



Health Assessment Simulation Without the Simulation Lab

Brenda A. Helmer, DNP, APRN-CNS, PHCNS-BC

American Sentinel University

Beth G. Hall, RN, PhD

University of Oklahoma Health Sciences Center, Ziegler College of Nursing



FRAN AND EARL ZIEGLER

COLLEGE OF NURSING

The UNIVERSITY of OKLAHOMA HEALTH SCIENCES CENTER

Background of the Problem

- Health assessment is a foundational skill for nursing professionals
- Focus is on techniques of inspection, auscultation, palpation, and percussion
- Little time is spent on health history data collection
- The connections between the health history and physical assessment may not be clarified for students
- Students reported discomfort with performing assessments in the clinical areas because many staff nurses are not performing assessments
- Current simulation activities did not place an emphasis on assessment of patients as a first step in the nursing care process

Review of Relevant Literature

- Assessment is a required competency to provide quality patient care (Cornelius, 2012; Zambas, 2010)
- Collection of subjective data is rarely mentioned in research describing physical assessment (Aizu et al., 2015; Giddens, 2007; Kohtz et al., 2017).
- Current nursing professionals report only a few of the assessment techniques learned in nursing school are being used in practice (Kohtz et al., 2017).
- A good health history interview leads to a more complete patient picture with less chance of missing important cues (McKenna et al., 2011).
- Research shows between 70-90% of medical diagnoses are ascertained during the health history interview (Muhler, 2014).
- A preparation-to-practice gap exists with new nursing graduates, with an inability noted to prioritize nursing care based upon patient acuity and needs (Kavanaugh & Szweida, 2017).
- Students report simulation activities make them anxious, and anxiety is shown in the literature to decrease learning potential (Shearer, 2016).
- Connections between prior knowledge and learning and nursing education are required to recognize patient cues before deterioration develops—a disconnect here may result in graduating nurses who cannot handle required acute care situations (Stern et al., 2019).

Student Learning Outcomes

After the health assessment simulation activity, nursing students will:

- Describe the methods to obtain patient subjective data
- Describe the methods to obtain patient objective data
- Understand the connection between subjective and objective data
- Describe the connection between subjective and objective data collection and analysis of the data to plan patient care
- Begin to prioritize patient care activities
- Develop a beginning therapeutic relationship with patients and family members
- Develop a collaborative relationship with other health care professionals
- Verbalize their own strengths and weaknesses with health assessment activities to improve patient care

Priorities for activity:

- Low stress
- Easy to administer
- Clear student learning objectives
- Applies to nursing practice
- Both subjective and objective data included
- Encourage student curiosity about patients

Methods & Materials

Simulation strategies:

- “On the fly” – semi-structured
- Preparation with readings and videos
- Simulation content is related to weekly course content
- Short pre-brief session
- Case study approach with peer actors
- Debriefing immediately following simulations and at the end of lab session with all students

Simulation content & administration:

- Students divided into 4 groups of 8-9 students
- One faculty works with each group
- Three case studies per simulation lab day
- Each group of 8-9 is further divided into smaller groups, and each smaller group chooses one of the case studies
- Students are given a short pre-brief instruction and 20 minutes to prepare
- Each simulation is then performed with debriefing

Lab 1: Respiratory Abdomen	<p>#1: You are working with the school nurse in the elementary school clinic. One of the kindergarten students comes in to the office with an audible wheeze & says “my lungs hurt”. The school nurse has no knowledge of this child’s health diagnoses or issues. How will you & the nurse handle this situation?</p> <p>#2: You are working as a student nurse on the surgical floor & are helping care for a patient who had a hip replacement three days ago & is preparing to be discharged to a skilled nursing facility for rehabilitation. In the course of obtaining health history information from the patient, you note that the patient indicates generalized lower abdominal pain. How will you handle this situation?</p> <p>#3: You are helping your nurse admit a patient to the general medical floor for an exacerbation of COPD (Chronic Obstructive Pulmonary Disease). As you begin your assessment, the patient asks you where the smoking area is & when he will be able to go there. You know that there is a “No Smoking” policy at the facility—how will you address this patient & complete your assessment? Include SBIRT in this scenario.</p>	<ol style="list-style-type: none"> 1. What health history questions are most important now? 2. What physical assessment data will you need & how will you obtain it? 3. What is the priority with this patient?
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Lab 2: Cardiovascular Peripheral Vascular Disease	<p>#1: A 72 year-old patient is admitted to your unit with CHF (Congestive Heart Failure). Vital signs are BP—135/85, P—60, R—20, T—98.7. You are preparing to perform a full health assessment. The patient’s family is in the room and they have some questions about this patient’s care. In addition, you note that the family members have brought some cigarettes in to the patient—they are sitting on the bedside table. How will you assess this patient & plan care? Please include SBIRT in your scenario planning.</p> <p>#2: You are caring for a 32 year-old Mexican American patient who has been diagnosed with PAD (Peripheral Arterial Disease) & is preparing for discharge after a weeklong hospitalization. Your patient speaks very little English & has one family member visiting who speaks fluent English. You need to perform a physical assessment prior to discharge & plan for educational needs for your patient. How will you assess this patient & plan care?</p> <p>#3: As a student nurse, you are assisting an RN in the Emergency Room. A 50 year-old Native American patient has just been admitted to the ER with chest pain. Your nurse has asked you to assist with a basic assessment on this patient. How will you assess this patient & assist with care?</p>	<ol style="list-style-type: none"> 1. What health history questions will you ask this patient & family members, if available? 2. What physical assessment data will you need & what techniques will you use to obtain it? 3. How will you include any family members in your assessment? 4. What communication techniques will you need to use with your patient?
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Lab 3: Neurological Mental Status Musculoskeletal	<p>#1: You’re working as a student nurse in the ER. EMS brings in a 66 year-old patient who was found face down on the floor in a small condo near Lake Texoma. A family friend happened to come to visit & found the patient there & called 911. The friend is able to give basic information about medical history, name, & address, & indicates the patient has been having some problems lately with dizziness, headaches, & an occasional fall. As you begin the assessment, you note the patient is slowly becoming more alert & is beginning to answer your questions appropriately. You also note a faint smell of alcohol. How do you proceed with this patient assessment & assist the RN in caring for this patient? Think about utilization of SBIRT with this patient.</p> <p>#2: You’re assisting the RN with care of a 58 year-old patient who was admitted through the ER this morning with severe lower back pain. You’ve been assigned the task of completing a full admission assessment. Initial vital signs are: BP—150/95, P—100, T—98.2, R—18. How will you proceed with this assessment?</p> <p>#3: As a student nurse, you’re caring for a 92 year-old patient who was admitted 2 days ago for a fall at home. The chart indicates the patient doesn’t have any broken bones or any notable head injuries, but there are a number of bruises on both arms & legs, & you note a large bruised & swollen area under the patient’s right eye. The last nurse documented the patient was awake, alert, & oriented x4. When you enter the patient’s room, you introduce yourself to the patient, perform hand hygiene, & ask the patient’s name as you check the name band. The patient pulls back the hand & mumbles something you can’t understand. How do you proceed with this assessment?</p>	<ol style="list-style-type: none"> 1. What health history questions are a priority for this patient? 2. What physical assessment data do you need now & what techniques will you use? 3. What information will you need from family members, if available? 4. What are the general overall health assessment priorities with this patient?
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Results

- Students were positive about the use of mini sims in course evaluations.
- Students reported the process helped them “connect” the didactic assessment information in the lab setting compared to the clinical setting.
- Students sometimes remained unsure of next steps during mini sims even though pre-briefing activities and faculty support was available.
- Student confidence appeared to increase with each lab session.
- Students in morning lab sessions were more anxious than those in the afternoon labs.
- Students may have told students in future lab sessions about the mini sim experience, thus decreasing overall anxiety.

Implications for the Future

- Reflective journaling post mini-sim may assist students to link concepts together after the experience.
- Faculty could conduct a mini sim prior to student’s mini sim experience to provide a better understanding of the process for students.
- Ensure a selection of different mini sims are used for each individual lab session.
- Different mini-sims can be presented through the semester.
- Students and faculty often served as the simulated patient. The use of standardized patients should be a goal.

Application to Teaching Practice

- Mini sims provide low cost experiential learning for junior nursing students enrolled in a health assessment course.
- Students practice critical thinking and psychomotor assessment skills in a safe place.
- Faculty give immediate feedback post mini-sim.
- Potential decrease of student anxiety in clinical area.
- Case studies can be inserted into the lab setting without additional faculty or resources. .
- Pre and post debriefing in small groups allows students freedom to safely examine their thinking without fear of evaluation, thus decreasing anxiety and promoting connections between concepts.
- Few additional resources are needed to develop and implement mini sims in a health assessment course.
- Assessment skills are increased for clinical practice.
- Small numbers of faculty and resources needed.

Summary

- Mini sims are low cost simulations which provide nursing students opportunities to learn the link between health history and physical assessment information to identify prioritized care.

Contact Information

Brenda Helmer, DNP, APRN-CNS, PHCNS-BC
Brenda.Helmer@AmericanSentinel.edu

Beth Hall, RN, PhD
Beth.Hall@ouhsc.edu

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