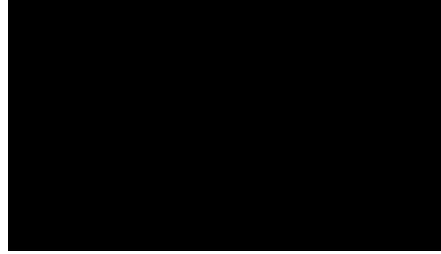


South Carolina Centers of Economic Excellence
2008-2009 Annual Report

CLINICAL EFFECTIVENESS & PATIENT SAFETY



**S.C. Centers of Economic Excellence
Programmatic Progress Report**

Clinical Effectiveness & Patient Safety

Approval Date: September 16, 2005

Award: \$5 Million

Medical University of South Carolina

University of South Carolina

PRINCIPAL INVESTIGATOR

John J. Schaefer III, M.D.
 Medical University of South Carolina
 19 Hagood Ave STE 706, HOT
 MSC 812
 Charleston, SC 29425-8120
 Phone: (843) 792-8098
 Fax: (843) 792-8140
 Email: schaefer@musc.edu

APPROVED CHAIRS

- A. Lewis Blackman CoEE Chair in Patient Simulation and Research for Health Sciences South Carolina
- B. Medical University of South Carolina
- C. This chair is an expert in quality and safety of patient care.
- D. John J. Schaefer, III, M.D.

- A. CoEE Chair in Biomedical Informatics
- B. Medical University of South Carolina
- C. This chair will work closely with the simulation and patient safety chairs to improve the medical informatics aspects of data acquisition.
- D. Jihad S. Obeid, M.D.

- A. CoEE Chair in Clinical Effectiveness and Patient Safety

- B. University of South Carolina
- C. This chair will focus on improving healthcare quality and patient safety by reducing errors.
- D. Rita Snyder, Ph.D., R.N.

I. Center Timeline

FY 2006-2007

March 2007 – Opening of the Phase I 7,500 sq. ft. center at GHS

May 2007 – Blueprint for the MUSC 11,000 sq. ft. simulation center in the MUSC College of Nursing completed.

FY 2007-2008

The initial focus of CEPSC has been on facility infrastructure and personnel development. Five collaborative partnerships have been created to date: MUSC, GHS, in partnership with Greenville Technical College, USC College of Nursing Clemson University-College of Nursing with the Central Administration office located on the MUSC campus leading this initiative.

As the CEPSC network matures you will see a significant increase in the number of students participating in simulation activities, an increase in the number of faculty developing and teaching courses, as well as more grant and research activities at all of the collaborative simulation centers; however, several milestones were met this year at each of the centers including:

- Network memberships defined and implemented
- Grand opening ceremonies were held for GHS and MUSC
- GTC, USC CON, CU CON and phase II of GHS are in active renovation or build-out phase
- Personnel were hired and trained for various positions at Central Admin, GHS and MUSC
- Personnel are being identified at USC CON and CU CON
- Training and development is underway for CU CON
- The SimCapture® (simulation data capture system) is a reality and is currently in the testing phase at MUSC
- CEPSC website is 85% complete and is expected to go live within the next several months
- CEPSC established and implemented:
 - Standard operating procedures,
 - A broadcast messaging system,
 - A survey for monitoring the quality of the services provided by the Central Administration office was implemented,
 - A survey for monitoring the quality of service at the MUSC simulation center was developed and implemented
 - Implemented the use of Microsoft Project statewide

FY 2008-2009

- The Greenville Technical College grand opening is scheduled for September 2009.
- USC CON and CU CON are actively running courses.
- The SimCapture® (simulation data capture system) is a reality and is currently being used at MUSC and USC CON. This system is in the purchasing and/or early installation phase at GHS and Clemson as continued development is ongoing.
- Survey data is collected and included in this report for all active centers.
- The CEPSC website is complete and online
http://healthcaresimulationsc.com/index.php?option=com_frontpage&Itemid=1



- CEPSC has established the University of South Carolina Beaufort as a collaborative partner.
- CEPSC has established the first collaborative partner membership with Trident Technical College.
- SimTunes LLC operation agreement and company space has been secured.



of South
partner.
external
with

in place

II. Summary of Proposed Objectives

The center's objectives as stated in the proposal to improve quality of delivered care, promote patient safety, and advance the practice and training efficiency of a critically understaffed workforce is actively in progress.

The CEPSC network of activities continue to grow rapidly and has made a significant progress toward increasing the number of students participating in simulation activities and the number of faculty developing and teaching courses at each collaborative site.

The CEPSC collaborating partners have increased from five to seven that include the Medical University of South Carolina (MUSC), Greenville Hospital System (GHS), Greenville Technical College (GTC) through GHS, the University of South Carolina – College of Nursing (USC-CON), the University of South Carolina – Beaufort (USCB), and Clemson University (CU). Each collaborating center incorporates the CEPSC mission into its local mission.

Although each center is at various stages in their development, tremendous progress toward achieving the mission has been made. A summary of these activities is listed below by location:



MUSC Facility offers:

- 11,000 square feet
- 14 training rooms
- Large classroom
- Office and reception areas
- Clinical training and continuing education for nursing, allied health students, residents,



- practicing physicians, nurses and allied health professionals
- Full staff includes a part-time director, two simulation specialists and two administrative staff
- The MUSC Simulation Center currently provides education to a full range of disciplines and specialties. Educational offerings range from basic skills training on partial task trainers to high fidelity, competency-based simulation activities. Since the opening of the new MUSC facility the center provided over 600 classes to over 8000 participants. There are currently 60 active courses with 17 in development and fourteen of these courses include an online curriculum component with over 100 active scenarios. This also includes over 8000 training hours used at the center.
- The center recently received the “Laerdal Center of Educational Excellence” endorsement and the American College of Surgeons” (ACS) accreditation.

GHS/GTC facility offers:

- 6,500 square feet
- 11 training rooms

- 1 Large classroom/1 Small classroom
 - Office and reception areas
 - Clinical training and continuing education for nursing, allied health students, medical students, residents, and practicing physicians
 - Full-time staff includes two simulation specialists, three administrative staff and a director of course curriculum development. A medical director is in recruitment.
 - The GHS Simulation Center currently provides education to a wide range of disciplines and specialties. Educational offerings range from basic skills training on partial task trainers to high fidelity, competency-based simulation activities. In FY08-09 the GHS center has provided 180 classes to over 3000 participants. There are currently 54 active courses with 17 in development. The future location of the phase II facility is planned for the fall 2010. Due to economic difficulties, the leadership at GHS has recently submitted a \$5,000,000 grant application to help facilitate the completion of the phase II facility.
-

USC-CON facility offers:



- 3,713 square feet
- 10 training rooms
- 1 Large classroom
- 2 Offices
- Clinical Training for College of Nursing (BSN, MSN, DNP, PhD)
- Full Staff includes a part-time director and one simulation lab technician



- The Client Simulated Lab (CSL) utilizes a major area of the first floor of the College of Nursing. This facility features an open classroom area to allow instructors to interact with many students at once while still providing individual rooms to simulate the hospital/clinical environment. There is also a small, private meeting/debriefing room that will accommodate a small group of 5-6 people. The lab hosts a variety of equipment such as beds with head wall units, exam tables, task trainers and high fidelity manikins. The latest audiovisual equipment is also available for use in this area. Since opening in March 2009, nine trained faculty are offering simulation experiences to 175 nursing students every 2 weeks and has provided simulation training to over 1300 participants.
-

CU facility offers:



- Approximately 4,500 sq ft
- 3 training rooms enclosed by glass doors and a research/renovation space used by graduate students in Healthcare Architecture
- Classroom – seats 24
- Meeting Space in Lab- seats 30
- Seminar Room
- Clinical training for nursing students
- Staff includes a Director, a simulation



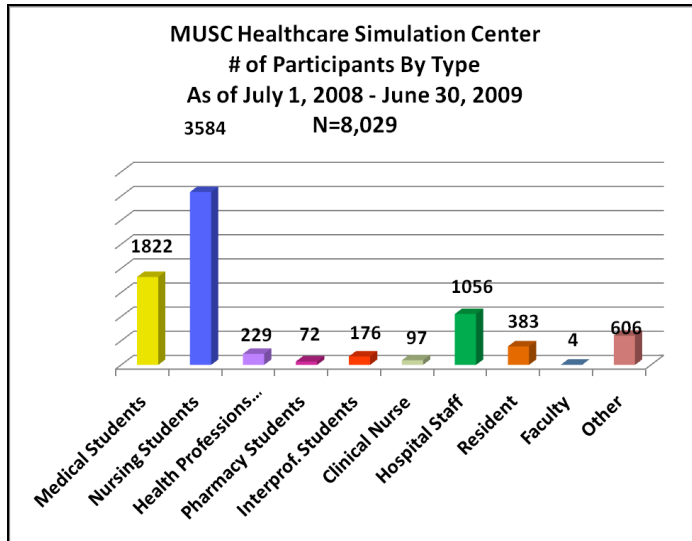
specialist, a clinical co-coordinator/administrative staff, an administrative/support troubleshooter and a technician/technical back-up support

- The Clemson University Clinical Learning / Simulation Center is in the early stage of development and currently provides education to nursing students. The nursing students receive wide range of basic skills

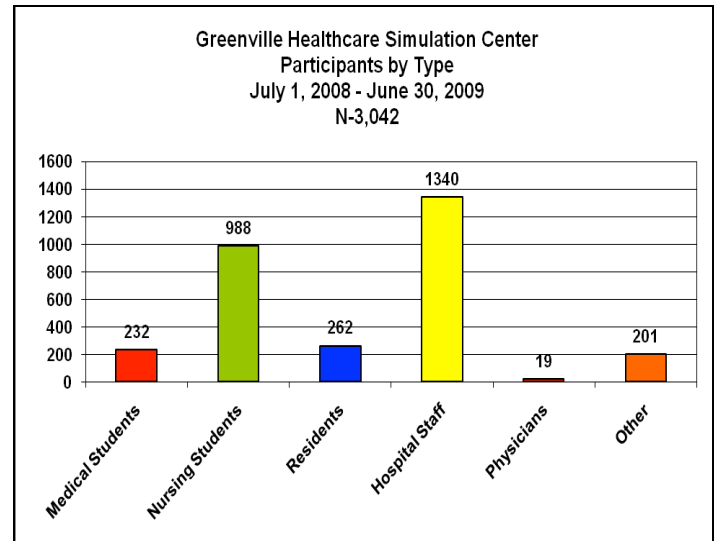
training using partial task trainers including some high fidelity simulation activities through 8 active courses. From January 2009 to May 2009 the center provided 67 classes to over 1700 students.

The charts below represent number of student training encounters at each active center.

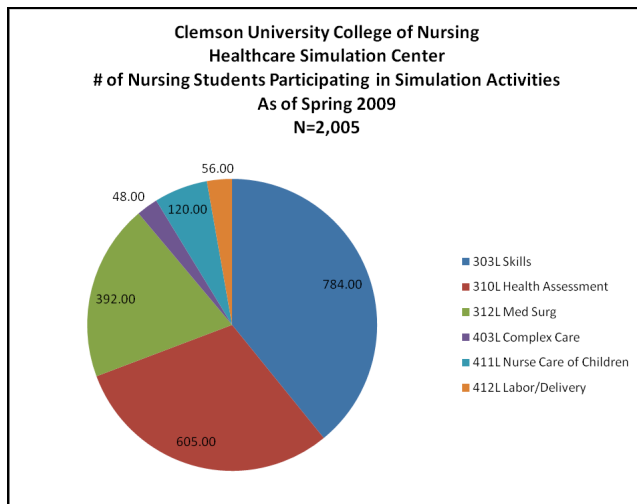
MUSC



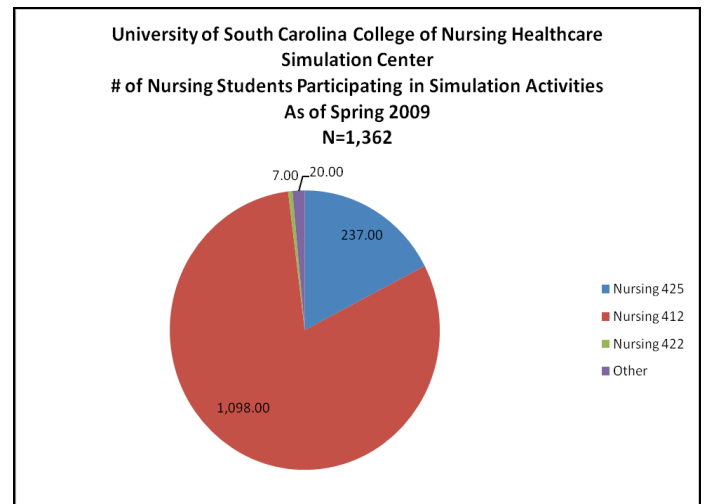
Greenville



Clemson



USC College of Nursing



Note:

Training statistic definitions:

Session—Each instance of a course, module or skill session

Participants—Each instance of a person participating in a session

Simulations—The number of simulation activities in which participants are engaged

Scenarios—The number of programmed or computer-based scenarios RUN per session

III. Summary of Non-State Partnerships

A. COEE START-UP COMPANIES.

Sim Tunes LLC – the purpose of this company is to license, develop and market simulation models.

B. OTHER NON-STATE PARTNERSHIPS

Dr. Schaefer is the lead national consultant for a key component of the simulation technology infrastructure software SimCapture® which is a simulation learning management and data capture system currently under development by B-Line Medical LLC in collaboration with the central CEPSC office and the Greenville Hospital System (GHS) simulation center. B-Line Medical has actively engaged the CEPSC in their development process. The resulting system, which does not currently exist elsewhere, will be an affordable, portable and easy to use solution for capturing simulation data from the simulators for both education and research. It will interact seamlessly with various simulators, builds participant portfolios, manages users, provides tools for scenarios, and generates multiple types of reports and information for research which is used to validate the effectiveness of healthcare simulation training.

Dr. Schaefer has been asked by Laerdal Medical to be the pre-beta testing site for new products including the new 3.3 operating system for the SimMan®, SimMan 3G® and SimNewby® simulators.

Dr. Schaefer and his staff are working with Elsevier Publishing to potentially develop programmed clinical scenarios for licensing through Sim Tunes LLC.

V. Summary of Graduate Education and Training

**See Page 10 for a summary of student training encounters by center and profession.

Simulation Activities Developed FYE 2009 at MUSC

Dental Medicine Eye & Ear Exam
 PA IV Placement
 PA Skills
 PA Evaluation
 PA Labor and Delivery
 Basic Anesthesia Management (Revised Scenarios)
 COM Cardiac Simulation
 COM Year 3 Orientation
 COM ECG Lab
 ED Resident Cardiac Training
 ED Resident Lumbar Puncture Training
 Family Medicine Rural Clerkship Simulation
 FAST
 Fundamentals of Laparoscopic Training
 Hysteroscopy
 Care of the Unstable Patient (New and Revised Scenarios)
 Pediatric Resident Infant Resuscitation
 Neonatal Resuscitation Program
 COM OB GYN Core
 Pediatric Advanced Life Support (PALS)
 COM Pelvis and Perineum Simulation
 COM Shoulder Dystocia
 Surgical Adrenal Management
 Surgical Thyroid and Breast Scenarios
 CON Adult Health I & II Clinical Training (New and Revised Scenarios)
 CON CPR Training
 CON Nurse Midwifery Simulations
 CON Health Assessment (New and Revised Scenarios)
 CON Psych Nursing
 CON Women's Health
 CON Gyn Lab
 CON Wound Care Lab
 COP Basic Vital Signs
 COP Basic Blood Pressure
 Interprofessional Rounds (COM & COP)
 Advanced Cardiac Life Support (Revised Scenarios)
 Basic Emergency Airway Management
 Crash Cart Review
 Golden Hour: Care for VLBW neonates
 Hospital Intubation Training
 Hospital Lumbar Puncture Training
 Hospital Medication Bar code Training
 Hospital Nursing Skills Orientation Training

Hospital Pediatric IV Lab
 Hospital Trach and Suction
 Hospital EKG Training
 Trident Technical College Nursing Scenarios
 Modified NLN Nursing Care Assessment Scenarios
 Basic Vital Sign Assessment Modules
 Pharmacy Cardiovascular Demonstration

Simulation Activities under Development as of June 30, 2009 at MUSC and GHS

PostPartum Hemorrhage for Physicians
 PostPartum Hemorrhage for Nurses
 Eclampsia for Physicians
 Eclampsia for Nurses
 Maternal Trauma for Physicians
 Maternal Trauma for Nurses
 CPR for the OB patient for Physicians
 CPR for the OB patient for Nurses
 Basic Emergency Airway Management for Moderate Sedation
 Moderate Sedation Training
 Radiology Contrast Reaction
 ACLS Research (FAER Grant)
 Urinary Tract Catheterization
 Adult Health Nursing Scenarios
 Pediatric Nursing Scenarios
 OB Trauma Drill
 ECCO Nursing Training
 ACLS - Practical
 ACS Phase III - Module II
 Neonatal Resuscitation Program
 Nursing Orientation: Vital Sign Assessment
 Nursing Orientation: Code Class
 Children's Hospital Nursing Orientation
 Central Line Training
 Clinical Judgment and Code Strategies
 Nursing Clinical Skills Immersion
 Peds Trach Care
 Trach Care for the Acute Care Nurse
 Urinary Catheterization

Carolina Cardiology
 GTC NUR 127 - Clinical Judgment
 Identifying Heart Murmurs in Pediatric Patients
 Mobile Care Ambulance Svc
 Malignant Hyperthermia

VI. Summary of Economic Development Outcomes

- Indirectly enhanced clinical effectiveness outcomes through safety improvement training activities (see pages 19-20)
- Cost recovery plan for the CEPSC state office is currently in development.
- The training of over 6000 nurses statewide and a statewide nursing grant is in process to develop additional simulation training activities for statewide nursing programs.
- Commercial activities are also well underway to include a new spin off company “Sim Tunes”, for licensing of scenarios. This effort lays the foundation for additional revenue support opportunities for the state. This project recently received a grant from the South Carolina Research Authority (SCRA) through SC Launch in the amount of \$50,000 to support the start-up. Office space has been identified on the MUSC campus.
- One administrative position was created in the CEPSC state office, one IT position was created at MUSC, one nurse educator at GHS and one position for the spin-off company “SimTunes”.
- The development of South Carolina as a training center for physicians and other health professionals is actively in progress through the 5 active simulation centers at MUSC, GHS, GTC, USC CON, and Clemson. There are currently two in development at USC Beaufort and Trident Technical College.

VIII. Summary of Research and Project Collaboration

Network Membership Update:

Seven collaborative partnerships have been created to date: MUSC, GHS, in partnership with Greenville Technical College, USC College of Nursing, Clemson University College of Nursing, **University of South Carolina Beaufort* and **Trident Technical College* with the CEPSC State office located on the MUSC campus leading this initiative.

*New members

Network Membership Definitions:

- ***Collaborative Partner:*** South Carolina Simulation Centers who are **Participating Partners** in the Clinical Effectiveness and Patient Safety Center (CEPSC) are committed to achieving rapid success through the adoption of the CEPSC policies, procedures and methods. Participating Partners recognize the role of the CEPSC Central Administration as providing the leadership to implement these policies, procedures and methods.
- ***Affiliate Member:*** South Carolina Simulation Centers who are affiliated with the Clinical Effectiveness and Patient Safety Center (CEPSC) seek advice on the creation of a simulation center and simulation courses. They will generally choose to participate only in selected statewide course and research activities and join the statewide data sharing infrastructure, but choose not to fully adopt the CEPSC policies, procedures and methods. The CEPSC Central Administration may provide guidance and advice to affiliated centers on matters related to simulation facility design, course development and/or research

Other Collaborations:

A nursing task force has been created to develop statewide nursing programs. The task force includes four representatives from collaborative member organizations (Clemson University, Greenville Technical College, and the Medical University of South Carolina). Three non collaborative members include Central Carolina Tech, Tri-county Tech, and South Carolina State.

IX. Summary of Testimonial and Anecdotal Data (CoEE Nuggets)

CEPSC follows its prescribed curriculum development process. By adopting this standard course development process it enables CEPSC to efficiently run many high quality courses simultaneously and collect performance and outcome data across the state. Each program's simulation curriculum is developed in consultation with the simulation center staff following this standard process.

The CEPSC network of collaborative members is committed to validating its simulation curriculum. The state office is recruiting for a Director of Research, who will oversee the projects designed to validate both the simulation educational processes and the simulators themselves. The learning management system developed by the B-Line Corporation in conjunction with CEPSC is designed to facilitate the collection of simulation outcomes data across the state.

Several faculty members and students are currently engaged in research projects aimed at validating simulation activities. Several abstracts have been presented at professional meetings. Full abstracts are available at request.

- **The Effect Of Real-Time Simulation On The Delivery Of Care To Hemodynamically Unstable Patients**
Matthew McEvoy, Frances Lee, John Walker, Scott Reeves, John Schaefer
Medical University of South Carolina, Charleston, SC, United States
- **The Effect Of Reference Cards On Adherence To ACLS Guidelines In High-Fidelity Simulation**
Young Choi, Matt Crumpler, Jennifer Matos, Fran Lee, John Schaefer, John Walker, Greg Beall, Matthew McEvoy
Medical University of South Carolina, Charleston, SC, United States
- **ACIS Reference Cards Reduce Wrong Actions During High-Fidelity Simulation Of Acls Megacodes**
Matt Crumpler, Jennifer Matos, Young Choi, Fran Lee, John Walker, John Schaefer, Greg Beall, Matthew McEvoy
Medical University of South Carolina, Charleston, SC, United States

Drs. John Schaefer, Matthew McEvoy, Donna Kern, and Joseph Dobson are in the process of collecting outcomes data in their respective courses. A summary of preliminary data collected from Dr. Dobson's Pediatric Resuscitation course and Dr. Schaefer's Difficult Airway Management course for CRNA's is shown below.

PEDIATRIC RESUSCITATION DATA

Pediatric Mock Resuscitation Course Class Averages (n=7)

Multiple-Choice Question Tests:

Pre-Test	Post-Test	Knowledge Assessment Test
57.4%	79.6%	89.6%

Individual Simulation Procedural Testing (% of Critical Actions Accomplished)

	Baseline Testing	Post-Course
Broselow tape	89.7	100
Intraosseous Needle Insertion	57.1	97.1
BVM with and without Compressions	66.7	93.7
Endotracheal Intubation	66.9	98.2
Cardioversion	38.4	92.6
Defibrillation	43.3	91.8
Overall:	59.7%	95.4%

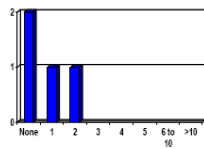
Group Simulation Scenario Testing

	Baseline Testing	Post-Course
Teamwork	37.5	89.2
Patient Management	46.7	92.1
Overall:	45.3%	91.7%

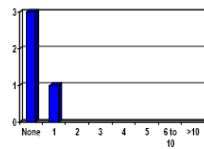
Final Grade Average: 89%

Self-Reported Pediatric Resident Experience (n=4)

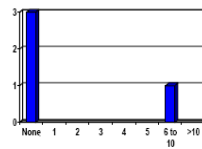
Indicate the number of Resuscitations that you have been directly involved in (not just observed)



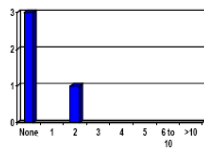
Indicate the number of times you have personally resuscitated a child in respiratory failure



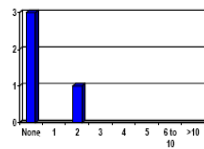
Indicate the number of times you have been directly involved in the resuscitation of a child in decompensated shock



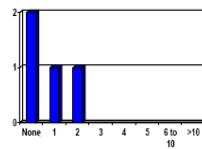
Indicate the number of times you have been directly involved in the resuscitation of a child in Pulseless Arrest (PEA or Asystole)



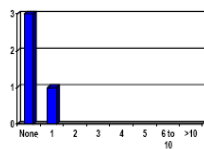
Indicate the number of times you have been directly involved in the resuscitation of a child with symptomatic Bradycardia



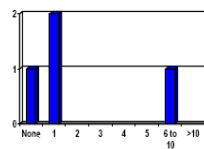
Indicate the number of times you have been directly involved in the resuscitation of a child with a cardiac dysrhythmia (SVT or VF)



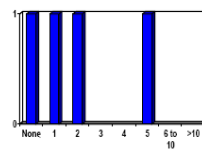
Indicate the number of times you have personally performed Bag-Mask Ventilation of a child



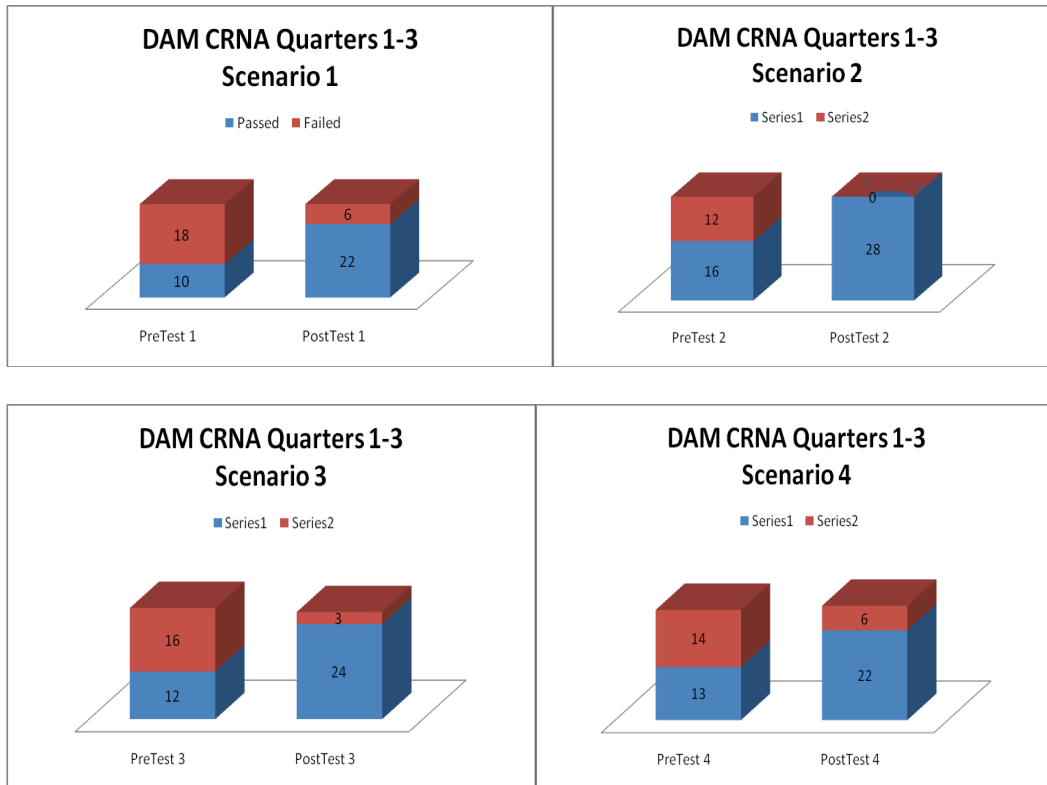
Indicate the number of times you have personally performed chest compressions of a child



Indicate the number of Times you have successfully Intubated a Child



**CRNA Difficult Airway Management
Participant Performance Data
Fiscal Year 08-09**



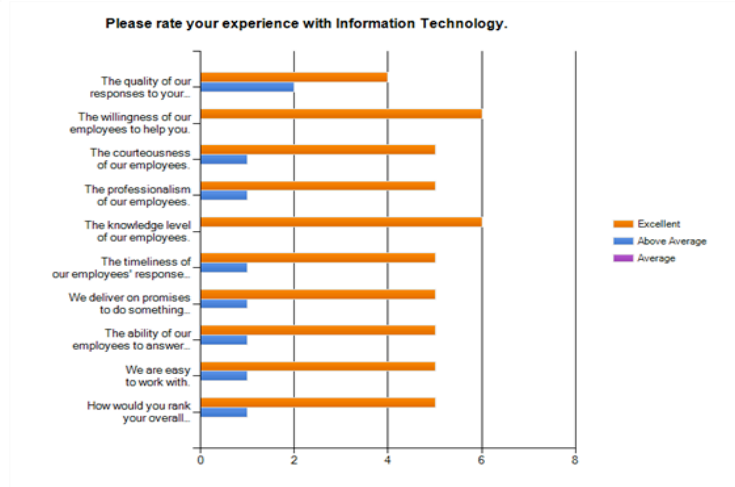
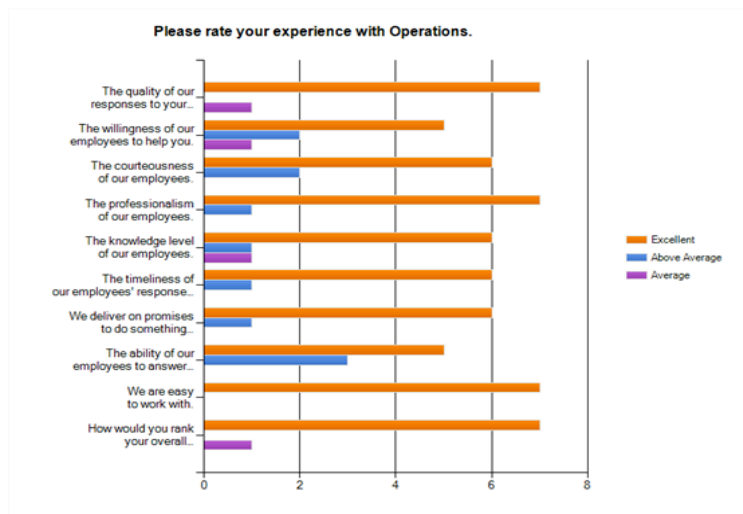
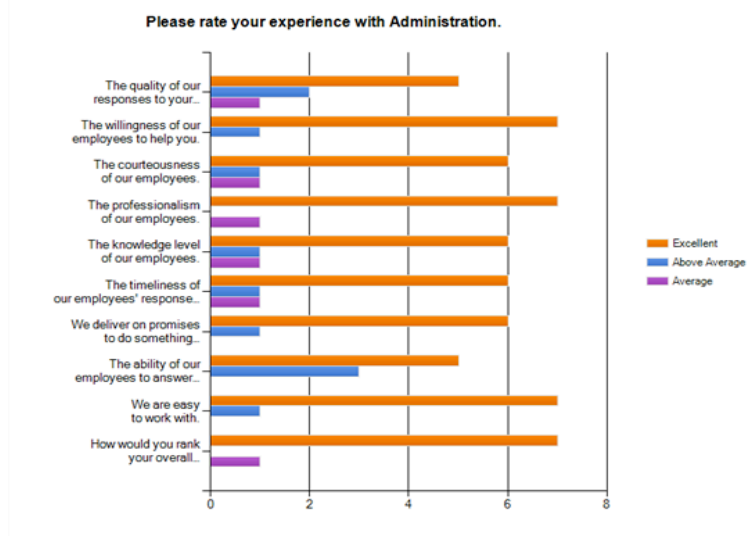
The centers strive to facilitate the growth in inter-professional education. MUSC has funded an inter-professional initiative, Creating Collaborative Care (C3). The CEPSC Director of Instructional Operations is a member of the C3 implementation team and has worked within that group to identify inter-professional simulation-based opportunities. Meetings are currently taking place to identify and develop methods for using the simulation center to assess the outcome of C3's efforts toward improving inter-professional team-based education.

Other interdisciplinary offerings at the MUSC center include Medical Emergency Team training for all members of the hospital's Medical Emergency Teams. In 2008 over 120 hospital personnel and residents participated in adult and pediatric Medical Emergency Team training.

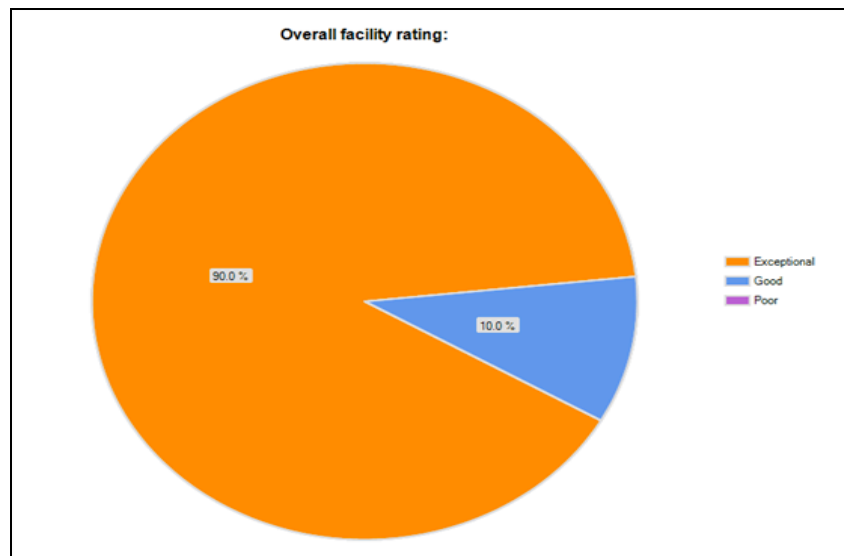
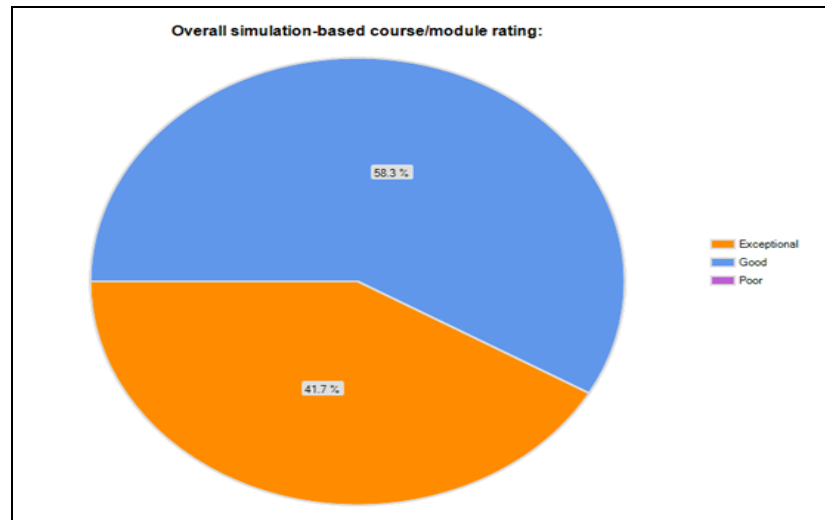
Outcome data from the other collaborative partners will become available as the centers infrastructure development matures. Other data include quality assurance results. Over 80% of respondents find the service provided by the CEPSC state office exceptional. The MUSC center reports over 60% of respondents find the courses/modules exceptional and 90% of respondents rated the facility and staff exceptional. GHS reported over 90% of respondents find the facility and staff exceptional and over 80% will put what they learned into practice. Clemson reports 60% of respondents find the courses exceptional with an 80% exceptional rating for the facility.

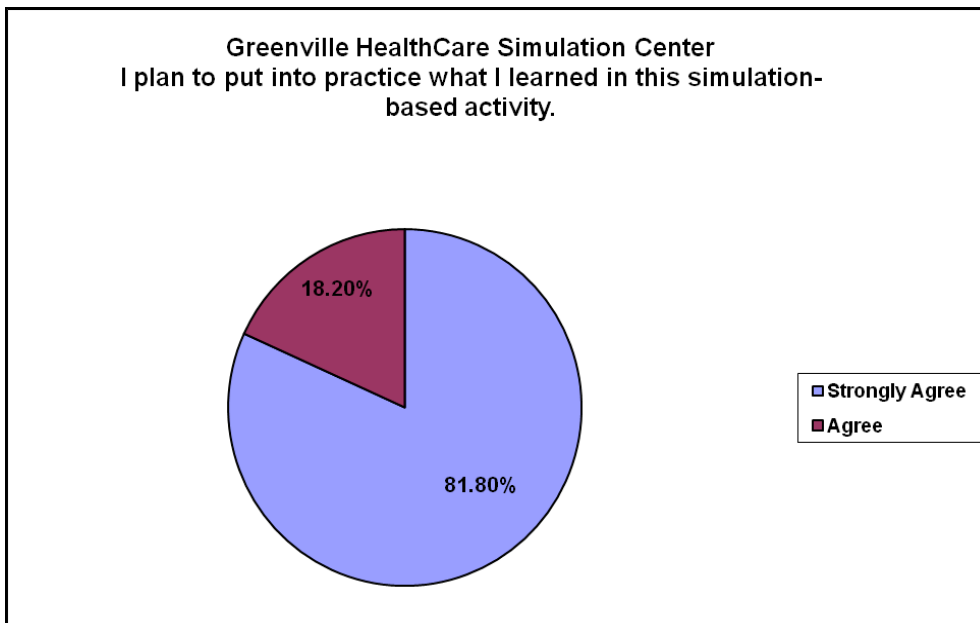
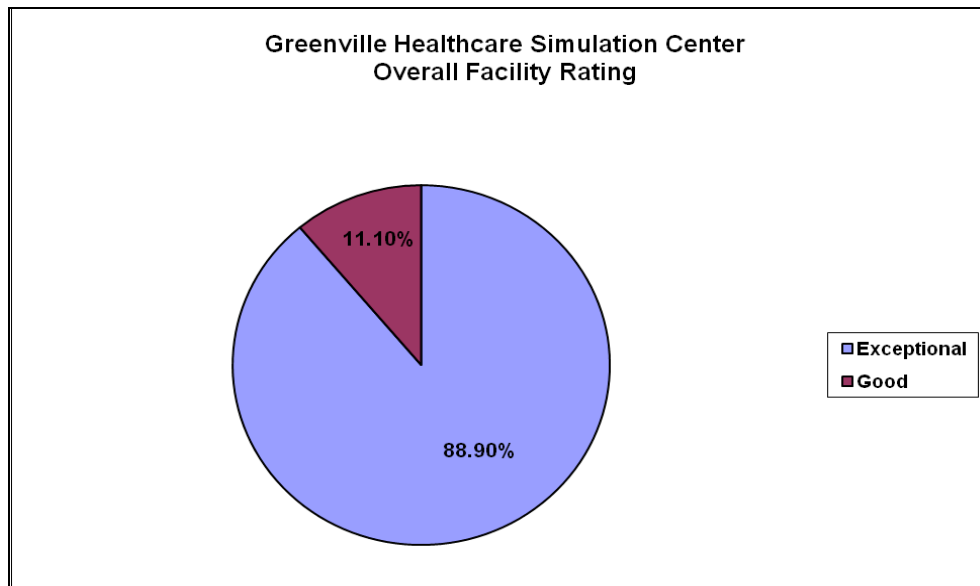
Summary of Quality Assurance Results:

Quality Assurance Survey Results for the *CEPSC State Office*:

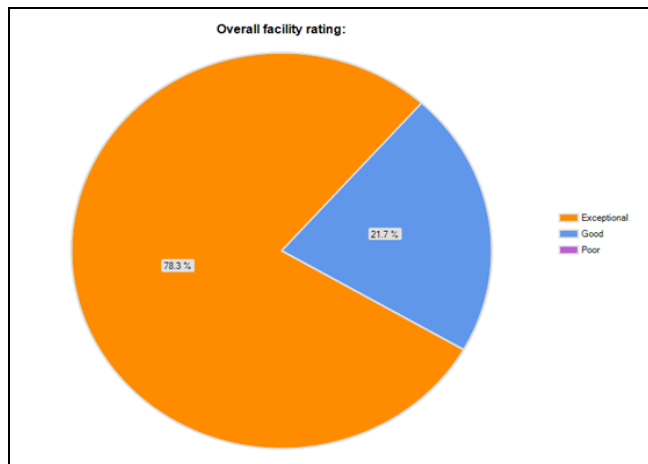
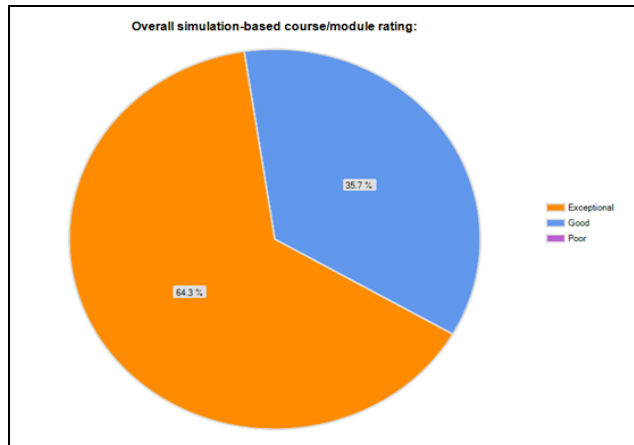


Quality Assurance Survey Results for *MUSC* Healthcare Simulation Center:



Quality Assurance Survey Results for *Greenville* Healthcare Simulation Center:

Quality Assurance Survey Results for *Clemson* Healthcare Simulation Center:



Complete list of courses being offered at MUSC, GHS USC-CON and Clemson:

MUSC Healthcare Simulation Center Active Courses:	
<i>Title</i>	<i>Organization</i>
Eye & Ear Examination	College of Dental Medicine
IV Arm Placement	College of Health Professions
PA Skills Day	College of Health Professions
PA Simulation Evaluation	College of Health Professions
PA Labor & Delivery	College of Health Professions
Trach & Vent	College of Health Professions
Basics of Anesthesia Management	College of Medicine
Cardiac Physiology	College of Medicine
Cardio Sim Experience	College of Medicine
COM Year 3 Student Orientation	College of Medicine
Difficult Airway Management -- Anesthesia	College of Medicine
ED Resident Cardiac Training	College of Medicine
ED Lumbar Puncture	College of Medicine
Emergency Team Training	College of Medicine
Family Med. Rural Clerkship	College of Medicine
FAST	College of Medicine
Fundamentals of Laproscopic Surgery	College of Medicine
Fiberoptic Bronchoscopy	College of Medicine
Hysteroscopy	College of Medicine
Intern-Basic Emergency Airway Management	College of Medicine
Intern-Unstable Patient	College of Medicine
Intern-Interprofessional Skill Pt. Care	College of Medicine
Laparoscopy	College of Medicine
Mock Orals	College of Medicine
Neonatal Resuscitation	College of Medicine
Neonatal Resuscitation Program	College of Medicine
OBGYN Core	College of Medicine
Pediatric Resusc.	College of Medicine
Pediatric Advanced Life Support (PALS)	College of Medicine
Pelvis & Perineum Sim Exp	College of Medicine
Shoulder Dystocia	College of Medicine
Surgical Adrenal Management	College of Medicine
Surgical Management	College of Medicine
Thyroid, Breast Scenarios	College of Medicine
Unstable Patient	College of Medicine
Adult Health II Clinical	College of Nursing
CPR Training	College of Nursing
Nurse Midwifery	College of Nursing

Nursing 315-Hlth Ass.	College of Nursing
Nursing 386-Adlt Hlth	College of Nursing
Nursing 387-Psy Nursing	College of Nursing
Nursing 388-Adlt Hlth 2	College of Nursing
Nursing 417-Women's Hlth	College of Nursing
Nursing GYN Lab	College of Nursing
Nursing GYN Lab	College of Nursing
Wound Care	College of Nursing
Basic Vital Signs	College of Pharmacy
Basic Blood Pressure	College of Pharmacy
Interprofessional Skills Sim. Wrkshp	COM/CON/PA
Interprofessional Patient Care	COM/CON/PA
Advanced Cardiac Life Support	Hospital Authority
Basic Airway	Hospital Authority
BLS Class (MUHA)	Hospital Authority
Crash Cart Review	Hospital Authority
Difficult Airway Management-CRNA	Hospital Authority
Fiberoptic Bronchoscopy-CRNA Training	Hospital Authority
Golden Hour	Hospital Authority
Intubation Training	Hospital Authority
Lumbar Puncture	Hospital Authority
Medication Bar Code	Hospital Authority
Medical Emergency Team-MICU Training	Hospital Authority
Nursing Skills Lab Orient.	Hospital Authority
Nursing Lab Orient. PCT	Hospital Authority
Pediatric Medical Emergency Team Training	Hospital Authority
Peds IV Lab	Hospital Authority
Trach and Suction	Hospital Authority
12 Lead EKG Training	Hospital Authority
Trident Tech College Nursing	Trident Technical College

Greenville Healthcare Simulation Center Active Courses:
ACLS - Full
ACLS - Renewal
Adult Code Strategies
ATLS - Full
ATLS - Renewal
Developing Simulation for Nursing Education and Orientation
Cardioversion for Cardiac Telemetry RNs
Code Stat for Critical Care Nurse Orientation
D.A.M. - Difficult Airway Management for Anesthesiologists
ER Nurse Efficacy
In Situ Shoulder Dystocia Team Training
Newborn Nursery Core Staff Training: <i>Newborn resuscitation, blood cultures, venous sticks, initial delivery assessment, APGAR Scoring</i>
NICU Transport Team
OB Code Strategies
PALS - Full
PALS - Renewal
PEARS - <i>Pediatric Emergency Assessment Recognition and Stabilization</i>
Peds Airway Management - <i>Respiratory Therapists</i>
Peds Code Strategies
Peds Transport Team: <i>PEA, RSV, Vtach, I/O, Needle Decompression</i>
Trach Care for the Home Health Setting
Trauma - Handling trauma patients for the floor RN
NUR 410 (Clemson) - Leadership for the graduating nurse
GTC EMS 225 - Labor & Delivery for the Paramedic
GTC NUR 119 - Post Op Atelectasis
GTC NUR 123 - Respiratory Distress
GTC NUR 125 - Labor & Delivery
GTC NUR 127 - Clinical Judgment - Who to Treat First?
GTC NUR 133 - Basic Assessment Skills
GTC NUR 223 - Upper Level Labor & Delivery
GTC NUR 248 - Pediatric Day at Greenville Tech
GTC NUR 254 - Nursing Specialties
GTC PTA 102 - Intro to Patient Care Equipment
GTC RAD 108 - Intro to Radiology
Internal Medicine Skills: <i>Central Line Placement, lumbar puncture, Intro to ACLS, IV, Chest Sounds</i>
OB/GYN OSCE (Objective Structured Clinical Evaluation)
OB/GYN Skills: <i>Sterile Technique, Vaginal Delivery, Episiotomy Repair, Suture technique, knot tying, Ultrasound & Aminiocentesis, Electrosurgery Lab</i>
Surgery OSCE (Objective Structured Clinical Evaluation)
Surgery Skills: <i>NG Tube placement, Catheterization, Intubation</i>

Neuro Skills for the M3 Student <i>Lumbar puncture and fundoscopic exam</i>
PEDS OSCE (Objective Structured Clinical Evaluation)
Pediatric Skills: <i>Lumbar Puncture, Intubation, IV insertion, catheterization</i>
OB Residents - Normal Vaginal Delivery
OB Residents - Shoulder Dystocia
OB Resident Mock Orals Boards
FLS Testing - Fundamentals of Laparoscopic Surgery
Family Medicine Skills: <i>Vaginal Exam, joint injection, OB skills, GYN Skills, wet prep</i>
Surgical Skills - American Collage of Surgeons Phase I: <i>Central Line, Urethral catheters, Colonoscopy, FLS, bone fixation</i> Phase III: <i>Decision Making and Critical Thinking, communication,</i>
Internal Medicine Skills: <i>Central Line Placement, Arterial Line Placement, Intubation, Chest tubes, Pelvic Exam, NG tube placement, Lumbar Puncture, Ear and Eye Exams, joint injection</i>
Pediatric Skills: <i>Lumbar Puncture, Intubation, IV insertion, catheterization, Intra-Osseous insertion</i>

Clemson University Healthcare Simulation Center Active Courses:
Simlab-Physical Assessment
Diabetes Management and Skills Check off
Simlab-Pre-operative
Simlab-Initiating IV site/Bld Administration
Simlab-IVF and IVPB via pump and gravity
Simlab-IVP medications and Central line care
Simlab-Nasogastric tubes
Simlab-Simulation-HHNC
Simlab-Endocrine, Heparin, ABG's, Staples, Sutures, Drains
Simlab-Chest tubes and Trach Suctioning
Simlab-Tracheostomy care
Simlab-Simulation-Diverticulitis/ Competency Practice
Simlab - Skills Competency Final (Central Line Dressing/ IVP Medication/NG Insertion)
Health Assessment- Intro and Health History
Health Assessment- Survey/Vital Signs/Pain Assessment
Health Assessment- Integumentary
Health Assessment-Head,Ears,Eyes, Nose and Throat
Health Assessment- Cardiovascular
Health Assessment- Thorax and Lungs
Health Assessment- Musculoskeletal
Health Assessment- Neurological
Health Assessment- Abdomen
Health Assessment- Breast/Axilla
Health Assessment- Genitalia/Rectal
Foundational Techniques
Body Mechanics/Hygiene/ADL's
Wound Care
Urinary /Bowel Elimination
Medication Administration/Oxygen Therapy
Medication Administration
Medication Check-off
Complex Care
Head Start Physical
Head Start Vision/Hearing Screening
Head Start Physicals
Noelle Delivery

University of South Carolina College of Nursing Healthcare Simulation Center Active Courses:
Pediatric Hypovolemia * (Hal)
Pediatric Seizure * (Hal)
Adult Acute Asthma (Rev NLN)*
Pediatric Respiratory Failure (Hal)
Pediatric Allergic Reaction (Rev. NLN)
Bowel Obstruction Complex (RevNLN)
Opioid Intoxication Complex(Rev NLN)
Blood Transfusion Rxn Comp(RevNLN)
Pulmonary Emboli Complex (Rev NLN)
Hypoglycemia Complex (Rev NLN)
Pediatric Allergic Reaction (Rev NLN)
Pediatric Resp Depression (Hal)
Adult Allergic Rxn (NLN Rev)
Mock Mayday (Vital Sim)