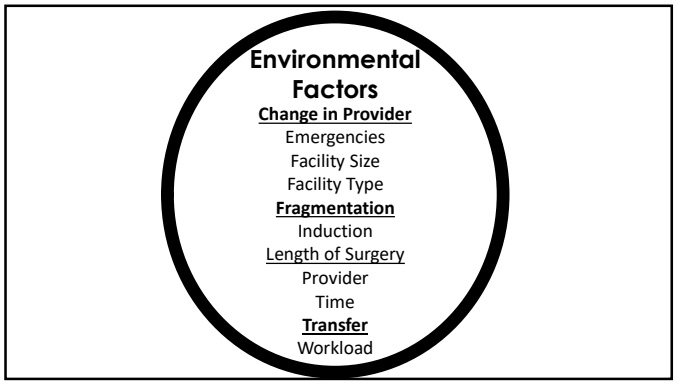

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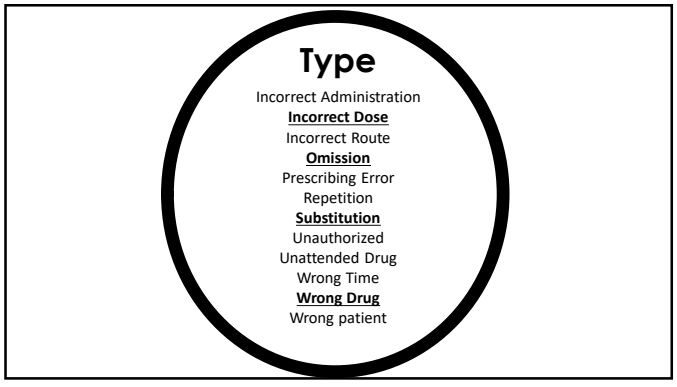

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Causes

Communication
Dilution
Documentation
Equipment
Knowledge Deficit
Labeling
Package Design
Performance Deficit
Protocol not followed
Syringe Swap

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Human Factors

Experience
Fatigue
Pressure to proceed
Vigilance
Stress

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Where do we start?

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THE GOAL:
SAFE PERIOPERATIVE MEDICATION ADMINISTRATION

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BARCODING

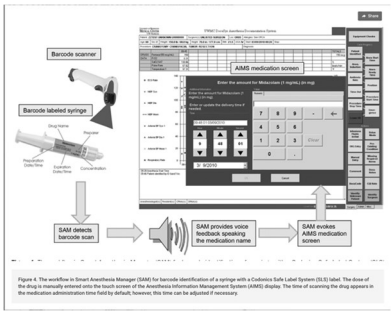

Figure 4. The workflow in Smart Anesthesia Manager (SAM) for barcode identification of a syringe with a Codonics Safe Label System (SLS) label. The dose of the drug is manually entered onto the touch screen of the Anesthesia Information Management System (AIMS) display. The time of scanning the drug appears in the medication administration time field by default; however, this time can be adjusted if necessary.

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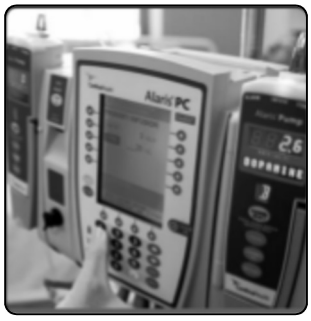

SMART PUMP TECHNOLOGY

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Understanding the National Aggregate Results from the 2021-2022 Perioperative Assessment

Rita K. Jew, Pharm.D., MBA, BCPPS, FASHP
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ISMP Medication Safety Self Assessment® for Perioperative Settings

- Established to:
  - Provide a standard way to assess perioperative and procedural medication use
  - Create a baseline of national practices and effort
  - Support organization-specific, safety focused, quality efforts
- National data collection: May 2021-February 2022; extended due to Covid-19 pandemic
- Grant includes the development of *Guidelines for Safe Medication Use in Perioperative and Procedural Settings* to be published in June 2022

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Assessment Items

- 221 critical safe medication systems and practice items
- Selected items based on the types of errors and safety risks identified in these settings
- Critical safe medication systems and practices
- Evidence-based items and expert opinion
- Extends beyond minimum standards of practice

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Keys Elements and Core Characteristics

#	KEY ELEMENT
I	Patient Information
II	Drug Information
III	Communication of Drug Information
IV	Drug Labeling, Packaging, and Nomenclature
V	Drug Standardization, Storage and Distribution
VI	Medication Device Acquisition, Use and Monitoring
VII	Environmental Factors, Workflow and Staffing Patterns
VIII	Staff Competency and Education
IX	Patient Education
X	Quality Processes and Risk Management

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Scoring Guidelines

Demonstration of adoption of safe practices

None

A. No activity to implement

B. Discussed, but not implemented

Partial

C. Partially implemented for some or all patients, orders, drugs, staff

D. Fully implemented for some patients, orders, drugs, staff

Full

E. Fully implemented for all patients, orders, drugs, staff

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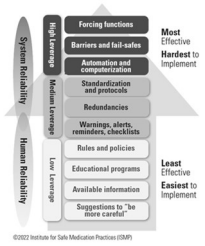
Items Weighted Based on Impact on Safety

Power (Leverage)

High
Max: 16

Medium
Max: 10

Low
Max: 6



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Demographics (N = 386)

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Hospitals: N=326 (84%)

Bed Size	N
Under 100 beds	20%
100-299 beds	34%
300-499 beds	21%
500 beds and over	25%

Patients Served	N
Only Pediatrics	5%
Only Adults	18%
Combination	77%

# ORs	N
Under 10	30%
10-39	57%
40-79	10%
80 or more	3%

# OR Procedures/Year	N
Fewer than 5,000	37%
5,000-19,999	42%
20,000-49,000	18%
50,000 or more	3%

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Hospitals: N=326 (84%)

# Procedure Rooms	N
Under 10	49%
10-39	44%
40-79	5%
80 or more	2%

# Non-OR Procedures Performed/Year	N
Zero/unknown	18%
Fewer than 5,000	38%
5,000-19,999	34%
20,000 or more	10%

Barcode Scanning	N
Holding area	86%
OR	32%
Procedure room	41%
Recovery	87%

Smart Infusion Pumps/DERS	N
Holding area	92%
OR	89%
Procedure room	88%
Recovery	94%

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Ambulatory Facilities: N=60 (16%)

Visits/Month	N
Under 100	20%
100-499	48%
500-999	20%
1,000 and over	12%

Patients Served	N
Pediatrics	2%
Adults	47%
Combination	51%

# ORs	
Zero	17%
1-3	43%
4-9	37%
10 or more	3%

# Procedure Rooms	N
Zero	27%
1-3	55%
4-9	18%

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Ambulatory Facilities: N=60 (16%)

# Procedures Performed/Year	N
Unknown	3%
Fewer than 1,000	18%
1,000-4,999	45%
5,000-9,999	22%
10,000 or more	12%

Barcode Scanning	N
Holding area	27%
OR/procedure room	13%
Recovery	27%

Smart Infusion Pumps/DERS	N
Holding area	28%
OR/procedure room	43%
Recovery	30%

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Results & Opportunities for Improvement

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Overall Score

Mean Percent Score: 79%

Hospitals: 79%
Ambulatory: 77%

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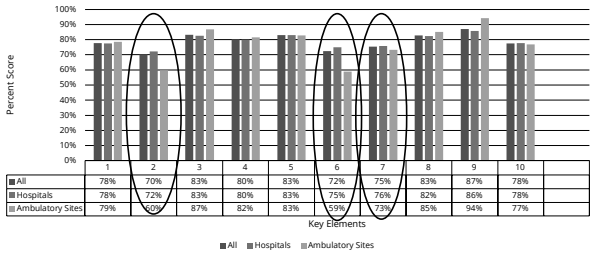
Percent Scores for the 10 Key Elements



	1	2	3	4	5	6	7	8	9	10
All	78%	70%	83%	80%	83%	72%	75%	83%	87%	78%
Hospitals	78%	72%	83%	80%	83%	75%	76%	82%	86%	78%
Ambulatory Sites	79%	68%	87%	82%	83%	59%	73%	85%	94%	77%

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II. Drug Information (70%)

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#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
34	Standard policies, protocols, guidelines, and/or order sets have been established and are followed to identify, treat, and monitor postprocedural and/or postoperative patients (adult, pediatric, and/or neonatal patients, as applicable) with signs of hyponatremia, water intoxication, and/or syndrome of inappropriate antidiuretic hormone (SIADH).	All	48%	19%	33%	45%
		Hosp	46%	21%	33%	46%
		Amb	58%	10%	32%	38%
42	Practitioner- and/or procedure-specific **preference cards** provide clear and concise medication instructions in an electronic format (not handwritten), **and** are approved and/or updated annually by an interdisciplinary committee (e.g., pharmacy and therapeutics).	All	34%	40%	25%	48%
		Hosp	35%	43%	22%	46%
		Amb	32%	28%	40%	56%

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VI. Medication Delivery Device Acquisition, Use and Monitoring (72%)

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#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
149	Plans are in place to transition to the new design standards (ISO 80369-6) for small neuraxial **NRFit** connectors used on medical device tubing, which will not fit into ports other than neuraxial, reducing the risk of misconnections.	All	76%	6%	18%	36%
		Hosp	77%	6%	17%	28%
		Amb	63%	11%	26%	79%

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A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting

#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
142	Data from **SMART INFUSION PUMP TECHNOLOGY** used in the perioperative setting are regularly reviewed and analyzed by an interdisciplinary team including perioperative practitioners: a. At least monthly to evaluate **DOSE ERROR-REDUCTION SYSTEMS (DERS)** compliance by medication and hydrating solution b. At least quarterly to monitor the alerts and actions taken in response to the alerts c. To develop perioperative-specific improvement plans to remove or reduce barriers to the proper use of **SMART INFUSION PUMP TECHNOLOGY**	All	47%	29%	23%	35%
			43%	28%	29%	39%
			42%	27%	31%	41%
		Hosp	48%	29%	23%	38%
			44%	27%	29%	43%
			42%	27%	31%	46%
		Amb	37%	32%	32%	16%
			32%	37%	32%	18%
			42%	26%	32%	15%

Hospitals: 96% said smart pumps are available
Ambulatory: 47% said smart pumps are available

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VII. Environmental Factors, Workflow, and Staffing Patterns (75%)

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#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
160	**For facilities with a daily onsite pharmacist(s):** a. At least one pharmacist works in the perioperative area(s) performing clinical activities such as reviewing patient records and drug orders, providing input into the selection and administration of drugs, educating patients, monitoring the effects of medications on patients, overseeing safe medication storage, and providing perioperative staff education. b. A pharmacist regularly conducts medication safety rounds in perioperative settings, in accordance with state and federal regulations and accrediting standards, to oversee safe medication storage, preparation, and administration and to provide perioperative staff education.	All	29%	25%	46%	48%
			22%	21%	56%	48%
		Hosp	30%	25%	45%	51%
			32%	34%	34%	51%
		Amb	20%	10%	70%	32%
			8%	4%	88%	32%

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Other Low-Scoring Items

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#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
9	Standard process used to determine the **opioid status** of adults and if at **high risk** for respiratory depression.	**All**	49%	28%	22%	36%
203	**BARCODE SCANNING** technology is used by perioperative practitioners in the following perioperative locations: **b. OPERATING ROOMS** by **ANESTHESIA PROVIDERS, NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**, and/or other perioperative practitioners to verify medications/solutions prior to administration.	**All**	63%	23%	14%	36%
	c. PROCEDURE ROOMS by **ANESTHESIA PROVIDERS, NON-ANESTHESIOLOGIST SEDATION PRACTITIONERS**, and/or other perioperative practitioners to verify medications/solutions prior to administration.		61%	25%	15%	36%

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#	Self-Assessment Item		None (A+B)	Partial (C+D)	Full (E)	Mean %
115	In holding and recovery area, there are **interactive ADC alerts** that require the entry of clinical information.	**All**	42%	24%	34%	38%
198	The perioperative **MEDICATION-USE PROCESS** is analyzed at least every 2 years to identify potential risk factors for medication errors.	**All**	47%	22%	32%	44%
49	Face-to-face verbal orders from prescribers who are onsite in the facility are never accepted, except in emergencies or during sterile procedures where ungloving would be impractical.	**All**	15%	39%	46%	46%

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A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting

Best Practice Guidelines Draft

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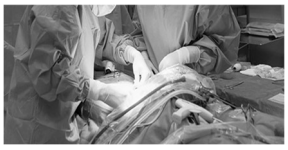
The Future of Perioperative Medication Safety: Charting our Path Forward

- ISMP National Summit held November 10-11, 2021
- More than 80 key stakeholders representing interests of perioperative settings
- Focus on consensus-based best practices for medication use
- Guideline development and release in mid-2022
  - **Public comment in Spring**



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Resource: ISMP Guidelines for Medication Safety in the Perioperative Setting

Topics will include:

- Elimination of handwritten syringe labels by 2025
- Advancement of medication-related technologies in the perioperative setting (e.g., barcode scanning, smart pumps, integration with EHR/anesthesia records)
- Continuous monitoring of oxygenation and ventilation for patients receiving sedation and opioids
- Enhanced pharmacy support
- Improved medication storage and distribution processes
- Standardization of products/ concentrations (avoid customized solutions)

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A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting

Intro

Advancing Technologies for the Safe Use of Medication in the Perioperative Setting: The Future is Now

Gee Mathen

Director, Pharmacy Clinical Applications & Technical Services, Texas Children's Hospital

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2010 APSF called for a New Paradigm

Medication Safety

TECHNOLOGY: *"Every anesthetizing location should have a mechanism to identify medications before drawing up or administrating them (bar code reader) and a mechanism to provide feedback, decision support and documentation (automated information system)."*

- There is drug administration error associated with one in every 133 anesthetics administered [1]. Of those errors, 1 in 250 is fatal [2].

[1] Based on Merry AF, Peck DJ. Anesthetists, Errors in Drug Administration and the Law. N Z Med J. 1995; 24:185-187.

[2] Hanna GM, Levine WC. Anesthesiology Clinics. 2011; 29:135-144

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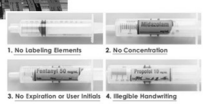
Safety in the Perioperative Environment

Medication Safety



- Manual labeling leaves room for human error.
- Barcode technology reduces the chance for error.
- Some barcode technologies provide visual and audible feedback at preparation and administration to ensure drug in hand.

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Safety in the Perioperative Environment

Medication Safety

- Barcode scanning confirms drug-in-hand based on the NDC scan ("source of truth").
- Barcode scanning helps eliminate the most common medication errors: vial/ampoule swaps, mislabeling and syringe swaps.
- Today, 11,000 operating rooms are using barcode technology, helping to prevent more than 1.1 million medication errors.[1]

1 Calculations based on Codonics installed base as of June 2021 and Merry AF, Peck DJ. Anesthetists, Errors in Drug Administration and the Law. N Z Med J. 1995; 24:185–187. 1:333 data,

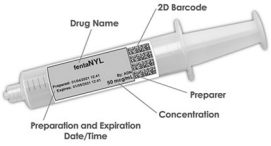
58

Compliant, consistent and easy-to-read syringes

TJC-Compliance

- Completely eliminates handwriting, complies with The Joint Commission (TJC) National Patient Safety Goals (NPSG) and American Society of Anesthesiologists (ASA) Guidelines for full-color labels.

"Best Practice"
--The Joint Commission



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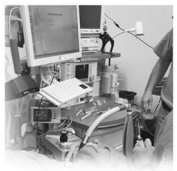
ADMINISTRATION/BCMA

Administration BCMA

- Scan directly into your EMR, such as Epic or Cerner



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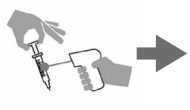
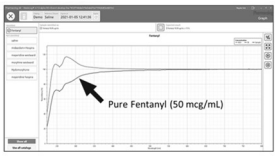
WASTE

Waste

- Safety beyond patient administration.
- Barcode scanning improves workflow and accuracy to help prevent and detect drug diversion.





Barcode scan

Assay/analysis

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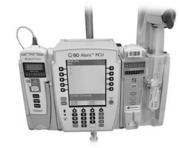
BCMA for Infusions
in the Perioperative Environment
"Interoperability"

Infusion Pump Interoperability in the OR



- Auto-programming with less clicks of all LVP and syringe interoperable-equipped pumps.
- Safer operation of pumps through auto-programming.
- Accurate and automatic documentation.
- Automated documentation once the infusion is started. Changes made to the pump (e.g. titrations) will auto-document into Epic without provider interaction.

Only available with: Epic

4 Easy Steps:

1. Scan syringe
2. Scan pump
3. Enter order in 4 clicks
   (Rate, Dose, Duration, Volume)
4. Confirm and start pump

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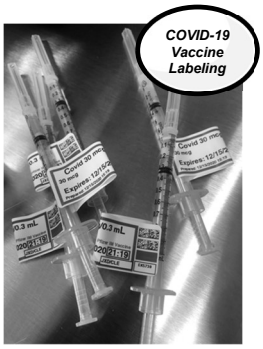
New safety concerns

First COVID-19 vaccines given to caregivers at Texas Children's Hospital

COVID-19 Vaccine Labeling



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Data Drives Change

Data Analytics

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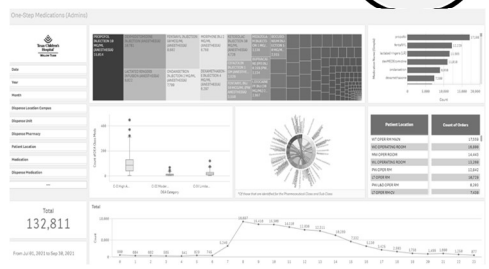
Data Drives Change

Data Analytics



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First, do no harm

The Reason

"We have to take responsibility that we don't cause harm to our patients. When you know a technology is out there, it becomes your responsibility to make sure you're not causing harm to your patients by choosing not to implement it."

-- Christina Barnes, Director of Pharmacy Services, Avita Health System

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What Is the Price You Would Pay for Safety?

Patient safety issues could drive $383B in healthcare costs by 2022

Megan Knowles - Thursday, March 1st, 2018 Print | Email

Share Tweet Share 0 Listen ▶ AA TEXT

By 2022, avoidable adverse patient safety events across the U.S. and Western Europe, including healthcare-associated infections, sepsis and diagnostic errors, could cost $383.7 billion, according to a Frost & Sullivan analysis.

Frost & Sullivan assessed the 30 most pressing safety adverse events affecting patients, caregivers, and healthcare organizations worldwide. These events also included medication safety, pressure ulcers, antibiotic resistance and hand hygiene non-compliance.

All together, these adverse events affected around 91.8 million patient admissions in the U.S. and Western Europe, which resulted in approximately 1.95 million deaths.

https://www.beckershospitalreview.com/quality/patient-safety-issues-could-drive-383b-in-healthcare-costs-by-2022.html

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The ETTO Principle – Efficiency – Thoroughness Trade-Off

The basic principle is that people have to make a trade-off between the resources (time and effort) they spend on preparing to do something and the resources (time and effort) they spend on doing it.

Efficiency means the level of investment or amount of resources used or needed to achieve a stated goal or objective.

Thoroughness means that an activity is done to achieve an objective and not create any unwanted side-effects.

The ETTO fallacy is that we are required to be both efficient and through at the same time.

Work as imagined and work as done. What really happens?

Erik Hollnagel

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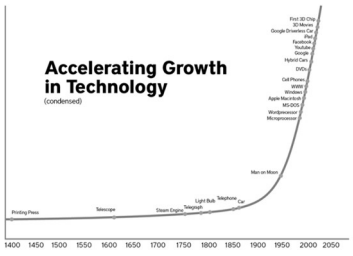
Where Do We Go From Here?

Clinicians in the OR will not only need to adapt to new technologies in the OR, they will need to play a role in developing them.



IBM.com

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A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting

ISMP Institute for Safe Medication Practices
An ECRI Affiliate

Questions?

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Online Evaluation and Statement of Completion

- **www.ProCE.com**
- Login with username and password
- Deadline: June 10, 2022

Attendance Code = B4FGC7

ISMP An ECRI Affiliate

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CE ACTIVITY EVALUATION AND CREDIT INSTRUCTIONS

1. To receive CE credit for this activity, you must complete the post-test and activity evaluation online **no later than Friday, June 10, 2022**.

2. Visit **www.ProCE.com/evaluation**.

3. Click on the **Evaluation** button which is listed with the **A Call to Action: Dedicated Medication Safety Transformation in the Perioperative Setting – May 13, 2022** CE activity.

4. Login to the ProCE Center. *Note: You will need to sign up for a new account if you have not previously used the ProCE Center.*

5. Enroll in the CE activity, then enter the **Attendance Code: B4FGC7** (you will need this code to access the post-test and activity evaluation).

6. Take the post-test, complete the evaluation, and claim CE credit.

7. If you need assistance or have questions, please contact ProCE at 888.213.4061or via email at **info@proce.com**.

Note: It is ProCE policy that CE requirements (i.e. post-test, if applicable for the specific CE activity, and evaluation) be completed within 30 days of the live activity date to ensure an on-time submission to your CPE Monitor account.

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About ISMP

The Institute for Safe Medication Practices (ISMP), an affiliate of ECRI, is an independent, nonprofit organization, internationally known as an educational resource for the prevention of medication errors. With more than thirty-five years of experience, the Institute provides independent, objective, multidisciplinary, expert review of errors reported through the ISMP Medication Errors Reporting Program (MERP) and the FDA MedWatch Program. ISMP shares all error reports and prevention strategies with the FDA. Working with practitioners, healthcare institutions, regulatory and accrediting agencies, professional organizations, the pharmaceutical industry, and many others, ISMP provides timely and accurate medication safety information to the healthcare community and encourages safe use of medications. ISMP has an interdisciplinary staff, which includes pharmacists, nurses, a medical director, and other support personnel who assist in ongoing safety efforts.

About ProCE

ProCE, LLC is a leading ACPE-accredited provider and full-service medical education company that integrates the expertise of its staff to bring a depth of experience in pharmacotherapeutics, patient care, public health, medical writing, multimedia design and event management. The team has extensive experience developing and producing educational activities in partnership with professional pharmacy organizations, including the National Association of Specialty Pharmacy, the American Society of Health-System Pharmacists, the Academy of Managed Care Pharmacy, and the Society of Infectious Diseases Pharmacists. ProCE also has a longstanding history of partnering with respected healthcare organizations, including VA hospitals, community health systems, Ascension Health, colleges of pharmacy, the Institute for Safe Medication Practices (ISMP), and pharmacy benefits managers.

ProCE has extensive experience reaching the clinical and specialty pharmacist audience, delivering more than 50 symposia at the American Society of Health-System Pharmacists (ASHP) meetings during the past 11 years. Our CE activities are consistently well-attended and demonstrate significant increases in learner knowledge and competence. In addition to deep experience developing content related to the efficacy, safety, pharmacology, economics, and appropriate management of medication therapy in clinical practice, ProCE excels in addressing the unique educational and professional development needs of the pharmacy audience as well as those of the interprofessional, collaborative care team. ProCE is the ACPE-accredited partner for important interprofessional events, such as the Infectious Diseases Society of America (IDSA) IDWeek, the Intalere Elevate Conference, the Pharmacy Quality Alliance (PQA) Annual Meeting, and many others.