

## Perioperative Medication Test Study Guide

The Surgical Services Management Staff at Rockdale Medical Center would like to take this opportunity to congratulate you for being selected interview with our organization. As part of your interview process, you will be required to take a Perioperative Medication Test. This study guide is intended to help guide you as you prepare for this test. This study guide gives you a basic overview of what the test will contain, however, it is not all inclusive and it is expected that you will do some preparation on your own. There are plenty of excellent websites available on line if you search for "nursing math for medications" that will provide you with several examples and practice problems. Good luck!

### Calculating Flow Rates:

You must know how to calculate a flow rate for an IV medication given the total volume of fluid to administer and the specified time frame. In other words, you need to be able to demonstrate on the test that you know what rate at which to set the pump.

Example:

The patient has an order for 1000 cc of fluid to run over 6 hours – At what rate do you set the pump?

$$\begin{array}{r} \text{Total volume to be delivered} \\ \hline \text{Prescribed hours} \end{array} = \frac{1000 \text{ cc}}{6 \text{ hrs}} = 167 \text{ cc/hrs}$$

### Dosage Calculation – Formula Method:

D = desired      The dosage ordered, in mg, g, etc  
H = have        The dosage strength available in mg, g, etc  
Q = quantity    The volume the dosage strength available is contained in, ml, etc.  
X = unknown    What you're trying to figure out

$$\frac{D}{H} \times Q = X$$

Example:

A dosage of 80 mg is ordered. You have 100 mg in 2 ml available. How many ml's do you administer?

$$\frac{80 \text{ mg}}{100 \text{ mg}} \times 2 \text{ ml} = 1.6 \text{ ml}$$

### Ratio and Proportion:

Example:

You receive a patient who has 40 ml of Heparin infusing per hour. The concentration of Heparin listed on the bag is 50,000 units per 500 cc of solution. How many units is the patient receiving per hour?

$$\frac{50,000 \text{ units}}{500 \text{ cc}} = \frac{X}{40 \text{ cc}}$$

$$50,000 (40) = 500X$$

$$X = \frac{50,000 (40)}{500}$$

$$X = 4,000 \text{ units}$$

**Conversions:**

Please study how to convert mcg to mg, kg to g, L to ml, kg to pounds and vice versa. Some common conversions are listed below.

1 kg = 1000 mg

1 mg = 1000 mcg

1 L = 1000 cc

1kg – 2.2 lbs

**Medication Safety:**

1. Be able to list at least 3 things that the circulator must confirm with the scrub person when presenting medications to the sterile field.
2. Know the five rights of medication administration, in addition to VORV.
3. Doses, mixtures, types of administration, uses of the following medications:

Ancef	Versed
Gentamycin	Zantac
Marcaine	Robinul
Adrenaline	Inapsine
Thrombin	Cocaine 4%
Epinephrine	

4. Review care of the patient with Malignant Hyperthermia, including drug therapy
5. Review commonly used medications in Moderate Sedation
6. Review surgical prophylactic antibiotic treatment recommendations