

## AN OHLONE STORY

### Human Patient Simulation in the Registered Nursing Program

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#### Overview

The State of California estimates by 2020 an additional 88,000 nurses will be needed to deal with the vast numbers of retiring “baby boomer” registered nurses. To meet the demand, the nursing program increased enrollment. Increasing enrollment requires additional resources to administer the program, including faculty, skills lab time and clinical sites. Clinical sites are at a premium since all nursing programs have increased enrollment. Clinical experiences may not correspond to theory taught that week. Therefore, nursing faculty strive to create meaningful clinical experiences.

Simulation training has been used extensively by the military and commercial aviation as a means to train personnel, reduce errors and improve safety. In the last few years, simulation training has impacted the way in which nurses and physicians are educated. Simulation based training provides opportunities for students to develop required skill development and acquisition through practice in a simulated environment that is representative of actual patient care situations. During the simulation, students are afforded the opportunity to build upon acquired theory and practice skills. At the same time, students are assessed and provided with feedback from faculty and students alike. Simulation based education offers students the opportunity to practiced acquired competencies in a safe environment.

While participating in simulation, nursing students learn in a controlled, non-threatening and safe environment. The use of scenarios assists students to synthesize theory and then apply that same knowledge to practice in an interactive, hands on environment. Simulation allows nursing students to practice communication, delegation, management and safety with an understanding of the disease process. This teaching tool does not replace human contact, however, engages students in non-traditional, high tech teaching/learning activities. According to the National League for Nursing (NLN) simulations coupled with the use of high tech mannequins offer extraordinary tools for 21st century nursing education (NLN, March 2, 2007). These concepts represent the genesis for the introduction of simulation into the registered nursing curriculum.

#### Relationship to College Values

High standards in our constant pursuit of excellence

The introduction and utilization of human simulation in the nursing curriculum demonstrates the faculty’s commitment to excellence and high standards. The nursing program enjoys a 95% retention rate and 96% NCLEX-RN passing rate (national registered nursing examination). Human simulation allows faculty to offer an additional layer of involvement while educating students in the art and science of nursing.

Lifelong learning opportunities for students, college personnel and the community

Schools of registered nursing education, licensed vocational and certified nursing assistants as well as paramedic, emergency medical technicians and health care facilities are seeking newer ways to educate and train health care providers. This human simulation center has the potential to

become a site in which other professional organizations can offer 21st century training for their specific constituents. Utilizing human simulation offers all health care professionals the opportunity to learn or remediate skills necessary when rendering care to the sick and infirmed.

#### Team work and open communication

The nursing faculty are actively engaged in human simulation. Currently N 101, 102, 103, 104, 106 and 107 utilize simulation as an adjunct to theory or skills lab. The faculty have developed scenarios in asthma (adult and pediatric), blood transfusion reaction (anaphylactic shock), hypovolemia in the adult patient, cerebral vascular accident (CVA), the first five minutes of a cardiac arrest and basic physical assessment. The specific team members work together when scenarios are run. Team members play the role of physician, laboratory supervisor, upset family member or charge nurse. Scenarios are written, reviewed and revised as a team project.

#### Innovation, risk-taking and entrepreneurship

Incorporating human simulation into the nursing program has taken a significant amount of time and thought. Human simulation is utilized in an effort to allow students the opportunity to apply theory to actual patient care situations. However, simulation also allows students the ability to develop those critical attitudes expected of a practicing registered nurse. Simulations are carefully developed to incorporate student management, communication, delegation and leadership abilities.

#### Contribution to Achieving College Goals

##### Learning College Model

Generation X and Generation Y learners demand that educators present information in a different manner than offered to the Baby Boomer generation. Human simulation embraces both active and collaborative learning. Human simulation supports visual, auditory and kinesthetic learners. When students are involved in a simulation they work as a team to render care to the patient. These collaborative efforts mirrors actual patients care situations. In the hospital setting nurses are constantly working along side other health care providers.

##### Continuous learning for all personnel

Human simulation provides students with an additional learning tool while challenging faculty to continually improve their teaching and learning abilities. Simulation emphasizes the integration of evidenced base nursing practice accompanied by high-level technological skills. The addition of human simulation into the nursing curriculum has demanded that nursing faculty attend workshops to learn this new technology. The initial training encompasses a three-day session. Intermediate training involves a two-day training session. The training sessions also reinforce the use of solid educational strategies, including the development of leveled objectives utilizing Bloom's Taxonomy, communication skills when conducting the debriefing session and team skills.

## Demonstration of the Meeting of One or More of the Accreditation Standards

The inclusion of human simulation into the nursing curriculum addresses two ACCJC/WASC accreditation standards. The first standard relates to student learning programs specifically instructional programs. The second standard relates to technology resources. Upon graduation, health care facilities expect novice nurses to be able to critically think their way through patient care situations. The registered nursing program utilizes an interwoven curriculum in which theory, skills lab and hospital clinical experiences are leveled across all four semesters. The commitment to use high-tech simulation affords faculty an additional layer of teaching tools while students capitalize on the use of 21st century technology.

## Expression of Accreditation Themes

### Student Learning Outcomes

The nursing faculty is charged with the responsibility to educate novice nurses who possess necessary knowledge, skills and attitudes necessary to care for increasingly complex patients in a health care facility. Therefore, student-learning outcomes are specifically developed to address that responsibility. The utilization of human simulation affords nursing faculty another avenue to assist students attain their learning outcomes.

### Institutional Commitments

The Newark Center for Health Science and Technology is scheduled to admit students in January 2008. This new campus will support the nursing, respiratory therapy, physical therapy assistant and allied health programs. New classrooms and skills labs have been designed to meet the needs of the health science programs. The Dean and Director of Registered Nursing have written a grant to procure additional supplies and materials needed to run human simulations.

### Dialogue

Human simulation has proven to be an effective teaching/learning strategy utilized by nursing educators. The nursing faculty has been actively engaged in this technology over the past semester. In an effort to educate administration regarding the efficacy of this technology, the nursing faculty invited the Deans and several Vice Presidents to participate in a patient care simulation. At the conclusion of this exercise, administration had first hand knowledge and experienced the power of human simulation. On a broader scope the Betty Irene Moore Foundation has taken a keen interest in human simulation. This foundation is funding a regional simulation lab. In the San Francisco/Alameda county area several hospitals and schools of nursing have formed a coalition to further the utilization of human simulation. This coalition of nursing educators and health care facilities are working together to gain education regarding simulation and write scenarios to support student learning through the use of simulation.