What the Nursing Assistant Needs to Know About Medications
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Disclosures
Cassia Chevillon has no real or perceived conflicts of interest that relate to this presentation.

Objectives
1. Discuss polypharmacy
2. Discuss the concept of medication side effects
3. Discuss the role of the nursing assistant
Polypharmacy

- Many Americans experience polypharmacy
  - Generally older adults, about 40% adults living in own home
- It is the use of multiple medications
- May be prescribed and may be appropriate
- May be from switching healthcare providers or pharmacies and there is no one record of all the medications
- May cause increase risk of adverse drug reactions
- Increase cost for patient/family
- May decrease quality of life

Side Effects

- What is a side effect?
  - A secondary, typically undesirable, effect of a drug
  - Vary from person to person
- All drugs come with side effects
  - From the most basic to the most sophisticated medication all have side effects
  - Many are minor, some an inconvenience, and others are very serious
- May lead to non-compliance

The role of the nursing assistant:

- Report side effects and/or non-compliance to the nurse

Types of Side Effects

- **Allergic reactions**: Can range from mild itching, a rash, nausea, to life threatening anaphylactic reaction.
- **Dose dependent**: Some medications have minimal side effects when correctly dosed, but chances of side effects increase with missed or improper dosing.
  - For example: Warfarin (Coumadin) = bleeding
Types of Side Effects

• **Chemical structure:** Some medications have chemical structures that cause side effects.
  • Benadryl is for allergies but also suppresses acetylcholine that leads to drowsiness and dry mouth.

The role of the nursing assistant:
• Safety precautions, if the patient is drowsy
• For dry mouth, moisten lips, offer ice chips/fluids as tolerated

Types of Side Effects

• **Combining medications:** Side effects may occur when certain medications are mixed with other medications or foods.
  • Also known as a drug-drug or drug-food interaction.
  • Narcotics/opioids & alcohol may lead to drowsiness.
  • Digoxin & grapefruit juice. Grapefruit prevents the drug from working properly, may lead to high levels of the drug in the body. With digoxin this may cause heart problems.

The role of the nursing assistant:
• Safety precautions if the patient is drowsy or unsteady
• Reports signs of shortness of breath, dizziness, to the nurse
• Reinforce teaching, done by the nurse, to patient/family

Side Effects

• Often the most common side effect for ingested (taken by mouth) medication is gastrointestinal upset such as upset stomach or nausea
• Be aware of significant side effects
• Examples:
  • Lasix = low potassium
  • Antibiotics = diarrhea, yeast infection
  • BP medication = low BP, dizziness, risk for falls

The role of the nursing assistant:
• Safety precautions
• Report side effects or different behavior of the patient
Pain Medications: the Cmax

- What is this?
  - A term used in pharmacokinetics to refer to the maximum or peak concentration of a drug after administration

- Why is it important?
  - It helps you to know when the medication has its peak effect as well as the peak effect for side effects

![Graph showing Cmax](image)

Opioid Pharmacology

- Cmax after
  - PO \(\approx 1\) hrs
  - SC, IM \(\approx 30\) min
  - IV \(\approx 6\) min

- Half-life of PO opioid \(\approx 3-4\) hrs

- PO opioid steady state after 4-5 half-lives (24 hrs)
Pain Medications: the Cmax

- The role of the nursing assistant:
  - If the patient is taking pain medication, the peak time is when the patient may be most comfortable, this may be the time:
    - For physical therapy or exercise because the pain medication is managing the pain
    - To have a ‘good’ visit with relatives or friends because the pain is not distracting
    - To reposition the patient

Acute Pain

- Begins suddenly, usually sharp
- Serves as a warning of a disease or threat to the body
- Broken bone, cuts, dental work, sprain
- Usually time limited, goes away after healing takes place

Chronic Pain

- Persists despite the injury heals
- Pain signals remain in nervous system or damage is present (arthritis = damage to the bones)
- Back pain, arthritis pain, cancer pain
- May be described as achy, soreness

Patients receiving pain medication

- May respond differently – pain management is individualized

The role of the nursing assistant

- Reinforce the importance to the patient/family to take medications as ordered. It is important to keep pain managed.
- Report to the nurse if the patient:
  - Has pain despite taking medication
  - Is not able to do activities because of the pain
  - Has nausea/vomiting or is NPO
Opiate Side Effects

**Common**
- Constipation
- Dry mouth
- Nausea/vomiting
- Sedation

**Uncommon**
- Bad dreams
- Dysphoria/delirium
- Myoclonus
- Pruritus
- Urinary retention
- Respiratory depression

**Constipation**
- Occurs with every opioid – no tolerance to this side effect: requires ongoing management
- Usually dietary interventions alone are not sufficient
- Problem is compounded by
  - Decreased fluid intake
  - Decreased activity/mobility level
- Easier to prevent than treat
- The role of the nursing assistant:
  - Observe and report bowel movements to the nurse
  - Report changes in stool consistency, regularity, comfort
  - Diarrhea may indicate constipation/blockage

**Common Medications**

<table>
<thead>
<tr>
<th>Medication type</th>
<th>General Action</th>
<th>General Side Effects</th>
<th>Role of Nursing Assistant</th>
</tr>
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<tbody>
<tr>
<td>Antibiotic</td>
<td>Infections</td>
<td>GI issues: upset stomach, nausea/vomiting, diarrhea.</td>
<td>Reinforce to take as ordered until prescription ends. Encourage fluid intake as tolerated. Report to the nurse any changes.</td>
</tr>
<tr>
<td>Anti-hypertensive</td>
<td>Lower blood pressure (BP)</td>
<td>Weakness, dizziness when change position from lying to sitting or sitting to standing.</td>
<td>Remind patient to rise slowly, sit on edge of bed for brief time before standing whenever getting out of bed. Report to the nurse any changes.</td>
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<td><strong>Benzo‐diazepines</strong></td>
<td>Relieve nervousness or tension, to calm the person. Slows the central nervous system.</td>
<td>Drowsiness, lightheadedness.</td>
<td>Observe for weaknesses. Use Fall precautions. Report to the nurse any changes.</td>
</tr>
<tr>
<td><strong>Steroids</strong></td>
<td>Block inflammatory pathways. May reduce swelling.</td>
<td>Increase hunger. May increase blood glucose (the patient may experience shakiness, nervousness). May be susceptible to infection.</td>
<td>Keep anyone with colds/flu/infection away from patient if possible. Observe for signs of elevated blood glucose. Report to the nurse any changes.</td>
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