

## **Dr. Robert and Dorothy Rector Clinical Skills Center at Jefferson Teaches Students to Perform Procedures Safely Using Simulated Patients**

The Dr. Robert and Dorothy Rector Clinical Skills Center at Jefferson is one of several centers at medical schools nationwide that provides medical and nursing students with the ability to learn to perform procedures safely using simulated patients-- automated mannequins and trained live actors-- without the fear of serious medical complications.

During the last few years, medical schools around the country have begun using simulations to help students learn.

"The future is bright for simulations in medical school," said Kate Worzala, M.D. co-director of the Clinical Skills Center. "We are moving more toward being able to prove competencies with simulations. Medical and nursing students can show us that they are capable of doing certain procedures."

In its future home in the Dorrance H. Hamilton Building, the center will have multiple portable simulators to simulate various clinical scenarios including outpatient clinics, operating rooms, inpatient hospital rooms, intensive care units and emergency rooms. The Rector center will provide a "virtual space" for teams of nurses and physicians to simulate clinical experiences and foster the team approach to delivery of health care.

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Clinical Skills/2

In addition to the mechanical simulations, the center will also be the site for one of the most innovative tools developed in medical education, the use of standardized

patients. Standardized patients are individuals, from the Philadelphia community, who have been trained to portray specific illnesses for evaluation and teaching. The Rector Center uses a unique Jefferson-based paradigm in which emphasis is on teaching using these tools.

These standardized patients serve to assist Jefferson in teaching and evaluating the skills that define physicians and health care professionals-- communication and physical examination. This teaching and assessment program will be located on two floors in the Hamilton building with 12 simulated examination rooms on each floor, all fully equipped with the most technically advanced video and computer system.

The existing Rector Center features clinical training areas, classroom space and an audio-video studio for taping student interactions. The facility has a variety of cutting-edge simulators and medical equipment that helps the students become proficient in a wide variety of clinical situations. The simulators include intubation mannequins, joint injection models, IV and intradermal simulators, pelvic exam and birthing simulators.

The prime mechanical patients are Harvey and SimMan. Harvey simulates 27 cardiovascular conditions, while SimMan provides realistic patient care scenarios specifically designed for training in anesthesia and difficult airway management.

Once a disorder is selected, the student not only can listen to the appropriate heart sounds, but can also palpate pulses, inspect jugular venous pulsation and record blood pressure on the mannequins.

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The body simulators not only reproduce a wide array of physiological signs, such as blood pressure, heart sounds and breath sounds, but they also allow students to practice basic and advanced clinical skills, such as vital signs; single-lead electrocardiogram; defibrillation; intubation of the normal and difficult airway; vein puncture; IV administration; urinary catheterization; and CPR.

“These tools can teach students the basics of a patient examination without burdening real patients in need of more immediate care,” Dr. Worzala noted. “The center’s facilities can also provide students with the opportunity to treat high risk or unusual medical cases.”

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