A Self-Directed Learning Approach to Medical Student Procedural Skills Training

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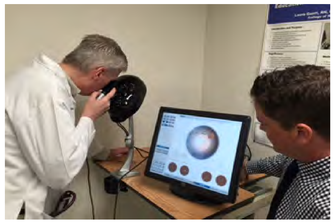
RATIONALE

- Faculty may not always be available or their presence needed in the initial stages of simulation-based procedural skills training.
- Self-Directed Learning (SDL) modalities using a YouTube type guided approach to training may be an alternative to the traditional faculty/student interaction.
- SDL refers to the collection of learning activities that are truly learner focused in that learners determine their own individual needs and participate on their own time and at their own pace.
- The goal of an independent SDL experience is to provide the medical student with early, introductory clinical procedural skills exposure in a safe, hands-on, self-directed, simulation-based educational environment.
- This experience is designed to reinforce knowledge, facilitate early learning of clinical procedural skills, and complement the formally scheduled curriculum.

METHODS

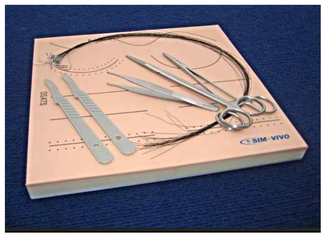
- The M1-4 medical student accesses a description of available SDL skills sessions on Blackboard.
- Each student determines if any of the available skills opportunities meet individual learning needs.
- Register through Blackboard using the online ECU College of Nursing Lab Management Software program to schedule a skills session.
- Instructional video-based and/or imbedded virtual reality simulator procedural skills modules are used to guide the trainee through the stepwise learning process of a procedural skill.
- Hands-on instruction of procedural skills is based on clinical scenarios to place the performance of procedural skills into a clinical context.
- Student completes the simulator orientation program, including an overview of simulator technology, and normal anatomy and physiology.
- Student works on modules in sequence from basic to more complex clinical cases and pathology.
- Simulator-based, or video-based, self-guided formative performance feedback occurs during the learning and practice session.
- Students will provide logistical information and rate their educational experience using a survey.

PROCEDURAL SKILLS


Otoscopy, Fundoscopy, Laparoscopy, Auscultation, Ultrasound, and Suturing Simulators





EVALUATION OF THE SELF-DIRECTED LEARNING EXPERIENCE

Self-Directed Learning (SDL) Simulation Session: _____ **Date/Time:** _____

Year of Training: M-1 M-2 M-3 M-4 Total Length of Session: _____

Program Objectives:

The student will:
- Be provided an opportunity to use their independent protected study time for self-directed learning and practicing technical skills.
- Actively learn and practice skills in an introductory hands-on, instructional video and virtual reality simulator-guided skills experience.
- Begin to develop the technical ability to perform selected clinical technical skills in a safe, simulated clinical environment.

Please rate your experience:

To what degree did the simulation session meet educational objectives?
1=Poor 2=Fair 3=Good 4=Very Good 5=Excellent

To what degree did this provide you with a useful hands-on educational experience?
1=Poor 2=Fair 3=Good 4=Very Good 5=Excellent

To what degree did the session reinforce clinical knowledge and skills?
1=Poor 2=Fair 3=Good 4=Very Good 5=Excellent

What learning modules did you complete today? _____

What other SDL opportunities would be helpful? _____

Would you like to continue to participate in SDL Sessions? Yes No

EVALUATION PLAN

- The plan is to determine if the session has met educational objectives, provided a useful hands-on educational experience, reinforced clinical knowledge and skills, and whether to continue the program.
- Each student will evaluate the simulation-based educational experience by completing a Likert-based survey.
- Data obtained will assist faculty in determining the feasibility, efficacy, and value of SDL skills opportunities.
- Asynchronous SDL activities are logged in the individual student's procedure log by the student.

IMPACT

- Medical students are provided with the opportunity to use their independent protected study time for self-directed learning of technical skills.
- This experience is designed to meet individual educational needs reinforcing knowledge, facilitating early learning of clinical procedural skills, and complementing the formally scheduled curricular experience.
- This program has the potential to provide the medical student with an early, standardized, introductory clinical procedural skills experience in a safe, hands-on, self-directed, simulation-based educational environment.

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CONTACT INFORMATION

The Interprofessional Clinical Simulation Center is located on the first floor of the Brody School of Medicine, Room 1L-28.

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