ISMP Canada is an independent Canadian nonprofit agency established for the collection and analysis of medication error reports and the development of recommendations for the enhancement of patient safety.

The Healthcare Insurance Reciprocal of Canada (HIROC) is a member-owned expert provider of professional and general liability coverage and risk management support.

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Narcotic Safeguards – The Challenge Continues

ISMP Canada has received several reports of serious medication errors involving narcotic medications. Two of the reports are shared in this bulletin:

(i) An adult patient admitted for a minor procedure, was experiencing significant pain. Prior to starting the procedure, the physician gave a **verbal** order for Demerol 25 mg IV. The patient received 25 mg of morphine IV and naloxone was required to reverse the effects. It was reported that miscommunication, a heightened sense of urgency of the situation, and intentions to alleviate suffering quickly, led to the error.

(ii) A post-operative patient was prescribed oxycodone controlled-release (Oxycontin) 20mg po q8h. The order was misinterpreted as q3h and the patient received several doses every three hours before the error was noted. The patient required naloxone.

In addition to these reports, we received several requests for recommendations related to improving safety in narcotic medication use in hospitals. It is evident from the concerns expressed that even though many system safeguards such as unit dose and centralized IV admixture systems have been implemented throughout Canadian hospitals, the dispensing and administration of narcotics remains a recognized area of weakness. The same appears to be true in the U.S. A recent article published in the American Journal of Health-System Pharmacists entitled Retrospective Analysis of Mortalities Associated with Medication Errors[1] identified opiates as the largest category of drugs causing error-related death.

A roundtable discussion about medication error prevention was held at the recent Canadian Society of Hospital Pharmacists Professional Practice Conference.[2] The discussion focused on narcotic errors and the need for additional safeguards. There was general agreement that while our current systems are well designed to ensure accurate verification of narcotic counts, they have not succeeded in ensuring the safe and appropriate use of narcotics. This is a continuing challenge for us. Some of the suggestions described below stem from the roundtable discussion.

Suggestions to Help Prevent Similar Narcotic Errors from Occurring:

- Review the existing hospital policy and procedure for "drugs requiring an independent second check" before administration. Parenteral narcotics, in particular, are considered "high alert drugs" since mistakes with this group of drugs are often life threatening. Requiring a second check before administration is a recommendation of ISMP in the US. The second check need not be restricted to an RN, but could include a pharmacist or physician.
- Automated dispensing units, when implemented to optimize safety, can build in an 'additional check'. For example, automated dispensing unit features can require that a pharmacist profile the order before allowing access to the medication. This inherently ensures an 'order review' and provides a 'check' in the system. Automated dispensing units can also be programmed to require a 'witness' when narcotics are removed, or when an override is used to access narcotics. Warning messages can also be incorporated. Such systems can provide a mechanism to ensure a second check takes place.
- Re-visit existing telephone order / verbal order policies. Hospital policy and practice should strongly discourage the use of verbal orders except in an emergency situation. Ensure that the hospital policy clearly defines the situations in which telephone orders or verbal orders are acceptable, and the personnel authorized to give and receive verbal orders. Ensure there is an ongoing expectation to repeat back the entire order to the prescriber, including the 'five rights': patient name, the drug, dosage, route and frequency. Educate the prescriber to ask for a 'repeat-back' if it is not automatically provided. Avoid the use of abbreviations in telephone or verbal orders. It is important the order be written as soon as possible, and that there are clear expectations as to co-signing of the order.
- Review storage areas for narcotics and limit the storage of high potency narcotic preparations (morphine and hydromorphone) to the Pharmacy.
- Limit the choices of floorstock narcotics (pediatric areas reviewed separately from adult areas) and standardize pain relief choices and/or protocols.
- Consider cautionary auxiliary labels when high potency preparations are dispensed including when dispensed from a centralized IV admixture service.
- Educate nurses to "reconsider" the appropriateness of an order when more than two containers of a drug are needed to prepare one dose. This may be a situation that automatically requires a 'second independent check' regardless of the medication.
- Educate staff about possible errors and share learnings from errors. A widely publicized Ontario error involving a meperidine /morphine 'mix-up' resulted in many recommendations from a coroner's jury. [3]
- Ensure naloxone is readily available and easily accessible in all areas where narcotics are administered.

- Ensure drug information is readily available, easily accessible, and up-to-date in all areas where medications are administered.
- Electronic order entry with 'built-in' checks and electronic medication administration records can add system checks to the prescribing, selection and administration processes.

ISMP Canada is interested in hearing from you if you would like to share other ideas for added safeguards with the use of narcotics, or if you have had success in implementing strategies for reducing the risk with narcotics. Write to info@ismp-canada.org.

References

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