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### Scavenger hunt: A creative teaching strategy to introduce pharmacological concepts and ethical concerns

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#### **KEYWORDS:**

Pharmacology; Teaching strategy; Ethics **Abstract** The sheer volume and number of errors in medication administration obliges nursing educators to facilitate a higher level of student understanding in foundational pharmacological concepts. The focus of this manuscript was the use of a faculty created teaching strategy to introduce foundational pharmacological concepts and ethical concerns in an undergraduate nursing pharmacology course. The use of the Scavenger Hunt facilitated active learning and student engagement as students were responsible for and active in their own learning.

The intent of the Scavenger Hunt was to introduce students to complex pharmacological concepts and ethical principles by using routine items from the students' daily lives such as common over-the-counter medications. The Scavenger Hunt used five tasks the student completed in order to "find information". The information obtained by the students was the basis of discussion on the second class day. Students were asked to (a) compare the cost of generic, trade and brand name medicine; (b) compare an adult medication to the same child/infant medication including dose and form; (c) compare and contrast the various forms drugs come in; (d) locate three different medications which contain diphenhydramine; (e) list 5-7 fillers that were found with the ingredients listed on the label. Using this information students were introduced to complex pharmacological concepts and ethical principles.

Overwhelmingly, students wrote positive comments on the evaluation administered at the end of class. On the annual course evaluations, many students made positive comments about the value they saw in participating in the Scavenger Hunt and encouraged the nursing faculty in the course to continue to use this strategy in future pharmacology courses.

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### 1. Introduction

All nursing programs have some type of pharmacology content, whether integrated throughout the program of nursing or as a stand-alone course. Educators typically teach the content within the first or second semester of the

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nursing curriculum. Pharmacological concepts are sometimes difficult for beginning nursing students to grasp. The sheer volume and number of errors in medication administration (IOM, 2006) obliges nursing educators to facilitate a higher level of student understanding in foundational pharmacological concepts. Further, 40% of nursing practice in health care facilities is dedicated to medication management (Armitage & Knapman, 2003). The purpose of this article is to share an innovative teaching strategy to facilitate student learning and comprehension of pharmacological concepts in an undergraduate pharmacology course.

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In addition to introducing pharmacological concepts to students, ethical principles of beneficence, nonmaleficence, and social justice were included during class discussion. The ethical dimensions of medication administration are not often addressed in nursing pharmacology texts. A search of the student's current text revealed no listing in the index or definition in the glossary of ethics, beneficence, nonmaleficence, or social justice. It is as important for a nurse to act ethically in medication administration, as well as competently.

A review of the literature revealed a few innovative teaching strategies for educators to implement regarding pharmacological content and medication administration. Some of the strategies were (a) the village—a strategy where students used hypothetical families and case studies to determine pathophysiology of diseases and the medications needed to treat the patients (Croteau, Howe, Timmons, Nilson, & Parker, 2011); (b) the medication mansion—a graphic organizer technique using sticky notes that students placed in areas around the house that reminded them of a particular medication (Montenery, 2013); and (c) a psychopharmacology conceptual handout (Bonnivier & Magoteaux, 2012). Educators designed these strategies to promote and facilitate students' understanding and comprehension of nursing pharmacology.

# 2. Development of a pharmacological scavenger hunt

Nursing educators are charged with incorporating innovative teaching strategies that engage students in meaningful learning and enhance critical thinking and clinical reasoning skills (Benner, Sutphen, Lenorad & Day, 2010; Billings & Halstead, 2012). Active learning is a student-centered approach to teaching. Schell (2006) reported that discovery learning and active learning rank in the top 10 of essential components of innovative teaching.

After considerable reflection on integrating and engaging students in active learning, the author developed the scavenger hunt as a creative strategy for first-semester baccalaureate students enrolled in a pharmacology course (Table 1). Although the scavenger hunt was initially created for a baccalaureate program, colleagues that teach

 Table 1
 Pharmacology scavenger hunt

- 1. Compare the cost of generic, brand, and trade name medications. (List each medication, quantity, and cost)
- Choose a medication; compare the adult version of the medication to the child version. (Include the name of the medication, dose of the drug, and form it is in)
- 3. Choose a medication and list the various forms the medication comes in.
- 4. Find three different classifications of medications with diphenhydramine in the medication; list them below (Hint: look in the cough/cold section, sleep section, and allergy section)
- 5. Choose a medication and list the name of the medication, the active ingredients, and at least five to seven fillers

pharmacology content in associate degree nursing programs indicated that it would be appropriate and useful in their courses. The intent of the scavenger hunt strategy was to introduce novice nursing students to complex pharmacological concepts and ethical principles by using common over-the-counter (OTC) medications. In a typical scavenger hunt, participants must retrieve items from a list. Nursing students were required to retrieve and record information related to foundational pharmacological concepts, such as nomenclature, pharmacoeconomics, pharmacokinetics (drug form and route), pharmacodynamics (dosing, measurement, and drug purpose), and ethical considerations, using OTC medications.

### 3. Active learning: Implementation of the scavenger hunt

On the first day of class, students were provided with the scavenger hunt list and asked to complete the form and bring it to the next class period. Students could use any retail store that sold OTC medications. The scavenger hunt consisted of five different tasks for students to complete in order to gather information that would aid in their understanding of nursing pharmacology. The tasks were related to pharmacological concepts: (a) nomenclature, (b) pharmacoeconomics, (c) pharmacokinetics (d), pharmacodynamics, and (e) ethical considerations. The findings of the students served as the basis for discussion during the second class. A presentation of the discussion of the activity and the student findings during the second day follows this section.

#### 3.1. Nomenclature

Students were asked to compare the cost of generic and trade name medications and list examples of each on the scavenger hunt. Students brought in examples such as Tylenol and acetaminophen; Motrin and ibuprofen; and Zyrtec, Wal-Zyr, and cetirizine. Students' examples allowed for a classroom discussion of trade names, generic name, chemical name, and proprietary rights. Students were instructed that some trade names are similar and could cause identity confusion, such as Zantac, Zyrtec, and Zyprexa. Discussion included strategies to prevent errors in look-alike drugs, such as the use of both generic and brand names on all electronic devices and medication administration records in all patient care settings (Cohen, 2007).

When students were asked how they located the different medications, they typically responded, "They were in the cold and allergy section" or "They were in the pain relief section," and the like. These statements led to a new discussion on drug classifications. Students learned to recognize that drug classifications were according to their purpose or according to the related body system action. For example, some drugs are classified as cold medications because they act on various systems in the body to decrease cold Download English Version:

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