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Does Cervical Palpation Prior to Speculum Insertion Ease Cervical Visualization Among Advanced Practice Nursing Students?



Introduction

- Texas Woman's University-largest provider of nursing education in Texas
 - 41% graduate students
 - 33% graduate nursing students



Holden-Huchton, P.(2010).





TWU Mission Statement

- TWU Mission Statement
 - Encourage application of innovative educational technologies that enhance evidenced based competencies for nurses.
 - Excellence in scholarship through focused research activities and application of new knowledge is also promoted
 - Further goals include increasing the number of classes and resources for development of APN's.



Alternatives Needed for APN's

- Advanced Assessment provides Nurse Practitioner Students with new skills to provide gynecologic care.
- Performing the first pelvic examination-causes student anxiety.
- Current teaching strategies/techniques: lecture, instructional video, simulated exams on mannequins, standardized patients, examining with preceptor guidance.

(Theroux, R. (2006); (Hendrickx, et al., 2006)



The Pelvic Examination

- Standard Process-external and speculum exam followed by bimanual exam.
- The procedure of a pelvic exam and its sequence was developed as Pap smears became more widely implemented in the 1950's.
- Palpation prior to visualization was not customary because the lubricant used was thought to alter the results of the Pap smears and lab specimens.



Continued

- Prior to speculum insertion, the provider chooses a speculum based on patient attributes such as age, parity, or body habitus.
- A speculum is then inserted without knowing vaginal length, cervical location or orientation within the vaginal vault.
- If the cervix is not identified the clinician searches for the cervix by manipulating the speculum until the cervix can be seen which leads to increased patient discomfort with examination.

Carcio, H., & Secor, M. (2010);



Alternatives

- If unable to find the cervix, providers feel frustration, anxiety, as well as a decrease in confidence.
- If visualization of cervix is difficult, providers are advised to remove speculum, palpate cervix and then try to place the speculum a second time.
- Because performing the bimanual examination affords the clinician a visual as well as tactile image of cervical location as well as size and orientation within the vagina, perhaps palpation prior to speculum insertion will improve student ability to visualize the cervix upon speculum examination.

Carcio, H., & Secor, M. (2010); Moriarty Dailey, A. (2002).



Advantage of Placing Bimanual First

- Facilitates insertion of speculum
- Clues the examiner to palpated abnormalities that may require further inspection
- Patients perceive it as less invasive
- Helps the inexperienced clinician determine the position of the cervix in order to make insertion of the speculum and location of the cervix easier.



Context

- Learning techniques-Standardized Patients (models).
- Evidenced Based-Comfort/Ease
- Current Research
 - 1997 study shows no change in adeq/interpret of cytology.
 - 2003 shows no evidence of contamination or inadequacy by lubricant.
 - Study of 615-no significant difference when lubricant used on speculum prior to insertion

Griffith, W., (2005);(Theroux, R. (2006). Casselman, C (2007);Tavernier, L. (2003).



Current Research

- 1997 study shows no change in adeq/interpret of cytology.
- 2003 shows no evidence of contamination or inadequacy by lubricant.
 - Study of 615-no significant difference when lubricant used on speculum prior to insertion
- 2007 Unpublished Manuscript from TWU faculty shows significant correlation between bimanual examination and ease of cervical visualization for advanced practice nursing students.



Purpose

- The proposed project will determine whether or not performing the bimanual exam prior to the speculum exam makes a difference in ease of cervical visualization by speculum examination in advanced practice nursing students.
- Measured by the Ease of Cervix Visualization Questionnaire which will be completed by participants on 5 human models during an advanced assessment skills lab.
- Each student will perform an exam on the same 5 human models.

Carter, S (2007).



Objective

- Evaluate differences in ease of cervical visualization among advanced practice nursing students using two different techniques, standard practice and palpation prior to speculum insertion.
- Evaluate other factors which may impact ease of cervical visualization for advanced practice nursing students.
 - Age, weight, BMI, education, race, parity, number/type of birth, type of APN student, number of speculum used, and number of times to reposition speculum.
 - Student characteristics: type of APN student, previous experience, time as RN, L&D experience.



Research Question

Does cervical palpation prior to speculum insertion ease cervical visualization among advanced practice nursing students when compared to traditional pelvic examination techniques.

PICO Question

In advanced practice nursing students, does cervical palpation ease visualization of the cervix compared to traditional pelvic examination techniques?




Methodology

Study Participants are students in advanced assessment in the advanced assessment courses in either family health, adult health, or women's health nurse practitioner programs. N=44

Randomly assigned to a group (Either Technique #1 or Technique #2), participation will be optional. Convenience Sample, Data will be collected for exams performed in the skills lab using the same 4-6 models for each examiner either using technique #1 or Technique #2. IRB approval through TWU will be obtained.

Exclusion Criteria: Declines participation in study.



Description of Techniques

- Technique #1 The bimanual examination is performed before the speculum examination. Using a small amount of water-based lubricant (<math>< 1/2 \text{ cc}</math>) a vaginal examination, cervical palpation, and bimanual examination will be done. After completion of the vaginal exam then the student will complete the speculum exam and report the findings.
- Technique #2 The external exam, speculum exam and bimanual exam as traditionally performed. Ease of cervical visualization questionnaire will then be completed to report findings.



Implementation of Study

- All students will receive instruction for advanced assessment skills for pelvic examination, teaching about both methods, as well as written materials regarding both methods.
- After consent is obtained each student will be given an opportunity to view study materials and ask questions. Contact information will also be given if questions arise for examiners.
- Each participant will complete questionnaire with their next 5 pelvic examinations using either Technique #1 or Technique #2.



Statistical Evaluation

- Coding of Questionnaire into Lime Survey
- Results of Ease of Visualization Questionnaire will be placed into Lime Survey
- Clean Data
- Consultation regarding statistical results.
- Statistical analysis completion



Project Timeline

- August 2010-September 2010 IRB approval from TWU
- October 2010- November 2010 Education/Collection of Data from participants
- December 2010-January 2011 Statistical Analysis
- January 2011-April 2011 Complete Capstone
 - Presentation of Findings
 - Prepare findings for article submission.



TWU Involvement

- This project will be held at TWU School of Nursing in Dallas in a skills lab with models that are used to teach pelvic examination to students learning the technique (4-6 models per class).
- Project will be supervised by TWU faculty who are teaching Advanced Assessment.
- Live models to assist with teaching students to perform pelvic examination are already utilized as part of the curriculum so additional changes will not be needed.



Benefits and Anticipated Outcomes

- Facilitate creative teaching techniques to promote student ability to perform pelvic examination.
- By enhancing examination skills, students will have more confidence in ability to locate cervix in clinical setting.
 - Benefits will include greater patient comfort.
 - Promote adequacy in cytology specimens.
- Contribute to body of knowledge on this topic

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