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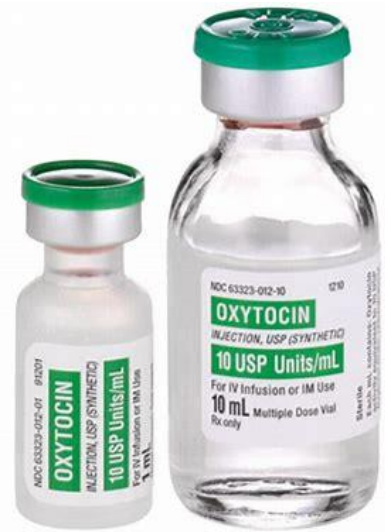
Global Implementation of Safe Oxytocin Use Practices

Rita K. Jew, Pharm.D., MBA, BCPPS, FASHP
President, Institute for Safe Medication Practices (ISMP)
Chair, Oxytocin Special Interest Group, IMSN

Background

- Oxytocin is used for various indications during labor and delivery
  - **Stimulate/reinforce labor**
  - **Adjunct for incomplete, inevitable, or elective abortion**
  - **Postpartum: Expulsion of placenta; prevent or control postpartum hemorrhage**
- Improper use and administration has led to fetal hypoxia, maternal morbidity and in some cases, maternal, fetal and neonatal deaths
- IMSN Oxytocin Special Interest Group established to further address the safe use of oxytocin globally



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Identified Risks Associated with Oxytocin Use

- Inappropriate/unnecessary use in labor induction in low-risk patient population
- Lack of standardized dosing regimen
- Confusion with look-alike and sound-alike medications
- Inappropriate use of brand names or unapproved abbreviations
- Non-standardized or non-centralized preparation of oxytocin infusions
- Use of multiple oxytocin infusion concentrations/preparations
- Insufficient monitoring of beyond use dates of pre-prepared solutions
- Reliance on manually programed infusion pumps without automated safeguards in place
- Mix-ups with infusion tubing
- Mix-ups with dosing/infusion rates
- Use/availability of oxytocin in the direct patient care area without appropriate orders and communication among healthcare providers

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Recommendations - General

- When possible, reduce unnecessary exposure of at-risk staff (e.g., women in 3rd trimester) to the medication and ensure appropriate labeling (e.g., auxiliary warning labels)
  - **National Institute for Occupational Safety and Health (NIOSH) in the US identified oxytocin as a potentially hazardous drug during 3rd trimester of pregnancy**
- Increase number of drug name letters required in electronic searches to a minimum of 5 letters to avoid confusion with other similarly spelled medications (e.g., oxy**CODONE**).

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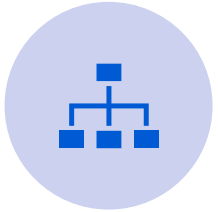
Recommendations

Procurement and Planning

Storage

Prescribing



Preparation & Dispensing

Administration & Monitoring

Patient Education

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Recommendations

- All phases of the oxytocin use process
- Risk-reduction strategies include combinations of high-leverage forcing functions (e.g., technology), moderate-leverage (e.g., warnings, reminders, standardization) and low-leverage strategies (e.g., staff education, patient education and counseling) to exponentially enhance safe oxytocin utilization
- Adding safety strategies upstream in the medication-use process to help prevent downstream risks.
  - **For example, utilization of centrally compounded and standardized oxytocin solutions will reduce errors associated with vial or ampule mix-ups downstream during preparation in obstetric care areas**

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Implementation

- Recommendations should be reviewed, discussed, and adapted by an interdisciplinary team of prescribers, nurses, pharmacists, and healthcare practitioners who need to assist with implementing changes.
- Start by evaluating current processes, then determine where and how these recommended safety improvements can be implemented. After making any changes, evaluate the revised processes to identify any new issues or outstanding safety gaps.
- Organizations should identify recommendations that can be implemented at each step of the medication-use process and consider the remaining recommendations as future goals to work towards.

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Next Steps

Continue to report oxytocin errors through reporting programs and to IMSN, to enable continue evaluation of the safe use of oxytocin globally

IMSN urges global pharmaceutical industry to make premixed oxytocin solutions available everywhere, as soon as possible

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OxytocinSIG Participants

- **Canada** - Parag Buch, Dorothy Tscheng, David U, Alice Watt, ISMP Canada; Sally Pepper, Health Canada
- **Colombia** - Ismael Basto Benitez
- **England** - Donald Peebles, Sascha Wells-Munro, Sharon Murrell, Graeme Kirkpatrick, National Health Service
- **France** - Étienne Schmitt
- **Germany** - Günter Emons, Wolfgang Paulus, Birgit Vogt
- **Ireland** - Peter Duddy
- **International Society of Pharmacovigilance (ISoP)** - Brian Edwards, Rosa Angela Caro Rojas, Medication Error SIG
- **Netherlands** - Thijs Ambagts
- **Saudi Arabia** - Hind Almodaimegh, Ghadeer Banasser
- **Scotland** - Alpana Mair (observer)
- **Singapore** - Cynthia Leow, Mohammad Nazri
- **Qatar** - Wessam Elkassem
- **United States** - Mike Cohen, Rita Jew, Michelle Mandrack, Christina Michalek, Tyler Nichols, ISMP United States
- **World Health Organization** (observer) - Ayako Fukushima

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Questions?