Pain Full Drug Shortages

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Objectives

- Describe actions taken to prevent drug shortages from affecting the clinical management of patients.
- Name several drugs that have required drug shortage management strategies.
- Describe a variety of roles that clinicians of all specialties may be asked to take in drug shortage management.
Institution Summary

- 950 beds
- 120+ clinics
- 200+ research labs
- 10 pharmacy (Rx) satellites
- 3 outpatient Rx infusion satellites
- McKesson® Robot for Cartfill
- McKesson® Packager (produces unit dose packages for Robot and other needs)
- 200 Omnicell® Unit Based Cabinets (UBC)
- Omnicell® carousels (central pharmacy inventory management)
‘Out of Stock’

• Source of that message
  – Wholesaler
  – Manufacturer representatives
  – Requests to borrow
  – Staff
  – Websites
  – News articles
  – Anticipation
    • Other drugs in category
    • Recalls

• What do we do Next?!
What do we do NEXT?

A. Panic!
B. Change to an alternative.
C. Use the Grey market.
D. Assess situation.
E. Call a compounding pharmacy.
A. Panic: Sometimes we do this too!

B. Change to an alternative: Not until we have made an assessment.

C. Use the Grey market: Try never to use this market.

D. Assess situation: YES!

E. Call a compounding pharmacy: Used to be an option if all else failed, now not used much at all.
Assessment

- **Actual quantity on hand**
  - Main inventory
  - Satellite stock
  - Automation
    - Robot
    - Automated Dispensing Cabinets
    - Packager

- **Usage**
  - Historical average
  - Days supply on hand
  - Current patients
Estimated Time of Arrival (ETA)

- Key information, will we make it?!
- No?
  - Move stock around
  - Automation extras?
  - Borrow
- Still tenuous? Alternatives? (OPS=operations, DI=drug information)
  - Same drug, concentration, different product size (2ml vs 5ml, etc...): OPS
  - Same drug, different concentration: OPS
  - Different drug (same class): DI/Clinicians
Action Required: Move it!

• **Consolidation into high use areas**
  • Sequester stock in one location for monitoring
    - Prevent ordering (remove scan tags)
    - Hide inventory extras
  • Assess quantity in ADC
    - Destock extras
    - Database work to prevent reordering
    - Inventory work (zeroing out pick) if want to keep reordering (have stock when back)
Examples: Consolidation

- **Morphine 2mg/ml carpujects**
  - Needed by pediatric patients (concentration issues)
  - Diversion in adults?

- **Diazepam injection**
  - Pediatric patient needs
  - Compound from MDV vials
  - Emergency boxes
    - Minimal use
    - Protocols to change
Action Required: Move it!

- Consolidation into high use areas

- **Sequester stock in one location for monitoring**
  - *Prevent ordering (remove scan tags)*
  - *Hide inventory extras*

- Assess quantity in ADC
  - Destock extras
  - Database work to prevent reordering
  - Inventory work (zeroing out pick) if want to keep reordering (have stock when back)
Examples: Sequester stock

- **Bactrim® IV**
  - Required patient specific information for acquisition
  - Needed to prevent satellite from ordering supplies for non-approved patients

- **High concentration sodium chloride**
  - Two strengths...ERRORS possible!
  - Put in carousels as inactive
Action Required: Move it!

- Consolidation into high use areas
- Sequester stock in one location for monitoring
  - Prevent ordering (remove scan tags)
  - Hide inventory extras

**Assess quantity in ADC**
- *Destock extras*
- *Database work to prevent reordering*
- *Inventory work (zeroing out pick) if want to keep reordering (have stock when back)*
Examples: ADC extras

- **Prochlorperazine**
  - PRN orders, excess
  - Preserve space, zero PARs so don’t reorder

- **Fentanyl**
  - Stocked in lots of places with average use.
  - Remove excess
Action Required: Change it!

- **Same drug, concentration:** different size: OPS focus
  - How stock
  - Who notify
  - Change in dispensed form \((Rx \text{ compounded vs manufacturer})\)
- **Same drug:** different concentration: OPS focus
  - Harder to manage
  - Safety concerns
  - More education
  - Database work (inventory, ordering, automation)
Examples: Different size

- **Nystatin oral suspension**
  - Bulk to UD
  - Automation issues
    - Robot orientation
    - Volume in cassettes
    - ADC stocking issues

- **Dextrose syringes**
  - Form
  - Sequestering for emergency supplies
  - Rx compounding
  - Database issues

- **Fentanyl 2ml vs 5ml**
Action Required: Change it!

- **Same drug, concentration: different size: OPS focus**
  - How stock
  - Who notify
  - Change in dispensed form *(Rx compounded vs manufacturer)*

- **Same drug: different concentration: OPS focus**
  - **Harder to manage**
  - **Safety concerns**
  - **More education**
  - **Database work** *(inventory, ordering, automation)*
Examples: Different concentration

- Morphine carpjects
- Nitroglycerin bottles vs vials
- Concentrated sodium chloride injection
Action Required: Educate it!

- Different drug: DI/Clinicians
  - Determine who gets remaining normal item
  - Committee decision
  - Patient ‘harm’
  - Ordering clinician buy-in
  - Automation helps?
    - Educating easier
    - Drug selection easier
    - Configuration challenges
    - Time challenges
Examples: Educate it!

- Hydromorphone PCAs
- Methylene blue
- Paralytics
- Assembly devices
  - Recall
  - Premature activation
  - Nursing acceptance
Alternative sources: Comfort Zone?

- **Borrow/loan**
  - Relationship building/strain
  - Temporary measure/Quick fix

- **Hospital Rx Compounding**
  - Resource constraints
  - USP 797 issues
    - Morphine preservative free injection
    - Diazepam injection
    - Dextrose syringes
Alternative sources: Comfort Zone?

- Compounding pharmacies
- Foreign sources
  - Government approved (Propofol)
  - Easy access (Border States to Canada)
Groups hardest hit

- **Anesthesia**
  - Pain meds
  - Paralytics

- **Oncology**
  - Chemotherapy
  - Anti-nausea meds

- **Emergency medications**
  - Sodium bicarbonate
  - Dextrose
  - Epinephrine
How can YOU help?!

A. Hoard drugs so your patients have some?

B. Understand that changes happen slowly, time is not a factor.

C. Electronic order management systems are cumbersome, all messages should come directly from providers.

D. Identify candidates for restricted items.
How can YOU help?! D

A. Hoard drugs so your patients have some? Many places do that...it makes the cycle much worse.

B. Understand that changes happen slowly, time is not a factor. Things change moment to moment.

C. Electronic order management systems are cumbersome, all messages should come directly from providers. Much harder if don’t use electronic systems.

D. Identify candidates for restricted items. YES PLEASE!
Other Healthcare Clinicians’ Roles

- Identify candidates for restricted items
- Understand need to restrict items
- Focus on warning information
- Use electronic resources whenever possible
- Understand changes happen frequently on the FLY (literally)
- Be patient
- read, Read, READ
Helpful Websites

- www.ashp.org/shortages
- http://www.cdc.gov/vaccines/vac-gen/shortages/
In Summary...

- Working hard to treat patients appropriately
- Lots of effort to conserve, appropriately utilize resources
- Very little time between adequate stock and no stock
- Other health care clinicians’ role
  - Assist
  - Be patient
  - READ 😊
  - Team work!
It's QUESTION TIME!!