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Disclosure

- The speaker declares no conflicts of interest, real or apparent, and no financial interests in any company, product, or service mentioned in this program, including grants, employment, gifts, stock holdings, and honoraria.

Learning Objectives

- Cite the three most implemented, and three least implemented best practices from the 2016-2017 list of ISMP Targeted Medication Safety Best Practices for Hospitals.
- Describe recommended strategies to overcome common implementation barriers for ISMP’s Targeted Medication Safety Best Practices.
- Identify the three new best practices for 2018-2019 and the medication errors that each of these new best practices were designed to prevent.

Presentation Goals

• Discuss the results of the July 2017 ISMP survey on implementation status of the current best practices
• Some of the barriers to implementation
• What can be done to overcome those barriers
• Present the new best practices for 2018-2019

Common Barriers

• Lack of buy-in from others: MD/RN/Leaders/RPh
  • Not convinced, not a priority
• Unwillingness/inability to change culture/practice
• Lack of perceived risk - not an issue at our hospital
• EHR limitations – lack of IT support, shared IT, EHR capability?
• Workload concerns, inadequate staffing
• Cost

Common Barriers

• Lack of space
• Need for perfection to implement
• Inability to validate implementation, inconsistent implementation
• Lack of understanding of the best practice
  • Not understanding alternative to EHR/automation

Best Practice 1

Dispense Vincristine and other Vinca Alkaloids in a minibag only

Implementation Barriers
- Staff acceptance/management acceptance
- Don’t infuse chemo by IT route so no perceived issue
- EHR build prevents
- Workload concerns, inadequate staffing
- Concerns regarding the inability to check for extravasation

Best Practice 2a

Use a weekly drug regimen default for oral Methotrexate

Implementation Barriers

- EHR limitations – can’t do defaults
  - Medication reconciliation module imports orders
- Too much variability in dosing to allow defaults
- Lack of support from IT-management
- Large health system (shared IT) – unable to convince everyone
- Lack of use of methotrexate
- Paper system
- Lack of perceived risk

Best Practice 2b

HARD STOP VERIFICATION OF DAILY ORAL METHOTREXATE ORDERS FOR ONCOLOGIC INDICATION

- February 2014: 53%
- February 2016: 34%
- October 2016: 47%
- July 2017: 28%

Implementation Barriers

- EHR limitations – can’t do defaults
  - Soft stop/reminders that can be overridden
  - Can’t do hard stops or hard stops limited by class/group
  - System doesn’t tie drug to diagnosis
  - Hard stop in the pharmacy but not for prescriber
- Cultural variations in use of methotrexate
- Impact on treatment plans
- Alert fatigue

Implementation Barriers

- Indication not readily accessible to pharmacists
- Pharmacists required to clarify indication - uncertain if occurs
- MD can override - Paper system
- Lack of perceived risk - No 24 hour pharmacy service
- Lack of IT support - management support
- Large health system (shared IT) – unable to convince everyone
- Fear of forcing people to do their jobs!

Best Practice 2c

![Bar chart showing patient education for all oral methotrexate discharge orders over time]

Implementation Barriers

- Inadequate staffing for one-on-one education – written only
- Can’t guarantee that nurses are doing it
- Not a nursing priority/no buy-in – educate same way for all drugs
- No ISMP leaflet – EHR system does not allow use
- Do not have resources (staffing/budget) to do/educate nurses
- Leadership need for nurses to avoid “delayed” discharge
- Can’t determine reason/indication at discharge
- Done at start of therapy – no need at discharge
- Very few discharge orders for oral methotrexate

Best Practice 3a

WEIGH EACH PATIENT ON ADMISSION. AVOID STATED, ESTIMATED OR HISTORICAL WEIGHTS

Implementation Barriers

• ED staff resistance
  • Time constraints, hinders ED flow, not seen as a priority, culture
• Lack of management support
• Individual practice variations
• Policy, but not sure followed
• Lack of scales – financial limitations
• Not all areas get weight on admission or OP encounter
• Weight information is not consistently entered into EHR
• EHR flow and design

Best Practice 3b

DOCUMENT AND MEASURE PATIENT WEIGHTS IN METRIC UNITS ONLY

Implementation Barriers

- RN, MD pushback
- Not viewed as a patient safety initiative – no leadership support
- EHR limitation – lack of vendor support
- Cost of scales and to hard lock bed scales to metric units
- EHR can be locked but not the scales - pose a safety risk
- Education does not stick - Staff workload and education
- Difficulty in outpatient clinics - ED workflow
- Families insist on weighing pediatrics in pounds
- Fear of enforcement - worker comfort is the priority

Best Practice 4

- Staffing constraints – too much time and manpower to do
- Pharmacy staff/leadership buy-in
- Lack of understanding of safety risk
- Pharmacy service isn’t 24 hours
- Cost of unit dosing – shorter expiration time
- Availability of prepackaged items
- Dispensing in ED after hours

Implementation Barriers

- USP<800>- hazardous drugs - potential constraints
- Advisories by manufacturers about storing drugs in oral syringe – Health Canada and BD
- Lack of stability information
- Space limitation for the syringe stock in ADCs
- Only a few exceptions (oral mouthwashes/compounded drugs)
- Controlled substance regulations and security also are preventing individualized unit dose distribution.

Revised for 2018-19

Ensure that all oral liquid medications that are not commercially available in unit dose packaging are dispensed by the pharmacy in an oral or ENFit syringe.

- Bulk oral solutions of medications are not stocked on patient care units
- Use only oral syringes that are distinctly marked “Oral Use Only.” Use of an auxiliary label is preferred, if it does not obstruct critical information
- Ensure that the oral syringes used do not connect to any type of parenteral tubing used in the organization.

Revised for 2018-19

• When ENFit syringes are used for administration of oral liquid medications, always highlight on the label, or affix an auxiliary label, stating “For Oral Use Only.”

• Exception: If the pharmacy is using unit-dose packaging automation that does not use oral syringes, then unit-dose cups/bottles may be provided in place of oral syringes. However, ensure that oral or ENFit syringes are available on nursing units in case patients can’t drink the medicine from the cup or bottle.

Best Practice 5

**USE ORAL LIQUID DOSING DEVICES IN METRIC UNITS ONLY**

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Implementation Barriers

- Cost
- Lack of availability (syringes/readable cups/wholesaler)
- Material management resistance
- Existing contracts
- Lack of leadership support
- Not under pharmacy control

Best Practice 6

**ELIMINATE GLACIAL ACETIC ACID FROM ALL AREAS OF THE HOSPITAL**

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Implementation Barriers

- OB-GYN, OR, endoscopy say no acceptable alternative
- Lack of management support
- Still needed in pharmacy for compounding

Best Practice 7

Implementation Barriers

- Space limitation
- Lack of refrigerator space for lidded bins/locked boxes
- Anesthesia ADC is open matrix, no segregation in OR anesthesia workstations
- Resources, time, management buy-in
- Lack of support (management/staff) for change in the pharmacy

Revised for 2018-2019

Segregate, sequester, and differentiate all neuromuscular blocking agents (NMBs) from other medications, wherever they are stored in the organization.

• Eliminate the storage of NMBs in areas of the hospital where they are not routinely needed.

• In patient care areas where they are needed (e.g., intensive care unit), place NMBs in a sealed box or, preferably, in a rapid sequence intubation (RSI) kit.

Revised for 2018-2019

• Differentiate these products by placing an auxiliary label on all storage bins and final medication containers (e.g., vials, syringes and IV bags) of NMBs that state: "WARNING: PARALYZING AGENT-CAUSES RESPIRATORY ARREST-PATIENT MUST BE VENTILATED" to clearly communicate that respiratory paralysis will occur and ventilation is required.

• Exception: Excludes anesthesia-prepared syringes of neuromuscular blocking agents.

Best Practice 8

ADMINISTER HIGH ALERT IV DRUGS BY SMART PUMP (W/DERS) ONLY

None  Partial  Full

Implementation Barriers

- Cost for smart pumps
- OR/anesthesia resistance
- Lack of leadership/management buy-in
- Complacency
- Getting nurses to use the drug library consistently

![Best Practice 9](image)

ANTIDOTES, REVERSAL AND RESCUE AGENTS AVAILABLE WITH
PROTOCOLS AND INSTRUCTIONS

- None
- Partial
- Full

Feb 2016 | Oct 2016 | July 2017
---|---|---
11% | 24% | 5%
70% | 38% | 39%
38% | 57% |

Implementation Barriers

Most responses said working on – just not there yet.

- Creating of standardized protocol
- Not all antidotes – couple missing
- Having available directions, time consuming
- Cost of product, cost of unused outdated vials
- Lack of resources/time to do this
- Low volume usage so not a priority
- Lack of management buy-in
- Drug shortages

Best Practice 10

STORE 1 LITER BAGS OF STERILE WATER IN PHARMACY ONLY

Implementation Barriers

- Respiratory department resistance
- 1L bags needed for NICU islettes, Vaportherm® machines
- Still available in OR and hyperthermia carts
- Can be purchased by materials management without going through pharmacy
- Vent poles will not hold 2L bag
- Lack of management support
- Sterile water bags looks different - so not an issue

Best Practice 11

VERIFY INGREDIENTS & AMOUNT PRIOR TO ADDITION TO IV BAG

Implementation Barriers
- Cost/manpower/space/time
- Workload, workflow, and inefficiency
  - Perceived workflow interruption and wait time for RPh to respond
- Capital request not accepted
- Need EHR upgrades
- Lack of support by pharmacy staff/management
- Does not happen when pharmacy closed
- Very few compounded items
- Working on – planned

Overcoming Barriers
- Overcome unwillingness to change culture/practice
- Need skills for justifying and gaining cooperation
- Don’t accept EHR limitations is a vendor issue
- Fake fact: Low volume so not an issue at our hospital
- Ensuring compliance – need for measurement
- Minimize exceptions, don’t expect perfection
- Use creativity to address workflow, space, resource needs

Focus for 2018-2019
- Due to low rates of compliance, ISMP is asking hospitals to focus on these existing best practices:
  - 2b: Clarifying daily orders for oral methotrexate for non-oncology
  - 2c: Improve discharge education of oral methotrexate
  - 3a: Getting an actual patient weight
  - 3b: Weighing and documenting weights in metric units.
  - 9: Antidotes/reversal/rescue agents available w/protocols & instructions
  - 11: Verify ingredients & amount prior to addition to IV bag when sterile compounding

New Best Practice 12
Eliminate the prescribing of fentaNYL patches for acute pain and in opioid-naïve patients
• Ensure the organization has a process in place to routinely document the patient’s opioid status (naïve vs. tolerant) and type of pain (acute vs. chronic) in the health record or prescriber orders.
• Ensure there is an implemented process to prevent or verify orders for fentaNYL patches in patients who are opioid-naïve or with acute pain.
• Examples include: use of hard stops, alerts, automatic interchange, and pharmacy interventions with prescribers.

Polling Question #1
• Where is your organization in relation to implementing this best practice 12?
  a) Fully implemented (all aspects/locations)
  b) Partially implemented (some aspects and/or some locations)
  c) Not implemented at all
  d) Uncertain/do not know

New Best Practice 13
Eliminate injectable promethazine from the hospital.
• Remove injectable promethazine from all areas of the hospital including the pharmacy.
• Classify injectable promethazine as a non-stocked, non-formulary drug.
• Implement a medical staff-approved automatic therapeutic substitution policy to convert all injectable promethazine orders to another antiemetic.
• Remove injectable promethazine from all computerized medication order screens and order sets and protocols.

Polling Question #2
• Where is your organization in relation to implementing this best practice 13?
  a) Fully implemented (all aspects/locations)
  b) Partially implemented (some aspects and/or some locations)
  c) Not implemented at all
  d) Uncertain/do not know

New Best Practice 14
Seek out and use information about medication safety risks and errors that have occurred in other organizations outside of your facility, and take action to prevent similar errors.

New Best Practice 14

• Appoint a single health care professional (preferably a medication safety officer) to be responsible for oversight of this entire activity in the hospital.

• Identify reputable resources (e.g., ISMP, The Joint Commission, ECRI, patient safety organizations, state agencies) to learn about risks and errors that have occurred externally to improve.

New Best Practice 14

• Establish a formal process for monthly review of medication risks and errors reported by external organizations, with a new or existing interdisciplinary team or committee responsible for medication safety.

  • The process should include a review of the hospital’s current medication use systems (both manual and automated) and other data such as internal medication safety reports to determine any potential risk points that would allow a similar risk or error to occur within the hospital.

New Best Practice 14

• Determine appropriate actions to be taken to minimize the risk of these types of errors occurring in the hospital.

• Document the decisions reached, and gain approval for required resources as necessary.

• Share the external stories of risk and errors with all staff, along with any changes that will be made in the hospital to minimize their occurrence, and then begin implementation.

New Best Practice 14
• Once implemented, periodically monitor the actions selected to ensure they are still being implemented and are effective in achieving the desired risk reduction. Widely share the results and lessons learned within the facility.

Polling Question #3
• Where is your organization in relation to implementing this best practice 14?
  a) Fully implemented (all aspects/locations)
  b) Partially implemented (some aspects and/or some locations)
  c) Not implemented at all
  d) Uncertain/do not know

In Summary
• Focus on assessing and implementing the 6 current best practices where implementation levels are low.
• Improve your skills to effectively implement changes in your hospital.
• Assess and implement the 3 new best practices for 2018-2019 related or fentaNYL patches, injectable promethazine and proactive risk assessments.

Questions?