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Communiqué

for Health Industry Clients
on the Legal Retainer Program

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Avoiding Medication Errors

Introduction

Considerable attention has been paid both in the media and the scientific press to the issue of error management in healthcare institutions. There are suggestions in the literature that hundreds, if not thousands, of episodes of morbidity and mortality occur on an annual basis in Canadian hospitals related to drug error.

A recent life threatening, near miss incident in a Canadian hospital clearly demonstrates how such errors occur. A number of suggestions are made in order to help institutions avoid such potential catastrophes in the future.

Case Outline

A patient presenting to an Emergency Department had an order written for intravenous administration of an antiviral drug. This drug was not a regularly stocked item, so the nurse called the Pharmacy requesting that the drug be transported to the Emergency Department. The Pharmacy technician who responded to the request inadvertently forwarded a neuromuscular blocking agent.

Unfortunately, although the nurse noticed the difference between the name of the drug she requested and the name of the drug received, the nurse was not familiar with either drug. The assumption was made, therefore, that the name of the drug received was the trade name for the drug requested. The nurse was sufficiently vigilant that an attempt was made to identify an alternate name for the drug received in the CPS, where no alternative name was found. The nurse, unfortunately, did not consider the possibility of a dispensing error.

The reconstituted contents of the received vials were added to a mini-bag for administration. Fortunately, the nurse

retained a sufficient degree of concern that they contacted the Pharmacy to once again confirm that the drug received was the same as the drug requested. At that time the pharmacist advised the nurse that the drug received was, indeed, a neuromuscular blocking agent. Had the drug been administered, it would have resulted in paralysis of the patient, with loss of voluntary muscles of respiration and an inevitable respiratory arrest.

In investigating this incident, the hospital Emergency Department and Pharmacy made the following discoveries:

- The neuromuscular blocking agent had been returned to the Pharmacy from the operating room, and inadvertently put into the container where antiviral agents were normally stored.

- Although the neuromuscular blocking agents were segregated in the Pharmacy, they were segregated in an area that happened to be in close proximity to the area where antivirals were stored.

- When the Pharmacy technician pulled the vials from the antiviral stock, they assumed that the product was the correct one, rather than checking and re-checking the labels on the vial.

- Both products were purchased from the same pharmaceutical manufacturer, and provided in 10 ml vials with red flip-top caps.

- Although some manufacturers of neuromuscular blocking agents package their products with warnings such as “paralyzing agents” on the label or vial cap, the particular manufacturer in question does not do so with their product.

Recommendations:

In order to avoid such potentially lethal errors, the following suggestions are made:

- The contents of this Communiqué should be shared with nursing, Pharmacy, and clinical staff of all acute care hospitals.

- All those involved in the distribution and administration of neuromuscular blocking agents must be familiar with and expert in the dispensing and use of such agents.

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- The packaging and labeling of products should be reviewed in order to ensure that those drugs with a high risk of untoward outcomes after administration (eg., potassium chloride, neuromuscular blocking agents) are clearly identified as such.

- Neuromuscular blocking agents should be well segregated within the Pharmacy. In addition to this segregation, the use of "multi-sensory warnings" such as a tactile label, have been suggested in the literature.

- Hospitals should develop a policy of only storing neuromuscular blocking agents in areas of the hospital where immediate access to them is mandatory (for instance, Emergency Department or critical care areas). If these drugs are to be stored outside the Pharmacy, they should be kept in plastic bags, with warning labels applied on both sides of the plastic bag.

- Hospitals should develop a double-check system ensuring that a pharmacist reviews any drug to be distributed to an area where it is not regularly stocked before the drug leaves the Pharmacy.

- Hospitals should ensure that a policy is in place to emphasis on the importance of verifying that any product supplied is, indeed, the product ordered.

- All clinical staff should be encouraged to heed any "internal warnings" before administering therapy.

About the author:

Dr. Isser Dubinsky is Vice President of Miltom Consulting Inc. He consults with Government, Institutions, Private Industry and Professionals in a variety of areas including: cost effective and cost efficient health care; conflict resolution; best practice; leadership development and quality management.

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