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# Simulated Basic Skills Training: Graduate Nursing Students Teaching Medical Students: A Work in Progress

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## CONCLUSION

IV therapy insertion is just one technical skill required by clinicians rendering care to the sick patient. Such procedures are often high risk and thus lend themselves beautifully to the simulated learning environment for establishment of competency prior to practice in the clinical settings. The successful establishment of this IV cannulation course has served as a prototype for offering instruction in simulated environments for a wide range of technical procedures that APN students are perfectly poised to offer to medical students. It also serves as an interdisciplinary initiative to improve communication and collaboration between the disciplines.

The APN student-led IV training module was transitioned into the School of Medicine's 3<sup>rd</sup> year Surgery Clerkship starting in Fall 2007. A new group of APN students has trained the first Surgery Clerkship rotation using last year's curriculum. The APN students are now in the process of updating the IV training module curriculum and incorporating new recommendations for best practices.

## FUTURE CONSIDERATIONS

The APN students are considering developing a short video of an actual IV insertion as they have not been satisfied with currently available commercial videos. Medical students have requested additional instruction for phlebotomy and urinary indwelling catheter insertion. Clearly this interdisciplinary initiative has only just begun.

Implementation of this program represents an example of cooperation between two different schools on our campus resulting in important interdisciplinary teaching experience for students in the Graduate School of Nursing while offering an essential technical skill for medical students.



## RESULTS

Sixty-five medical students completed the pre-test and 63 completed the post-test. The pre/post-test consisted of 9 multiple-choice "knowledge" questions and 1 "confidence" question (see graphic 1). The mean knowledge-based pre-test score was 74%; the mean post-test score increased to 94%. On a four-point scale ranging from "no confidence at all" to "very confident," 20% of participating medical students rated themselves "somewhat" or "very confident" at selecting a vein and starting an IV prior to the training module. Upon completion of the IV training, 87% of the medical students rated themselves as "somewhat" or "very confident," an increase of 67%. The APN students found the experience of teaching the medical students extremely rewarding and enjoyable.

Graphic 1 IV Therapy Training Module Pre-Test

- 1) Which of the following sites are appropriate for IV insertion?  
a) Radial vein  
b) Metatarsal vein  
c) Cephalic vein  
d) All of the above
- 2) When initially placing an IV you should try to place it distally and in the non-dominant hand if possible.  
a) True  
b) False
- 3) Conditions that are often risk factors include all of the following except:  
a) Rheumatoid arthritis  
b) Myocardial infarction  
c) Diabetes  
d) Peripheral vascular disease
- 4) For the medical group that will successfully deliver the practical therapy at the bedside one:  
a) True  
b) False
- 5) Evidence-based practice recommends the use of alcohol swabs over chlorhexine for venous site prep.  
a) True  
b) False
- 6) If there needs to be removal from the site prior to IV insertion a score should be used:  
a) True  
b) False
- 7) When performing the IV catheter insertion (1) to increase the catheter should be:  
a) Inserted at a 30-45 degree angle  
b) Inserted at a 90-100 degree angle  
c) Inserted at a 15-30 degree angle  
d) Inserted at a 45-60 degree angle
- 8) Completion of IV insertion which would accurately connect of the catheter include all of the following except:  
a) Flushing  
b) Securing  
c) Labeling  
d) Documenting
- 9) Evidence-based practice recommends stabilizing and securing an IV site with an occlusive dressing.  
a) True  
b) False
- 10) Prior to use one will condition an infusing vein and start on IV:  
a) Normal control  
b) Normal control  
c) Normal control  
d) Yes condition

Developed by the University Graduate School of Nursing, Simulation Training Practice Program, Fall 2006



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## BACKGROUND

For a number of years, Advanced Practice Nursing (APN) students have taught interested 1<sup>st</sup> year medical students to perform intramuscular injections prior to their participation in community flu clinics. When several 4<sup>th</sup> year medical students needed documentation of competency in intravenous (IV) cannulation prior to participating in an elective rotation at another institution, the Medical School's Dean of Students called the Director of Interdisciplinary Partnerships in the Graduate School of Nursing to request assistance. In fact, all medical students need IV therapy training prior to graduation, not just those who seek out visiting clerkships at other medical schools. Integration of IV training into the Undergraduate Medical Education Surgery Clerkship Curriculum supports the clinical objectives of the Surgery Clerkship along with the developing use of simulation within in the medical school. This need led to the development of this interdisciplinary simulation education initiative.

## METHODS

The School of Medicine's Surgery Clerkship Director submitted a proposal for curriculum development funds to purchase four upper extremity intravenous task trainers and IV supplies for the UMMS Simulation Center. The APN students searched the literature for evidence for best practices to develop the curriculum. They then prepared a PowerPoint presentation, handouts, pre/post-tests, and developed a one-on-one guided hands-on practice session for the training module. In Fall 2006, 200 3<sup>rd</sup> and 4<sup>th</sup> year medical students were notified of this opportunity via email. One hundred thirty replied with interest and 99 participated in one of ten 2-hour classes.

