

Bar Coding for Cart Fill and First Doses

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The speaker has no conflicts to disclose.

SwedishAmerican Hospital

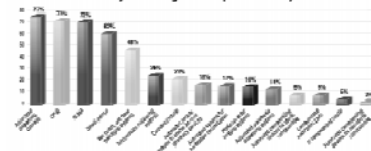
- 333 bed community teaching hospital in beautiful downtown Rockford, Illinois
- Average Daily census = 225
- Distribution Model: Hybrid
 - ADM's contain PRN's, CS's and limited first doses
 - Traditional Cart fill and pharmacist double check

Which of the following applies closest to your organization's med dispensing process?

1. Traditional - tech prints fill list, fills med drawer, pharmacist checks drawer against original list
2. All meds pulled from an Automated Dispensing System (e.g. Omnicell, Pyxis, etc.)
3. Combination of #1 (scheduled meds) and #2 (PRN meds, controlled substances, IVs)
4. Robotic system used to fill med drawer
5. A Traditional process (#1) except have a bar code scanning step during the fill process
6. Other process

A hole in the Swiss Cheese

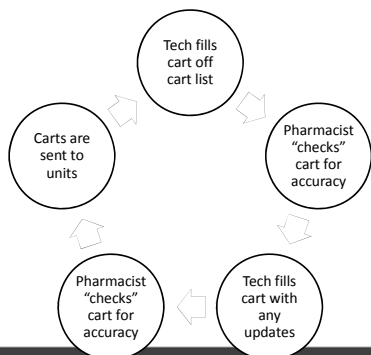
Key Technologies in Hospital Pharmacy



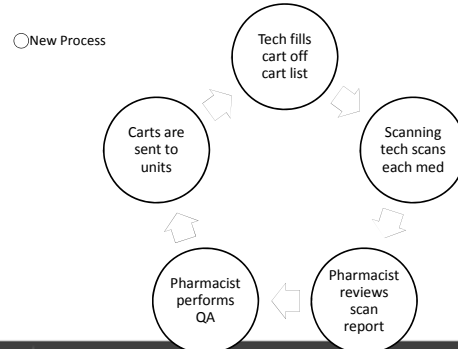
Scanning of medications prior to dispensing has not been a focus

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Traditional Cart Fill Process



New (scanning-based) Cart Fill Process



Step #1: Tech Fills Cart

- Technician runs a cart fill (like normal) and places medication in respective drawers



Step #2: Scanning Tech Double

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Medication	Dispensed	Count
Succinate Sodium 300 mg softgel cap	3 cap	3
Amphetamine 75 mg tab	2 tab	2
Amoxicillin 250 mg tab	2 tab	2
Acetaminophen 7 mg/ml IV	1 patch	1
Levonelle 100 mg tab	1 tab	1
Compazine 10 mg cap	2 cap	2

Step #3: Pharmacist Check

Medication	Amount to Dispense	Count
Levthyroxine 0.1 mg tab	1 tab	1
Multivitamin w/Minerals tab	1 tab	1
Acyclovir 200 mg cap	2 cap	2
Alltopurinol 300 mg tab	2 tab	2

Step #4: Quality Assurance

As an on-going process improvement and assurance initiative, 20% of all drawers are checked after they are scanned

Training and Competency

- All pharmacists and technicians were trained on the new process
- Baseline technician competency:
 - Must scan 1,000 medications without an error
 - Pharmacist would verify in the traditional "double-check method" accuracy of scanning to become "competent"
- Quality Assurance
 - 20% of all drawers are checked with the traditional double-check method

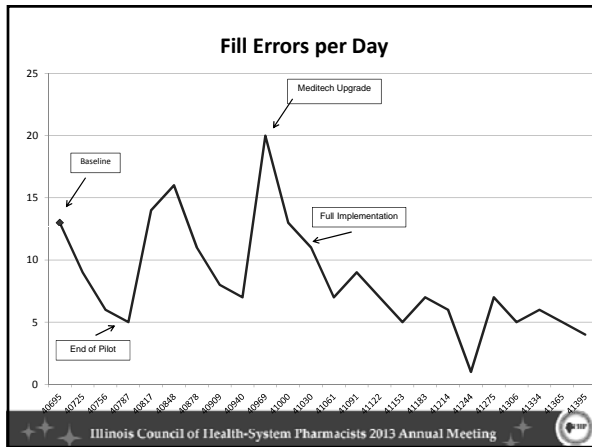
Which of the following steps is NOT included in the modified scanning process presented?

1. Tech #1 prints fill list; fills med drawers
2. Tech #2 scans meds from drawers against electronic check routine
3. Pharmacist reviews the scanned meds check report
4. Pharmacist performs quality assurance check against original fill list
5. Steps 1, 2, and 4 only
6. All steps are included

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Results

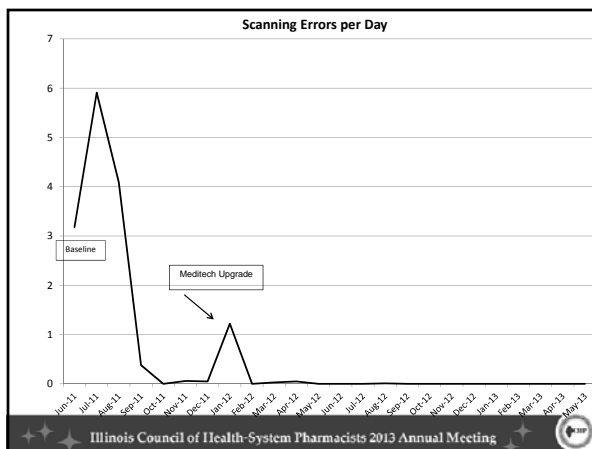
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Fill Errors per Day Observations and Summary

- Achieving the 1,000 medications per day threshold takes about 4 – 6 weeks
- Fox Guarding the Hen House?
 - Every other month the filling tech is also the scanning tech for their cart
 - This “forced” the tech to fix their own mistakes

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Scanning Errors per Day Observations and Summary

- Zero errors identified in 11 months!
- Unintended benefit: **correct bar-code!!**
 - Unrecognized bar-codes are caught prior to getting to the nurse
 - Right dose, but incorrect strengths are caught:
 - Dose = Lasix 40 mg
 - One Lasix 40 mg vs Two Lasix 20 mg

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Time Savings per Day

	Pre	Post	Savings
Technician	0	1.25 hrs	1.25 hrs
Pharmacist	4.5 hours	0.5 hrs	(4.5 hours)

Change in productivity once the cart has been filled, but not checked

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Lessons Learned

- Significant improvement in assuring the correct bar code is used:
 - Unknown bar codes
 - Matching the dose and strength
- Cross over method for scanning has “forced” the self-learning of cart fill mistakes
- DIY!!
 - Current capital and operational investment = \$0!

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Next Steps

- Meditech does not have functionality to provide the same process for first dose
- Developing a process to incorporate a similar double check for first doses

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Which of the following is NOT a potential benefit of the process presented?

1. Increases patient safety from reduction in potential med errors
2. Potential to reduce paper costs; associated storage needs
3. Increases time for pharmacist to perform other duties
4. Increases nursing satisfaction
5. Saves tech time filling med drawers

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