







Several years ago, The US Institute of Medicine estimated that 100,000 people die every year from medical errors and hospital-acquired infections. The North Shore-Long Island Jewish (LIJ) Health System believes that this number is unacceptable.

The health system has created a goal of zero tolerance for medication errors and infections, and believes that clinical education plays a key role. The Patient Safety Institute (PSI) was established to provide state of the art education for healthcare professionals.

PSI, part of the North Shore-LIJ Health System's Center for Learning and Innovation, features a human simulation lab that includes PC-based interactive, high-fidelity, digitally enhanced mannequins, and partial and full body task trainers. Full-scale patient simulators help a wide variety of healthcare practitioners and students to diagnose and manage clinical problems without risk to real patients. Simulators have been successfully used in the past as an integral component of education in the aviation, aerospace, and automobile industries, to name a few.

Clinical education scenarios at PSI can replicate situations in a critical care unit, an emergency department, the operating room, and other high-paced hospital



environments. Acute clinical scenarios are planned, rehearsed, reviewed and studied, leading to a direct improvement in a healthcare professional's performance in life-saving situations.

PSI is able to create new and realistic methods of learning. Using a computer, certified instructors in control rooms with one-way mirrors can manipulate the patient simulators to mimic virtually any medical scenario, including a stroke, heart attack, smallpox, trauma, etc. All simulations are video recorded and reviewed during post-scenario debriefings. Clinicians can take vital signs, insert intravenous lines, CVP lines and practice airway management, as well as perform many other clinical procedures.

Additionally, team training, based on the airline industry's Crew Resource Management (CRM) program, is conducted for multidisciplinary clinical teams.

The Patient Safety Institute (PSI state of the art learning for l



- SimMan High-fidelity, computer-operated adult patient simulators that include anatomical landmarks, trachea, and esophagus along with simulated lungs and a stomach, allowing multiple medical procedures. SimMen have heart beats that generate pulses and an ECG rhythm, as well as heart sounds, lung sounds and bowel sounds. Accurate genitalia also allow for urologic care procedures.
- SimBaby High-fidelity, computer-operated infant simulators, which include anatomically realistic airways that allow accurate simulation of infant airway management and patient care. The models can simulate realistic infant breathing patterns and complications, and can simulate a large range of medical situations.
- NOELLE Maternal and neonatal birthing computer interactive simulators that combine emergency care with obstetrics for managing complications in pregnancy and childbirth.
- Hal 3000 Mobile Team Trainer High-fidelity, computer-operated patient simulator that is un-tethered and can be controlled from up to 300 meters away.
 Hal is used by the US military and can be programmed to simulate various medical conditions, physiological conditions and reactions.
- Nursing Anne Adult patient simulators that include anatomically correct airways and basic vital signs, including pulse and blood pressure. Female-specific medical situations, such as a breast mastectomy, can be simulated.
- Several task trainers, including: central line mannequins, airway management trainers, VitalSim "vital sign generators," IV arm simulators, mega code simulators, and various individual skill trainers.

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Interactive Learning Environment

The Patient Safety Institute offers an interactive learning environment and fosters teamwork and communication among staff members. Clinical teams also role-play as fam-

ily members in the scenarios, so students' communication and interpersonal skills are analyzed in addition to their clinical skills.

The Patient Safety Institute educates healthcare professionals with careers in all areas of



the hospital, including operating rooms, emergency departments, critical care units, and other fast-paced hospital environments. The simulation lab offers an environment that is adaptable to all clinical levels and allied health professions. Although some courses are designed for specific clinical specialists (e.g. nurses, physicians, technicians, etc.), other courses are designed to incorporate the team approach found in actual clinical settings.

North Shore-LIJ's Patient Safety Institute also provides mass disaster training for hospital personnel, as well as for pre-hospital EMTs and paramedics. Education includes courses on managing casualties from chemical, biological, radiological, nuclear, explosive and natural disasters.

For more information, contact the Patient Safety Institute at (516) 396-6250.



PATIENT SAFETY INSTITUTE

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North Shore-Long Island Jewish Health System

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