R&E Current Events Seminar: Drug Shortages

1/23/24

Start time: 6:10 PM

End time: 6:55 PM

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# Article 1: The Drug Shortage Crisis in the United States

* [Link to article](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3278171/)
* **Part 1: Contributors to National Drug Shortage**
	+ Main causes of national drug shortage:
		1. **Manufacturing (23%)**
			- Changes in formulation, limited production
			- FDA approves specific manufacturing lines for specific drugs at specific facilities
				* Pharmaceutical manufacturers can’t just set up production of short-supplied drug somewhere else in facility
				* Not possible for coverage of a drug’s shortage by producing it in another place/way
		2. **Supply & demand issues (13%)**
			- Occurs from: approval of new indication for existing drug, changes in therapeutic guidelines, spread of disease, or other unforeseen factors
			- EX: COVID-19 pandemic → shortages on masks, testing kits, hydrocortisone
		3. **Raw materials shortage (3%)**
			- All manufacturers of drug that uses raw materials are affected + delayed in production
			- No drug coverage by ordering from diff manufacturer
				* Specific drug can’t be covered by simply ordering from a diff manufacturer
		4. **Health care system practices & supply chain issues**
			- Caused by restrictive distribution methods that deviate from usual supply chain
			- Market approval requirements + post marketing surveillance → limit drug product availability to only certain suppliers + healthy systems
			- Health systems may be required to order certain drugs directly from manufacturer or specialty distributor (also restricts supply)
	+ **Discussion questions**
		1. *What contributing factor(s) of drug shortage do you think could belong in the 55% unknown?*
			- Student 1: supplier choose what they make ⇒ focus more on lifestyle drugs instead of drugs for infections (e.g. antibiotics)
			- Levia: ppl now are more informed of what health conditions they have → increase in demand for certain medications
		2. *Should there be looser/stricter federal laws in place for producing certain medications?*
			- Student 1: I don’t think they should loosen them up but maybe the government can reduce the days supply for certain medications during drug shortage (e.g. 3 month supply → 1 month supply)
* **Part 2: Other Impacts**
	+ **Increased hospital expenses & gray-market**
		- Distributors buy up remaining stock + aggressively market it to facilities that are unable to obtain drug at 10-1000x the usual price
	+ **Increased medication errors**
		- Due to need for physicians to prescribe alternative product forms/concentrations that they might not be as familiar with
	+ **Increases stress levels + workload of healthcare workers (e.g. physicians, pharmacists, purchasing agents, nurses)**
		- Can compromise relationships with colleagues in workplace, with patients, or family members at home
* **Discussion question**
	1. *If you’re a pharmacy technician, pharmacy clerk, or shadow/intern in a pharmacy, what are your experiences or observations with these impacts of drug shortages? (Share if comfortable)*
		+ Student 1: Mounjaro = biggest shortage witnessed
			- Started being prescribing for weight loss instead of diabetes
			- Diabetic patients could no longer get the medication
			- Went from low dosage to 1.7 dosage ⇒ diabetic patients became more pale + skinny (physically affected by shortage)

# Article 2: Low Prices are Contributing to America’s Drug Shortage Problem

* [Link to article](https://www.axios.com/2024/01/05/america-generic-drug-shortage-reasons)
* **Problem**
	+ High rates of drug shortages in U.S.
	+ Drugs are either too cheap/expensive (generally inaccessible)
* **Causes**
	+ Lowering prices of generic drugs
		- Brand name companies have difficulty competing with lower prices
			* Have little incentive to join/stay in market
		- Increased demand, natural disasters, quality control
* **Parties affected**
	+ People who need the drugs affected by shortages
		- EX: ADHD medications, life-saving cancer meds, children’s Tylenol
	+ Quality of medication
		- Low cost production methods to maintain lower prices → reduce quality
* **Possible solutions**
	+ Invest government funds for quality control + increase price of generic drugs
		- EX: could switch to domestic production to better control development but it would be an expensive process
* **Discussion question**
	1. *Have you been personally affected by the drug shortages? If so, how did you handle it?*
		+ Student 1: Have heard about how hard it was to get COVID tests in 2020-2021
		+ Student 2: hard to get flu shots during flu season (like in November)
		+ Student 3: drug shortages definitely affects patients health-wise (grandfather has high blood pressure so have to go to pharmacy out of town to pick up medications; difficult when they’re not available)
		+ Student 4: COVID tests were out of stock on campus (e.g. MU) so had to go to other stores

# Article 3: Current Drug Shortages - ASHP

* [Link to article](https://www.ashp.org/drug-shortages/current-shortages)
* Comprehensive list by American Society of Health System Pharmacists (ASHP) containing current + previous drug shortages (+ discontinued drugs)
* **Discussion question**
	1. *Is the size of this list worrisome? Should we be worried about the future of drugs considering this growing list?*
		+ Student 1: definitely worrisome bc of increase in medication/prescribing errors
		+ Student 2: size of list is not that bad
			- Discontinued medications are a bigger problem
			- More worrisome when drug that a lot of ppl use is taken off market → have to look for alternatives