Pharmacy Operations

General Prescription Duties

Pharmacy Technician Training Systems
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Pharmacy Operations, General Prescription Duties

Assessing Prescriptions and Medication Orders

Obtaining Patient Information for the Patient Profile

Ambulatory Patient Profile Contents:

- Name
- Date of Birth (DOB)
- Address
- Phone
- Insurance
- Allergies
- Weight for children and infants

Institutional / Long-Term Care Patient Profile Contents:

- Name
- Date of Birth (DOB)
- Address
- Height
- Weight
- Room number
- Patient record number
- Primary physician
- Allergies
- Automatic stop order (are acceptable with antibiotics)
Additional Patient Information Which Should be Maintained:

- Diagnosis
- Desired therapeutic outcome
- Medication use
- Adverse reactions
- Medical history
- Psychosocial history
- Patient characteristics
- Socioeconomic history
- Reimbursement
- List of all prescription medications obtained from the pharmacy in the preceding two years
- Pharmacist comments relevant to patient drug therapy

Processing Prescriptions and Medication Orders:

- Entering prescription/medication information in the patient profile - computerized with help of database program
- Verify information
- Compare new order to profile
- Enter required information
- Pharmacist initials
- Reimbursement
- Pharmacy policy and procedures followed

Appropriate Product Selection:

- Brand vs. Generic

  Dispense as written (DAW)

  Bioavailability must be the same in order for a pharmacist to exercise professional judgment in selecting a generic product for a patient.

  The FDA reviews the generic products to make certain they are equivalent in composition and have the same rate and extent of absorption in the systemic circulation to the original brand name product.

  The Orange Book contains two letter codes assigned to drugs for therapeutic equivalence and is an appropriate reference for drug related information.
Formulary is a document or listing of committee approved pharmaceuticals and therapeutics in stock.

Institutional:

HMO's preferred products reimbursement differential

Goals - manage the cost of rational drug therapy

Assess inventory:
In-stock status
Commercially prepared vs. compounded

Assisting the Pharmacist in Preparing and Dispensing Medications:

Quality control is a process of checks and balances.
Quality is defined by what our patients perceive.
Quality improvement is an important part of meeting regulatory agency (e.g., JCAHO) requirement.

Measuring and Counting

Conical - Easy to handle
Cylindrical - More accurate by using the meniscus
Choosing - Appropriate package for dosage form

Perform Necessary Calculations / Verification:

Must be checked and verified by a pharmacist
Calculate twice, compound once

Compounding:

Extemporaneous (on the spot compounding):

Preparing and packaging for a specific patient
The Remington's Pharmaceutical Sciences: reference book used to look up formulas.

Definitions:

Desiccation is the act or process of desiccating or the state of being or becoming desiccated. This is the complete or nearly complete deprivation of moisture or of water not chemically combined.

Colation (straining) is the process of separating a solid from a fluid by pouring the mixture on a cloth which will permit the fluid to pass through, but will retain the solid.

Distillation - the process that involves a change of state - from liquid to vapor and back to liquid.

Filtration is the process of separating liquids from solids with the purpose of obtaining optically transparent liquids.

Levigation is the process of producing a smooth dispersion of a drug with a spatula.

Trituration is the grinding of tablets into a fine powder in a porcelain mortar.

Gelatin capsules are used for extemporaneous compounding. Size vary from 5 (the smallest) to 000 the largest.

"Controlled Room Temperature" is defined as between 15 - 30 degrees centigrade and 59 - 86 degrees Fahrenheit.

"Refrigeration" is defined as between 2 to 8 degrees C or 46 to 59 degrees F.

Suspending or thickening agents are added to suspensions to thicken the suspending medium and the sedimentation rate. Examples: Acacia, Tragacanth, Bentonite

Stability is the ability for medication to maintain chemical and physical integrity over time.

Sublimation is the process of distilling volatile solids.

Bulk:

Preparing and packaging for more than one patient
Must include lot numbers and expiration dates of ingredients
Documentation of procedure on prescription/medication order
Weighing:

To ascertain a definite weight of a material to be used in compounding or manufacturing a dosage form.

Class A Balance

6 mg sensitivity
Accurately weighs between 120 mg and 15 gm

Class B Balance

30 mg sensitivity
Accurately weighs between 650 mg and 120 gm

Process

Paper is placed on each pan
Balance or "zero"
Desired weight is placed on right tray (weights)
Substance on the left to be measured until balanced

Reconstitution:

Liquids that are stored as powders because of stability limitations
Must add water
Label with time and date when reconstituted
Expiration date on label - Exp. in 14 days
Refrigeration is often (not always) required to increase stability

Aseptic Technique / IV Admixtures

Must be prepared under special circumstances to prevent the introduction of contaminants such as bacteria and other microorganisms from the environment, devices, equipment, and people.

Controlled Substances:
Require Strict Inventory Control

Documentation of Receipt - Commercial invoice
Documentation of Distribution - Narcotic inventory record

Documentation

Date
Amount of drug
How used
Patient information (name, RX#, ID#)
Initials

Packaging Preparations for Prescriptions and Medication Orders

Prescriptions

Packaged appropriately with consideration of light sensitivity

Medication Orders

Unit dose
Multiple dose

Labeling Prescriptions and Medications Orders:

Prescriptions

A prescription label should be affixed to the medication packaging so that it can be read easily.

Label may Contain:

Name and address of pharmacy
Date of issuance
Prescription number
Drug name, strength, and quantity
Directions
Patient's name
Prescriber's name
Expiration date
Number of refills
Lot number
Pharmacists initials
Auxiliary labels
Federal transfer label

Patient Med Pack Labels

May provide multiple medications to a specific noninstitutionalized patient

Labels may Contain:

- Serial number identifying each prescription order
- Pharmacy name and address
- Patient name
- Name of prescribing practitioner
- Medication name, strength and quantity
- Physical description of each medication
- Directions to medication use and precautions
- Date of preparation
- Date of expiration

Medication Orders:

Unit dose dispensing systems provide a single dose of medication for one administration time.

Labels should Contain:

- Drug name and strength
- Lot number
- Expiration date
- Directions for administration
- Auxiliary labels
- Name and address of dispensing pharmacy

Multiple Dose:
Labels should Contain:

- Patient name and room number
- Drug name, strength, and quantity
- Directions for administration
- Lot number
- Expiration date
- Auxiliary labels

Competencies in Unit Dose Drug Distribution:

Advantages of Unit Dose

- Reduce medication errors
- Increase drug use control within institutions
- Minimize drug waste and pilferage
- Reduce nursing preparation time
- More accurate and efficient billing
- Fully utilize involved members of the health care team
- Enhance or improve the quality of patient care

Unit-dose systems provide each patient with a storage bin with a twenty-four hour supply of drugs.

Type of Unit Dose Systems

Centralized:

- Definition - med. cart, one pharmacy

Decentralized:

- Definition: satellite pharmacy
- Combination of Both

Verification:

Five "Rights" of Medication:
Right medication (NDC a great check)
Right patient
Right dose
Right route
Right time

Three Check Points:

Retrieving bottle from stock
Counting from bottle
Returning bottle to stock

Pharmacist's Authorization:

Pharmacist is ultimately accountable to patient.

Medication Errors:

It is important to follow established policies and procedures because they formally establish a system to prevent the occurrence of medication errors.

All the following could contribute to a medication error:

Failure to rotate stock appropriately, preparing three prescriptions at a time, reading the drug product label fast, and abbreviations are frequently the source of medication errors.

Misinterpretation of Abbreviations can lead to:

Improper transcription of physician instructions for medication use
Dispensing the wrong drug, strength, or dosage form
Inappropriate therapeutic or formulary substitution

Errors may lead to:

Increased risk of serious adverse effects
Worsening of disease signs or symptoms
Death

Reporting Procedures:
Supplemental Information at the Direction of the Pharmacist

Package Inserts Required Every Time Drug Dispensed, New Rx and Refills

- Oral contraceptives
- Estrogens
- Progesterones
- Isotretinoin
- Intrauterine devises
- Isoproterenol inhalation products

Computer Generated Patient Information Sheets

Patient Education Videos

Determining Charges and Compensation:

- Calculating charges
- Third party knowledge
- Obtaining compensation