

RIVERSIDE CITY COLLEGE  
SCHOOL OF NURSING

ROUNDING POLICY FOR DOSAGE & MEDICATION CALCULATIONS

OBJECTIVES:

1. To achieve maximum accuracy in administration of oral and parenteral medications and fluids.
2. To calculate an accurate measurable dose for administration.

GUIDING PRINCIPLE:

When calculating dosages, accuracy is maximized by rounding only once, at the end of the dosage calculation.

MEASURABLE DOSE FOR ADMINISTRATION:

1. Liquid oral medications and parenteral medications:
  - a. If the volume is greater than 1 ml (milliliter), use a syringe calibrated in tenths of milliliters. Round to the tenths place.
    - 1) Round down if the digit in the hundredths place is less than five.  
Example:  $1.837 = 1.8$
    - 2) Round up if the digit in the hundredths place is five or higher.  
Example:  $1.674 = 1.7$
  - b. If the volume is less than 1 ml (milliliter), use a syringe calibrated in hundredths (tuberculin syringe). Round to the hundredths place.
    - 1) Round down if the digit in the thousandths place is less than five.  
Example:  $0.674 = 0.67$
    - 2) Round up if the digit in the thousandths place is five or higher.  
Example:  $0.837 = 0.84$
2. Calculating IV flow rates: All IV flow rates are rounded to the whole number.
  - a. Drops per minute: Round to the whole number according to above guidelines.
    - 1) If the number in the tenth place is less than five, drop the digits after the decimal.  
Example:  $31.25 = 31$  drops per minute
    - 2) If the number in the tenth place is five or higher, round up the whole number by one.  
Example:  $31.8 = 32$  drops per minute

- b. Milliliters per hour: Round to the whole number according to the above guidelines. If a pump is used that can be adjusted to tenths of a milliliter per hour (ml/hr) round according to agency/unit guidelines.

CALCULATING DOSAGE INSTEAD OF VOLUME: For example, milligrams, grams, mg/Kg/24 hrs, mg/min, mcg/drop, etc.

1. Round dosages to the closest hundredth.  
Example:  $26.666666 \text{ mcg/drop} = 26.67 \text{ mcg/drop}$