

**OAKLAND UNIVERSITY
SCHOOL OF NURSING**

**Medication Administration
Module B**

*Basic BSN: 1st Semester Junior
Accelerated 2nd Degree: 2nd Semester*

**Faculty of Record:
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MEDICATION ADMINISTRATION EXAMINATION – MODULE B

The MAE is administered to all Basic-BSN and Accelerated Second Degree nursing students at each level of the nursing curriculum. Please refer to the SON Undergraduate Student Handbook for information related to the MAE policy and requirements.

Introduction

The RN must be able to calculate dosages correctly for safe medication administration. These calculations must be performed quickly and accurately. The RN must verify dosages that were calculated by pharmacy staff and know how to correctly administer medications once needed calculations have been completed. All nursing students are expected to utilize mathematical and critical thinking skills to ensure that medications are administered appropriately and safely.

The Medication Administration Examination (MAE) - Module B is to help students prepare for the MAE Level II (Basic-BSN Junior-Semester 1 and ASD-Semester 2). In addition, it lays the groundwork for the more advanced calculations in Module C. **Students should review Module A to ensure that they are proficient with those conversions and calculations before starting the new content in Module B.** Module A is posted on the SON website.

As with module A, students are expected to utilize the required textbook in order to prepare for the MAE. In Module B students will calculate adult and pediatric dosages based on patient body weight.

Objectives

At the completion of this module, the student will be able to:

1. Convert dosages within and between measurement systems using metric, household, and apothecary systems.
2. Correctly interpret medical abbreviations and medication orders.
3. Demonstrate correct calculation of oral and parenteral medication dosages.
4. Correctly calculate intravenous flow rates, intravenous piggyback infusion rates, and duration of infusion.
5. Correctly calculate pediatric and adult dosages based on body weight.

Required Textbook

Pikar, G. D., & Abernethy, A. P. (2013). *Dosage calculations*. (9th ed.). Clifton Park, NY: Delmar, Cengage Learning. (ISBN 13: 978-1-4390-5847-3)

MODULE B

Chapter 13: Pediatric and Adult Dosages Based on Body Weight

Make sure that you read and review this chapter carefully. Complete all of the review and practice questions. When you are done, you must be able to:

- Convert patient weight from pounds (lbs) to kilograms (kg)
- Calculate single and daily adult and pediatric dosages based on the patient's body weight, including combination medications (i.e. hydrocodone with acetaminophen)
- Calculate recommended parameters (minimum and maximum recommended doses) for medications based on the patient's body weight
- Determine whether or not the ordered dose is within recommended parameters and should be administered as ordered- or if the prescriber should be contacted to clarify the order

IMPORTANT NOTE to students who will be taking NRS 337/385:

Chapter 16: calculation of pediatric BSA

Students will not have to calculate the BSA for the MAE. However- students are expected to be able to do so for pediatric patients in clinical. Use the square root formula using the metric or household measurements of height and weight shown on page 490.

Complete questions 1-12 in review set 42 on page 493.

Also look through the calculation of daily volume for maintenance fluids on pages 503-504. This will not be included on the MAE but students will perform these calculations during pediatrics clinical.

Complete questions 3-6 in review set 45 on page 505.

