

Appendix B: NCAL Medical Center Reports



San Jose Center for Advanced Research and Education

Background

In 2004, simulation began with an idea and the purchase of mannequins in the box! San Jose physicians wanted to train using simulation and convinced local leaders this was an excellent way to train staff without to risk patients. Two Intensivists, who were trained in this teaching methodology, were the only staff using the mannequins. which was infrequently. Nursing and allied health did not use these simulators.

San Jose Medical Center's (SJO) first experience with a Sim lab was in 2007 with an \$800K grant to partner with Evergreen San Jose Community College, for simulation opportunities for incumbent workers. The proposal focus was on medical errors and the use of simulation to improve the quality of patient care by RNs. The grant was to train 400 RNs using 16 hours of simulation training. Evergreen San Jose Community College District was charged to create a simulation lab as a community resource supporting medical simulations.

A great deal of work was done during this time. There was engagement of senior leadership and physicians through KP Steering Committee advisory board and had the ability to approve finances to move simulation forward. The idea of having a local simulation lab was also on the forefront. The simulation steering committee met with leadership to come up with a location to house the simulation lab. The Assistant Administrator of Support Service was an RN, CNS who had a passion for education and found a storage area which needed retrofitting, but had the insight to convert this space into a simulation lab. The space designated for simulation was a shell for 2 ORs. The floor was cement, the walls had exposed studs, and the ceiling was exposed to pipes. With an architect and a budget of \$175,000, space was created that was user friendly and convertible. The SJO simulation lab is a multi-function simulation space with 2 areas for simulation, control room, debriefing/classroom space, ADA bathroom, storage space, and a computer lab. This process from start to finish took 18 months. This simulation lab houses the SimFamily mannequins for both in situ and classroom simulation.

April 2010, was the grand opening of SJO's Center for Advanced Research and Education (CARE) and has provided simulation training with Mock Codes/RRT for annual skill days for staff RNs in medical-surgical area. Starting the first week of July, the center will be used for providing a simulation experience for RNs and OB Tech Scrubbing in collaboration with the OR to provide consistency with training.

Objectives/Goals

To reduce risk to our patients by practicing low volume, high risk skills through simulation both in situ and in

the simulation center. To use CETT to improve staff skills in MCH emergencies, mock Codes/RRTs, in other areas including Pediatrics emergencies. Outcomes will improve the quality of care for our patient population. For the pressure ulcer grant, the objectives were to have RNs improved skills to assess darkly pigmented skin in for detection of pressure ulcers.

Approach

Content experts in simulation were hired to support the Evergreen partnership grant, which had a robust timeline. Components of training included train-the-trainer education for Clinical Nurse Educators/Specialist, College Faculty, Staff RNs, Simulation Technologist for redeployed LVNs from Kaiser Permanente San Jose (KP SJO) and San Jose City College. One positive outcome was sharing the type of clinical education needed in the hospital with the college faculty, improving nursing student education. While scenarios were being developed, the simulation lab was being built. SJO was able to contribute gently used equipment to the new simulation lab at San Jose City College. This afforded SJO the opportunity to have more scenarios developed. Originally 16 scenarios were going to be created, based on KP's contribution, 20 scenarios were completed.

The training grant focused on two components developing a community resource at the Workforce Institute at Evergreen San Jose Community College District and teaching and educating our staff about simulation. A total of 28 trainers were used which included Clinical Nurse Educators, Clinical Nurse Specialist, Staff RN, (5) Simulation Technologists as well as College Faculty. With this training program, the nurse labor representative fully embraced the opportunity to test the scenarios and determine the validity of the sessions. After discussion with the union rep, an agreement was made to respectfully destroy the videotapes since the training was not to be used in a punitive way instead supporting growth and education.

In Feb and March 2010, with a \$25K Medline grant, training was conducted to improve the identification of pressure ulcers on admission with ethnically diverse mannequins: Hispanic and African American. This study was intended to have the RN assess ethnically pigmented skin to detect pressure ulcers on bony prominences and under devices, especially on the face due to respiratory devices (endotracheal tubes, oxygen, trach ties, and tracheostomy).

Measurement

The Simulation partnership with Evergreen examined medication safety, workplace safety, pain (assessment/reassessment), early intervention, time out and double check, patient handoff, communication, safety, patient care management, culture competency, interdisciplinary teamwork, regulatory (national patient safety goals), scope of practice with accountability (policies and procedures) through the use of simulation with total of 20 specific high risk/low volume scenarios in specialty areas: Maternal Child Health, Medical Surgical, Critical Care (Telemetry, ICU and ED), & Periop Services (4 in each area) . Safety was measured by direct observation of the participants during the debriefing process and analyzed each of the RNs participation with each scenario. Direct of observation of training videos during debriefing by examining the following: cognitive, technical and behavioral skills.

In fact for this grant, 351 working RNs had 16 hours of simulation training totally 5,616 hours of simulation education. Post grant, an additional 109 RNs received 8 hours of simulation training, totally 1,192 hours more of training. The grand total was 6,808 hours of simulation training, which the biggest sample size internationally using this is teaching methodology. In total 99.9% of SJO's staff RNs were trained using simulation.

With the second grant received by SJO for assessment of pressure ulcers in diverse patient population, a T Test; pre and post assessment after intervention of education was used. This study went through the KP Research Department for IRB approval. Data is being evaluated by KP's Department of Research Statisticians. Raw data suggests that RNs were able to identify pressure ulcers in bony prominences, but after education was done post evaluation, RNs were able to recognize that pressure ulcers occurred under devices in both ethnically diverse skin populations.

Status

In 2009, KP NCAL regional offices provided Laerdal equipment training for each medical center at the Garfield Center. SJO educators, hospital and clinic educators and physician champions participated, with the goals of further experiences with the simulation. March 2010, SJO was given the opportunity to have Critical Events Team Training Train-the-Trainer at our local facility through our KP Northern California Regional Simulation Team. New simulator trainers included physicians, Respiratory Therapist, Staff RNs, Clinical Nurse Educators/Specialists, and Interventional Radiology Staff. For some staff, this was a review and for others this was a new teaching methodology. Since SJO, no longer has a pediatrics service, Pedi emergency scenarios were tested to keep up pedi emergencies competencies. With simulation, pediatricians can receive emergency training both in CARE and in situ. A new service area in our ED, the Clinical Decision Area (CDA) was tested to determine if staff would be able to manage coded patients in this area. Additional simulations occurred in radiology, to test the MRI room with scenarios to determine when a patient needs to come out of the MRI machine for a code. In situ simulations were used with the actual crash cart in real patient's room to access if the staff on those units gained experience in Rapid Responses and Codes.

Critical Events Team Training (CETT) in the MCH is ongoing training twice a year since 2004. A total of 240 members of the multidisciplinary team have been trained MDs (Pediatricians, Anesthesiologist, and OB/GYN), RNs, and RTs. Mock Code and RRT Trainings occur every where. In 2010, 10 mock codes/RRTs have been conducted with approximately 100 members of the interdisciplinary team.

Future

Multidisciplinary CETT is an ongoing process using high fidelity mannequins in the areas of Mock Codes, in ICU, Step-down, Pedi, Med Surg Floors, ED's new Critical Decision Areas as well as high risk/low volume areas in Labor and Delivery. As we experience new ways to use simulation, we will have the opportunity to train especially since we now have a simulation space and will continue to come up with different ways to incorporate simulation to improve patient safety through our staff. As an ongoing process, SJO has moved from having difficulty in managing the mannequins, to streamlined training and education using simulation in a variety of ways.