Building a better mousetrap

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Objectives for an Institutional Drug Distribution System

- Timely availability of medications
- Patient safety
- Medication accountability
- Effective systems management

Typical Unit Dose Medication Distribution

- Pharmacist review of order prior to initial medication dispensing
- Turn around time
- Tech-check-tech of 24 hour cart fill can free up pharmacist time for clinical activities
Enhancing Patient Safety with Automated Distribution Systems

- Unit based vs. pharmacy based
- Chaos vs. automated chaos?

Benefits of Automating the Distribution System

- Automated Dispensing Machines (ADMs) are essentially floor stock under pharmacy's control
- ADMs can “replace” 24 hour cart fill process
- ADMs highly configurable by device
- Automation doesn't take breaks or call in sick
- Improve accuracy of dispensing?

Drawbacks of Automated Distribution

- False sense of security
- Human interface still required
- Management of the systems requires pharmacy labor
- Expensive
Other Technologies which Enhance Patient Safety

- Pharmacy Computer Systems with Decision Support
- Medication Order Management Systems
- Bar Coding/RFID
- Computerized Prescriber Order Entry
- Wireless technology

Pharmacy Computer Systems

- Standardized order entry
- Defaults - positive or negative?
- Decision support
  - Drug-Drug, Drug-Food Interactions
  - Duplicate Therapy
  - Allergies
  - Rules
- Dose range checking

Medication Order Management Systems

- Getting the order from the prescriber to the pharmacy
- Compare to NCR or FAX copy
- Illegible original = illegible scan
- Requires equipment and software
- Order queue viewable by RN
Bar Coding
- Variety of steps in medication distribution process can be bar coded
- Not all medications are bar coded
- May prevent more medication administration errors than computerized physician order entry

Computerized Prescriber Order Entry (CPOE)
- Stand alone or integrated systems
- Decision Support at the prescriber level
- Computerizing the thought process involved in clinical decision making
- ‘Build’ of system is extremely complex, and requires constant maintenance
- 100% of orders, or something less?

Wireless Technology
- Easy access to information
- Wireless networks can be unreliable in certain areas
- HIPAA - Sensitive patient information available on devices which are difficult to control
- Mobile carts, tablet PCs, PDAs
- Battery life
System Management

- Pharmacy is responsible for medication use processes in ALL areas of the institution
- Use automation data to enhance safety
- Target problem or high volume areas or medications
- Educate, educate, educate
- Use interdisciplinary teams to formulate and review medication distribution processes, policies and procedures

Questions?