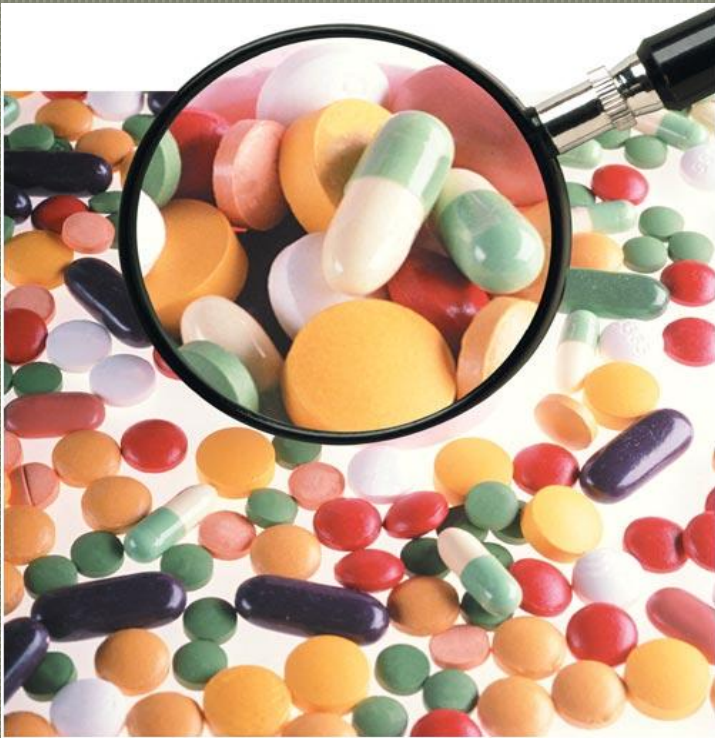


# Pharmacy Information Needs

Patty Northman



# Who are Pharmacists?

- Must be licensed with a Doctor of Pharmacy degree – Pharm D.
- Historically used to compound their own drugs
- Now drugs manufactured



# What do they do?

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- ◉ Dispense medications
- ◉ Educate consumers/patients
- ◉ Advise other health professionals
- ◉ Check for potential drug interactions
- ◉ Can work in
  - Hospitals
  - Inpatient/Outpatient settings
  - Community

# Stakeholders in Medication Cycle

- Manufacturers
- Physicians
- Nurses
- Pharmacists
- Pharmacy technicians
- Hospital Administrators
- Patients

= complex environment and need to share information



# Challenges to Medication Management

- Visit multiple physicians
- Do not follow recommended regimen
- Financial barriers to affording drugs
- Elderly take multiple medications
- Lack of understanding



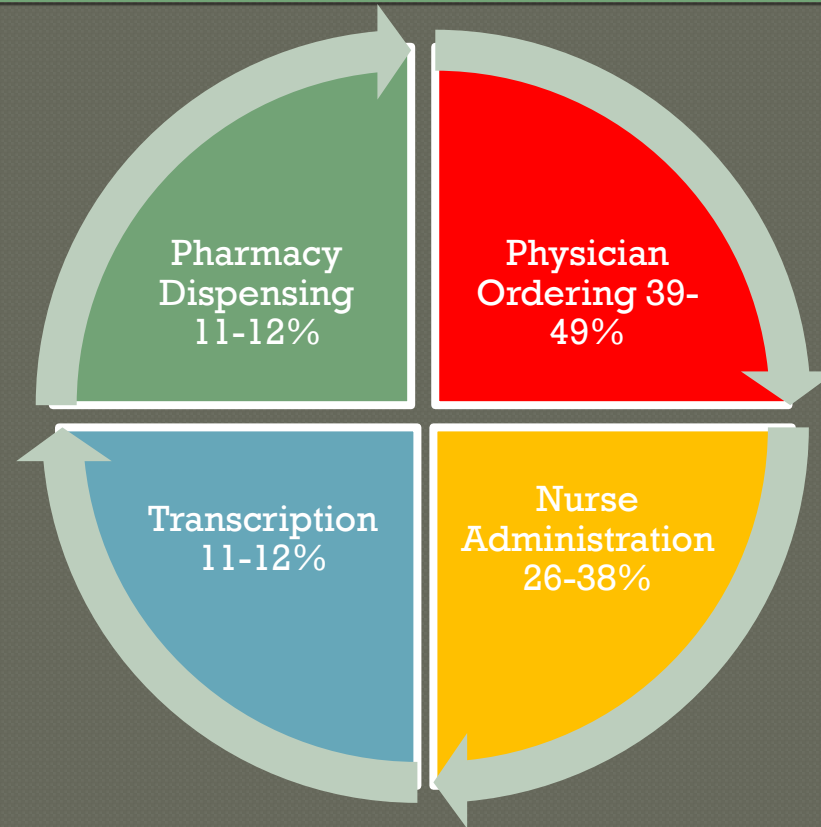
# ADE (Adverse Drug Event)

Adverse drug events (ADEs) result in more than 770,000 injuries and deaths each year and cost up to \$5.6 million per hospital

— AHRQ (Agency for Healthcare Research and Quality)

Setting	Preventable ADEs	Year	Study
Hospitals	450,000	2003	Bates, et al.
Long-term care	800,000	2005	Gurwitz, et al.
Ambulatory care	530,000	2003	Ghandi, et al.

# Systems Analysis of How Drug Errors are Made



Leape LL, Bates DW, Cullen DJ, et al. Systems analysis of adverse drug events. *JAMA* 1995;274(1):35-43.

# Solutions to Prevent ADEs

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- EHRs
- CPOE
- ADEAS
- CDS
- Pharmacist Reconciliation of Med Lists
- Participation on Ward Rounds

Pharmacists need to be able to receive, record, and share accurate information regarding patient medications.

Multi-pronged solution

# Pharmacist Information Needs

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## ⦿ EHRs

- Patient demographics
- Diagnoses
- Laboratory results
- Structured data

## ⦿ Medication lists must be current

- Updatable from multiple access points
- Hospital, nursing home, community pharmacy

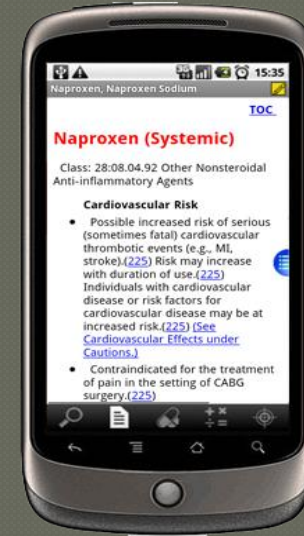
## ⦿ CPOE

- Reduces Errors due to poor handwriting

# CDS Info Needs

## ○ Clinical Decision Support

1. patient medications
2. patient characteristics
3. drug-drug interaction
4. drug-allergy interaction
5. laboratory values



- Conversion from standard dose to weight
- Evidence Based Medicine
- Set alerts to be viewed by physicians first to avoid alert fatigue by physicians

# Patient Centered



# Interdisciplinary Team

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- ◉ Nurse-pharmacist team cost effective
- ◉ Integrated Medicine Management improves drug therapy for patients
- ◉ ADE reporting should be mandatory
  - FDA needs to know more about drug effects after approval
  - Online sources are most easily updated that printed references like PDR

# Influences on Solutions

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- Patient Centered Home
- HiTech Act of 2009 \$19 billion
  - Government Incentive for EHRs
  - Must show meaningful use by November 2011 (Thompson 2007)
  - All or nothing scoring – too bureaucratic
  - \$44,000 per physician paid over five years may not cover cost of implementing EHR (Baron 2010)

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# Questions?

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