

Managing the Complexity & Rate Of Change In Pharmacy Inventory

Fatimah Muhammad, MPH
Program Manager of 340B Department
of Pharmaceutical Services

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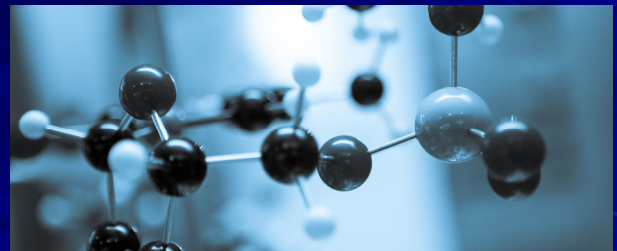
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Learning Objectives

- 1) Evaluate the benefits of optimizing supply chain management for pharmacy inventory
- 2) Explain and define 340B drug delivery models and subsequent inventory models used for drug purchasing and distribution
- 3) Explain and identify the current drug shortages within pharmacy inventory and potential causes
- 4) Discuss possible rates of change within pharmacy inventory and identify how to generate savings on drug purchasing

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Managing Complexities



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Hospital Pharmacies

- Data analytics and benchmarks used to **evaluate drug costs** comparable to industry standards & determine drug prices that are higher than the expected reimbursement received
- Closely monitor payments to drug vendor invoices for complete product order inventory records

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Hospital Pharmacies (*continued*)

Drug procurement: the procedure to be used throughout the organization for drug procurement

- Focus on safety and quality of care
- Creation of formulary

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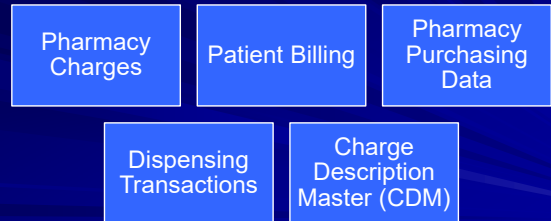
Hospital Pharmacies (*continued*)

US Drug Enforcement Administration (DEA) **Schedule II drugs** must be ordered by completing official paper DEA 222 order form or electronically

- Schedule II: includes oxycodone, hydrocodone, fentanyl, etc.
 - At high risk for abuse
 - Controlled medical treatment use

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Pharmacy Revenue Cycle



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Retail Pharmacies

Inventory management systems must be able to:

- Track store inventories,
- Medication orders,
- And newly received inventories.



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Retail Pharmacies: Inventory Management

Due to larger movements of medications, pharmacy inventory should be periodically checked for expired medications

- Conduct **user reports** to determine the most commonly dispensed medications
- Maximizes inventory use and reduces the medications sent to reverse distributors

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Retail Pharmacies: Inventory Management (*continued*)

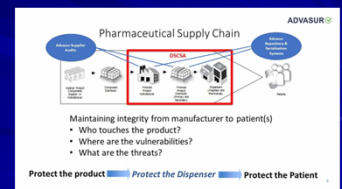
Proper management of reorder quantities (ROQs) and reorder points (ROPs) for commonly used medications

- Determining when to place orders for medications based off on-hand inventory
- Optimizing pharmacy supply chain in order to reduce spending costs

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Drug Supply Chain Security Act (DSCSA) of 2013

- **Goal:** to safeguard the nation's pharmaceutical supply, as well as to protect consumers from counterfeit or compromised drugs



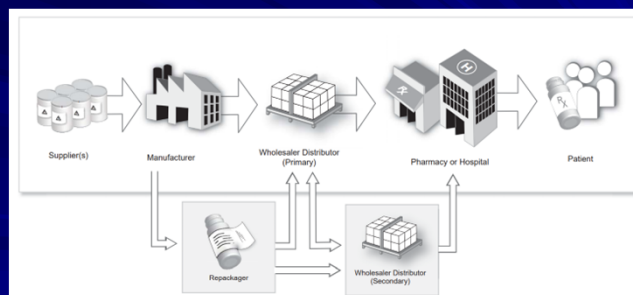
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Drug Supply Chain Security Act: Key Requirements

Product Tracing	Product Verification	Detection & Response	Notification
<ul style="list-style-type: none"> Provide information about a drug including who handled it each time it is sold in the U.S. market 	<ul style="list-style-type: none"> Establish methods, systems and processes, to verify the Unique Device Identification or UDI on certain prescription drug packages 	<ul style="list-style-type: none"> Quarantine and promptly investigate any drug that has been found to be potentially counterfeit, unapproved, or dangerous 	<ul style="list-style-type: none"> Establish methods, systems and processes, to report any illegitimate drugs to the FDA and other stakeholders

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Inventory Management



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Medication Expenditures

Price Inflation

- an increase in the unit price of existing medications

Utilization

- an increase in use of a drug (increase in number of rate of users, days of therapy, or dose per day of therapy)

Mix

- changes when newer, more expensive therapies are used in place of older, less expensive but equally effective drugs

Innovation

- innovative therapy, a blend of the utilization and mix factors increases drug expenditures when expensive, new medications become available to treat conditions previously untreatable with drug therapy

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Drug Inventory Management Software



This software keeps track of:

- Orders
- Monitors medicine supply and utilization
- And simplifies pharmacist verification and billing

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Drug Inventory Management Software (continued)

Drug Inventory Management inclusion qualifications:

- Keep track of every drug that is stored and given to patients (cost, lot number, expiration date, patient name).
- Monitor medication deliveries and shipments.
- Inventory data is centralized, including a tally of how much of each drug is in stock, usage statistics, and trend data on predicted demand against reality.

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Inventory Management: Potential Issues

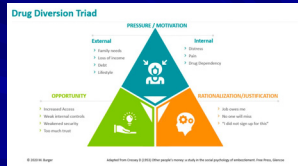
- Illegal diversion of drugs:** the risk of this issue increases when one individual is responsible for purchasing and receiving without the necessary oversights or checks and balances in place
- Hospitals run the risk of not being able to provide patients with the most appropriate medication when it is most needed



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Inventory Management: Potential Issues (continued)

- Pharmacies' dispensing patterns and drug selection choices may have a direct effect on the affordability of care
- Utilizing drugs that are **non-contracted or not on the formulary** may be more costly to the patient, or may result in a lower-than-expected reimbursement



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What is a potential issue that can arise from the inventory management process?

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- a) Illegal Diversion of Drugs
- b) Drug exclusion
- c) Medication expenditures
- d) Drug shortage

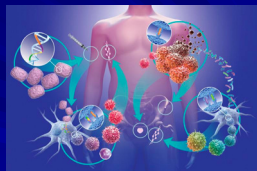
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Drug Delivery Systems

- Drug Delivery Systems:** the guided release of therapeutic agents from technologies engineered for target delivery.
- These systems provide great alternatives for peptide and protein therapeutics which are mainly used for treat major autoimmune and cancer illnesses
 - In principle, drug delivery systems "provide enhanced efficacy and/or reduced toxicity for anticancer agents" (Tiwari et al., 2012)

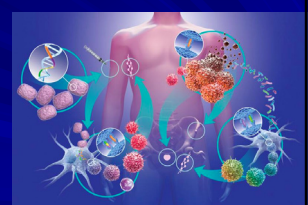


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Drug Delivery Systems (continued)

Forms of drug delivery systems:

- Lung-specific drug delivery
- Anticancer drugs
- Nanoparticulate systems for brain delivery of drugs
- Colon-specific drug delivery
- Transdermal delivery



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340B Drug Delivery Models: Specialty Pharmacies

Physicians making the switch from independent practices to practices owned by hospitals

- Emerging profit drivers
 - Copay maximizers
 - Nonbiologic specialty generics
 - White bagging
 - Pharmacy benefit biosimilars coming to market in 2023, such as adalimumab



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340B Drug Delivery Models: Specialty Pharmacies (*continued*)

Vertical integration of health systems buying practices pose **new market access risks**, for:

- New products coming to market;
- New companies trying to enter the market;
- And new pharmacies trying to get into the market.

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340B Drug Delivery Models: Contract Pharmacies



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340B Drug Delivery Models: Entity-Owned Pharmacies

Owned by the covered entity located either within the entity itself or off-site

- **Benefits:** Can be used as a community pharmacy for locals, higher capture rate, can expand patient care team, and "low-cost medication access to uninsured patients"



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340B Inventory Models

Separate Physical Inventory

- Requires space and standard operating procedures that guide the staff on the rules for using the two inventories (for 340B and non 340B drugs)
- Potentially more costly and requires more space than they have available

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340B Inventory Models (*continued*)

Replenishment Model

- One neutral physical inventory which are neither 340B nor non-340B
- Saves location space and inventory cost associated with separate physical inventories
- Must virtually separate inventory
- May require software/tracking systems
 - Separate costs to ensure compliance with 340B requirements

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True or False?

In the 340B program, there are 2 types of Inventory Models:

- Separate physical inventory,
- And the replenishment model.

True

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Drug Shortages

Drug shortages are **caused by** numerous things:

- Covid-19 pandemic
- Manufacturer delays
- Supply chain issues

Current shortages:

- Sterile injections (epinephrine)
- Oncology treatments (doxorubicin)
- Antibiotics (clindamycin)
- And other classifications

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Drug Shortages (*continued*)

Drug Formulary:

- An updated list of medications and related info compiled by pharmacists, clinicians, and other diagnostic experts...
- Created to ensure **abundant supply of regularly used medications**

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Drug Shortages (*continued*)

Drug Formulary System:

- Formulary list
- Medication use policies
- Pharmacy and therapeutics committee
- And other related information in formulary management

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Drug Shortages (*continued*)

- **Biosimilars:** Act as possible solution to reduce spending costs and improve inventory needs
- Medicare Part D could have saved **\$84 million** by increasing the use of all available biosimilars

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With the current drug shortage across the U.S., what is a way for pharmacies to increase inventory and savings?

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- a) Use drug formulary systems
- b) Incorporate generics
- c) Incorporate biosimilars
- d) Negotiate with manufacturers for a lower price on popular medications

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Managing Rate of Change

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Price Gouging

Federal government involvement:

- Federal Law prohibits the government from getting involved in drug pricing negotiation and regulation for Medicare

U.S. inflation rate is 7.9% up from 1.7%:

- Pharmaceutical companies are blaming inflation for rising drug prices

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Price Gouging (*continued*)

Increased revenue due to increased drug prices:

- Revenues from U.S. sales in 2020 were almost double the total revenues for the rest of the world

Possible savings:

- Medicare could have **saved \$14.4 billion** on just 50 drugs in 2016 if the program had paid the same prices as the Department of Veterans Affairs

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Build Back Better Act: Federal Government Involvement

Medicare Price Negotiation:

- Amends the Social Security Act to establish the Fair Price Negotiation Program

Inflation Rebates:

- Mandatory drug rebates on certain Medicare Part B and Part D drugs, when prices exceed the rate of inflation

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Build Back Better Act: Federal Government Involvement

- **Cap Medicare Part D recipients' out-of-pocket costs:**
 - \$2,000/year
- **Limits Cost-Sharing for Insulin:**
 - \$35 for a 30-day supply

Congressional Budget Office estimates **\$297 billion in Federal Savings** for prescription drugs

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What is a way the federal government can help increase savings for pharmacies when purchasing certain Medicare drugs?

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- a) Price gouging
- b) Inflation rebates
- c) Mandate a price cap on the purchasing of certain drugs
- d) Negotiating a limit to how many drugs can be sold

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Conclusions

- **Optimize supply chain** in both hospital and retail pharmacies to minimize order delays, reduce costs, and improve inventory management
- Specialty, contract, and entity-owned pharmacies can help **improve access** to medications and maximize costs

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Conclusions *(continued)*

- Drug shortages have always existed, and pharmacies could utilize biosimilars to reduce risks of shortages and back orders
- Savings can be generated multiple ways through Medicare and Federal government involvement (approx. **\$312.24 billion**)

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Questions?

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