

Human Factors Evaluation of Medication Administration Errors

Katherine Bubric, Human Factors Safety Specialist
AHS Patient Safety Department

ABSTRACT

Patient Safety Concern

Medication preparation and administration are complex processes that require full attention and use of resources to perform appropriately. Due to a number of errors on an inpatient unit at a large hospital in Alberta, a human factors evaluation was requested in order to reduce errors and improve patient safety.

Project Details

A human factors specialist performed observations and semi-structured interviews with nurses working on the unit in order to understand current practice and identify risks. Nurses were observed preparing medications, with a particular interest in how the process was impacted by interruptions and how and when medication checks are performed and documented. Storage and preparation areas were also evaluated.

A number of suggestions were put forth to reduce medication errors on the unit including:

- Standardizing medication preparation processes, including physically separating prepared medications at workstations, using calculators, and the use of independent double checks.
- Reducing interruptions by providing visual cues to others and providing education to staff about the consequences.
- Improving storage of medications through standardized labelling, use of patient-specific medication bins, and managing overstock.
- Positioning of computers near storage areas so staff can use them to verify orders prior to selecting a medication.
- Standardizing the handover process when nurses go on a break or there is a shift change.

Contact humanfactors@ahs.ca for more information about this project