Title:
Auscultation Skills: Gown Versus Skin?

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Session Title:
Research Poster Session 3
Slot (superslotted):
RSC PST 3: Sunday, 30 July 2017: 9:45 AM-10:15 AM
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References:


Abstract Summary:
Nurse practitioner students are typically taught to place a stethoscope against the skin for auscultation of heart/lung sounds. Yet, providers in many settings perform auscultation through the patient clothing. The study sought to provide evidence for or against the practice of auscultating heart/lung sounds against the skin.

Learning Activity:
Abstract Text:

**Purpose:** Current nursing education programs throughout the world, typically include physical assessment courses with specific procedures for heart and lung auscultation. Students practice in a variety of ways through, manikins, sounders, recorders, and live patients. With traditional teaching, students are taught to place a stethoscope directly against the skin for auscultation. However, practitioners have been observed in many settings performing auscultation through the patient gown or clothing. A concern of this practice is the potential for missing soft added sounds in heart auscultation and mistaking rubbing of gown on the stethoscope as pulmonary crackles. Despite this prevalent observation in clinical settings, few studies have been conducted to determine if this is acceptable practice. The purpose of this research is to provide evidence for or against the generally-accepted practice of teaching graduate nursing students to auscultate heart sounds and lung sounds by placing the stethoscope directly against the skin.

**Methods:** The study was a non-experimental repeated measures design to determine if there was a difference in correct identification of heart and breath sounds using a stethoscope placed directly against the skin versus through a gown. Research Questions: 1) Is there a difference between heart sound and lung sound interpretation when auscultated with a stethoscope against the skin and auscultated through a gown?, 2) Does auscultation directly against the skin improve accuracy of heart sound and lung sound auscultation when compared to auscultation through a gown? The sample consisted of 30 graduate students in their final semester of a nurse practitioner program who had successfully completed the advanced health assessment course. Participants were asked to perform basic auscultation maneuvers typically used in clinical practice. The sounds were produced using a simulation manikin specifically designed for auscultation of heart and lung sounds (Harvey® The Cardiopulmonary Patient Simulator). Four breath sounds and four cardiac sounds were programmed. A high quality stethoscope (provided with manikin) was used during auscultation. Participants were individually scheduled to perform auscultations. After orientation to the simulator sounds, participants auscultated four heart sounds with the stethoscope placed directly on the skin. Following each sound, the participant identified the sound on a written form. Then, four heart sounds were repeated in a different order and participants auscultated through a gown. This procedure was repeated with breath sounds.

**Results:** There was no significant effect of auscultation on skin or gown. There was a significant difference in participant ability to identify correct breath sounds over cardiac sounds.

**Conclusion:** In practice, many practitioners auscultate through hospital gowns, possibly related to dignity and privacy issues in patient care. Further research is needed to determine the impact of the practice to determine if sounds are being overlooked or misidentified. Further efforts in nursing education of nurse practitioner students should focus on repeated practice of cardiac sounds, normal and abnormal, to further hone their capabilities and expertise in diagnostics. The importance of auscultatory skills should not be underestimated in favor of higher technology readily available. While such diagnostics tools are necessary, they cannot replace skillful assessment techniques that may provide early detection of slight changes in a patient’s condition.