University of Basrah \ College of Nursing
Branch of Basic Sciences
Pharmacology for Nurses1 (1st course)
Lecturer: Dr. Utoor Talib Jasim

Pharmacology and the nursing process

Objectives: Upon completion of this lecture, student will be able to

1. Describe the roles and responsibilities of nurses regarding safe drug administration
2. Define the Nursing Process in general
3. Explain what is involved in each step of the nursing process as it relates to drug therapy. (Application of the nursing process in the drug therapy)

Responsibilities of the Nurses Regarding Medication

The responsibilities of nurses regarding drugs, including: before, during, and after a drug administration.

1) Whether administering drugs or supervising the use of drugs by their patients, nurses must understand the pharmacological principles for all drugs given to each patient and have adequate knowledge about the patients who are receiving these drugs and the disorder for which the patient is being treated.

2) Intervening to make the drug regimen more tolerable for patients.

3) Preparing and administering the drugs to the patient.

Preparing and administering the prescribed drug to the patients is a fundamental responsibility of the nurse in many health care settings.

Nurses play an essential role in the drug administration, but they must have a physician's order before administration of medication in a hospital or other health care settings in order to preparing and administering the prescribed drug to the patients.

Nurses are both ethically and legally responsible for correct administration of drugs.

For safe and accurate drug administration, nurses should use the ***"Six Rights"*** and their subsequent additions and ***Three checks*** as guidelines.

"Sex Rights" – Right drug to Right patient in the Right dose by the Right route at the Right time and with Right documentation:

- ✓ Confirm the patient's identity before administering each drug to ensure the **Right patient**
- ✓ Read labels of drug containers for the drug name and concentration and check the medication order with drug label to ensure the **Right drug**

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- ✓ Perform a dosage calculation accurately to ensure the **Right dose**
- ✓ Check the order with drug supplied to ensure the **Right route**. Use the correct procedures and techniques for all routes of drug administration
- ✓ Verify the frequency of dosage with medication order to ensure the **Right time.**
- ✓ Record the medication in the patient's order sheet immediately after administration for **Right documentation**

The **three checks of drug administration** that the nurse uses in conjunction with the six rights help to ensure patient safety and drug effectiveness.

4) **After the administration,** the nurse is responsible for the following:
   a. Recording the administration of the drugs
   b. Observing, evaluating and recording the patient's response to the drug and to intervene if required.

5) **The nurse has an important role as patient advocate – protect the patient against the medication errors. The nurse is the patient's last line of defense against medication errors.**

Pharmacology and Nursing Process: (Nursing Process in Drug Therapy)

Review of the nursing process

Nursing process is a systematic, rational, and continuous method of gathering and using information to planning, providing, and evaluating individualized nursing care to optimize the administration of medications.

Nursing Process consisting of problem-solving steps that must be involved in all steps taken by the nurse in caring for a patient.

Nursing process can be viewed as a cyclic procedure that has five basic steps:

1. **Assessment,**
2. **Analysis (including Nursing Diagnoses),**
3. **Planning,**
4. **Implementation,**
5. **Evaluation**.

Nursing process in the drug therapy

Each part of nursing process is applicable, with modification, to the administration of medications.

Assessment

Assessment involves collecting data (objective and subjective data) about the patient.

Data collection from the patient, significant others, medical records (Physical examination, Laboratory and diagnostic tests, Medical and drug-use histories)

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In addition, in the assessment step the nurse gathering data about the drug(s) that he or she is responsible for administering and monitoring.
These data are used to identify actual and potential health problems.
Assessment including:

1. **Initial or pre-administration assessment and**
2. **Ongoing assessment**

Analysis & Nursing Diagnosis –What is the problem???

In this step, the nurse analyzed database that collected previously to determine actual and potential health problems associated with drug therapy and formulates one or more nursing diagnosis that nurses are qualified and licensed to treat.

Objectives of nursing analysis in drug therapy:

1. Judgment of appropriateness of the prescribed regimen.
2. Identifying potential health problems that the drug might cause.
3. Determining the patient's capacity for self-care.

- A complete nursing diagnosis consists of two statements:
  1. a statement of the patient actual and potential health problems followed by
  2. a statement of the problem's probable cause or risk factors.

The two statements separated by the phrase **related to** –

Example of a drug-associated nursing diagnosis: Noncompliance with the prescribed regimen [problem] related to inability to self-administered medication [the cause].

- North American Nursing Diagnosis Association **(NANDA)** has approved a list of diagnostic categories to be used in formulating the nursing diagnosis.

The most frequently used **Nursing Diagnosis** related to the administration of drugs developed by NANDA, include:

1. Effective Therapeutic Regimen Management
2. Ineffective Therapeutic Regimen Management
3. Deficient Knowledge
4. Noncompliance
5. Anxiety
6. Patient is at risk for injury related to adverse effects of medications.

Planning: (how to manage the problem)

Once data have been analyzed and nursing diagnosis are formulated, the planning phase begins – the nurse develops a written plane directed to solving or preventing the problem identified in analysis.
The plan must be individualized for each patient.

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Good planning will allow you to promote beneficial drug effects. E.g., good planning will allow you to anticipate adverse effects – rather than react to them after the fact.

Planning consists of four major components:

1. Defining goals
2. Setting priorities
3. Identifying interventions
4. Establishing criteria for evaluation

Implementation (Interventions)

Implementation: actions undertaken to meet a patient's needs, such as administration of drugs, comfort measures, or patient teaching by carrying out the planned activities.
Implementation of the care plan in drug therapy has four major components:

1. Drug administration.
2. Patient education.
3. Intervention to promote therapeutic effects.
4. Intervention to minimize adverse effects.

Evaluation:

This step is performed to determine the degree to which treatment has succeeded and accomplished by analyzing the data collected following implementation.
Some outcomes can be evaluated within a few minutes of drug administration (e.g., relief of acute pain after administration of an analgesic), but most require longer periods.
Evaluation should identify those interventions that should be continued, those that should be discontinued, and potential new interventions that might be implemented.
Evaluation completes the initial cycle of the nursing process and provides the basis for beginning the anew cycle.

Self-assessment

- What are Responsibilities of the Nurses Regarding Medication?
- What are the three checks of drug administration?
- Can we apply nursing process in the drug therapy? Explain
- What is nursing analysis or diagnosis? Is it differing from medical diagnosis?
- What are the main objectives of nursing analysis?
- Explain what is involved in planning step of the nursing process as it relates to drug therapy.
- Explain what is involved in Evaluation step of the nursing process as it relates to drug therapy

References

1. Anne Collins Abrams, Clinical Drug Therapy: Rationales for Nursing Practice, 9th ed., New York, Lippincott, 2009.
2. Richard A. Lehne, Pharmacology for Nursing Care, 8th ed., London, Saunders, 2009.

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