



WELCOME TO

THE CENTER FOR ADVANCED PEDIATRIC and PERINATAL EDUCATION

You are among a select group of health care professionals who have been invited to participate in an innovative education and training program, at the Center for Advanced Pediatric and Perinatal Education (CAPE).

LOCATION: Center for Advanced Pediatric Education
700 Welch Road, Suite 200
Palo Alto, CA 94304

The Stanford Barn, 2nd floor (see map)

HOURS: 0800 – 1700

ATTIRE: surgical scrubs, comfortable shoes, and everything you normally bring for patient care activities (stethoscopes, code cards, etc.)

MEALS: light refreshments provided and a list of local lunch options

MATERIALS:

- 1) maps and directions
- 2) introduction to simulation-based training
- 3) link to NRP online exam
- 3) list of key behavioral skills (the “Ten Commandments”)

If you have any questions about the program or the materials included in this mailing, please do not hesitate to contact:

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INTRODUCTION TO SIMULATION-BASED MEDICAL EDUCATION AND TRAINING

What makes education and training interesting for adults like you?

Adult learners are independent and self-directed. Their motivation to learn is internal. Their readiness to learn is related to the social and professional roles of their day-to-day lives, and they seek immediate applications for their learning. Perhaps most importantly, adult learners have accumulated a wealth of experience that serves as a resource and foundation for their ongoing intellectual development. It is through critical reflection on learning and life experiences that adult learners are truly empowered to take action in solving real life problems. The most significant learning experiences for adults take place in the context of their day-to-day real life activities. Effective medical educators have a responsibility to acknowledge these characteristics of adult learners in order to design effective training programs for physicians, nurses and allied healthcare personnel.

What is simulation-based training?

Simulation-based training involves immersion of the trainee in a realistic situation (scenario) created within a physical space (simulator) that replicates the real environment with fidelity sufficient to achieve "suspension of disbelief" on the part of the trainee. A simulator is a physical space designed to faithfully replicate a real life environment in which professionals work. It includes equipment that must be adjusted manually and monitors and alarms that must be acknowledged. It includes human beings who respond in appropriate or inappropriate ways to the events that occur. It also faithfully recreates in those exposed to it the mental and physical challenges of the real, non-simulated environment. Examples of professions that have embraced simulation-based training include aerospace (flight simulators), the military (realistic war games), and nuclear engineering (power plant simulators). The program that you will experience will incorporate many of the visual, auditory and tactile cues that are important in your everyday medical environment, thereby simulating that environment with high fidelity and creating a realistic and stimulating training experience.

What are the advantages of simulation-based training for the adult learner?

The traditional paradigm of professional education and training consists of three primary components: 1) reading of the literature, 2) observation of others possessing more experience in the field, and 3) "hands-on" experience during a defined period of time in preparation for independent practice. This paradigm, although historically accepted and utilized, has numerous intrinsic limitations. Review of written literature is necessary but not sufficient to achieve competency; research indicates that optimal acquisition and retention of knowledge and skills by adults is achieved by active participation rather than more passive exercises. Observation of senior colleagues who theoretically have more experience in a particular field ("learning by osmosis") assumes that those colleagues

always serve as good role models, that their attributes can be incorporated into the behaviors of the trainee, and that the appropriate spectrum of situations is observed. However, trainees may not be able to distinguish poor role models from those that are superb and assimilation of certain professional attributes may prove a difficult task for particular trainees. The period of training or apprenticeship is limited in time and depth; therefore the experiences obtained by individual trainees may vary greatly.

Training in a medical simulator offers advantages over traditional training experiences for the following reasons. Simulators are controlled environments in which multiple intense clinical experiences can be provided in a relatively brief period of time. These clinical experiences can be scaled to fit the level of the trainee, whether he or she is a novice or veteran. Unlike the real world, the simulator offers the convenience of scheduling and the option of repetition. Because the simulator is stocked with real medical equipment and populated with interactive human colleagues, trainees must actively demonstrate appropriate technical and behavioral skills and are unable to simply “talk their way through” difficult scenarios. The use of videotape provides an objective, time-coded record of trainee communication and actions and creates a powerful stimulus for learning during facilitated debriefings. Because the activities in the simulator pose no risk to patients or to professional liability, trainees are allowed to witness the natural evolution of mistakes without the need for intervention by senior colleagues. Finally, simulators reduce the use of hospital resources by supplanting expensive patient care arenas as the location for clinical teaching and recycling supplies and devices that normally would require disposal if used on real patients.

What is CAPE?

In an effort to improve upon the traditional medical education and training paradigm, the Center for Advanced Pediatric Education (CAPE) at Lucile Packard Children’s Hospital at Stanford has established simulation-based training programs in fetal, neonatal, pediatric, and obstetric medicine. The CAPE medical simulator is designed as a flexible, multifunctional facility capable of simulating any intensive care environment (delivery room, emergency room, intensive care unit) or non-intensive care environment (ward, clinic, private office) found within a hospital or other health care facility. CAPE is equipped with multiple remote control pan-tilt cameras and sensitive adjustable gain microphones that allow all of the events occurring during the scenarios to be recorded digitally and played back for review during debriefing sessions that immediately follow each scenario. The conference and debriefing rooms are equipped with a 2000 lumen LCD projector, 50 square foot projection screen, and 50 inch plasma display; ISDN lines are available for remote teleconferencing. The state-of-the-art control room is equipped with all of the technology necessary to produce high quality video and audio recordings, including a server that allows video streaming over the Internet and a Macintosh G4 workstation for non-linear video editing.

The instructors at CAPE draw from their clinical experiences as nurses and physicians to create realistic scenarios and provide constructive commentary during debriefings. Instructors act as confederates in scenarios, helping trainees to navigate through difficult

situations. As in the clinical setting, trainees are able to call for back up in the simulator and receive the assistance of real human colleagues to aid in the scenarios.

What can I expect?

A welcome and introduction is conducted at the beginning of each CAPE program. This introduction includes a brief lecture describing simulation-based training, videotape review of exemplars of performance in dynamic non-medical and medical environments, and a detailed hands-on orientation to all of the physical components (patients, devices, drugs, etc.) of the simulator. Once this familiarization is complete, you will spend the rest of the day actively participating in scenarios designed to simulate real medical situations. During the scenarios all events are captured on time-coded videotape for playback during a formal debriefing session that immediately follows each scenario. As many as five scenarios and debriefings are conducted in a single program. At the end of the day you will be asked to complete an evaluation that will be used to refine and improve this training program.

Development of complex scenarios that integrate physicians, nurses, and allied health care personnel requires a tremendous amount of time and effort. Similarly, conduct of the training program is very labor intensive and requires the participation of numerous instructors and technicians. Because of these issues you are asked to review and sign a confidentiality agreement stating that you will not discuss the details of your simulator experience with others, including your colleagues. Likewise CAPE instructors are also required to sign confidentiality agreements in order to insure that discussion of individual performance during the scenarios takes place only during the debriefings and does not leave the simulator. Finally, you are requested to sign a photo consent form in order to be videotaped during your scenarios.

You may complete the NRP test during lunch and following the program. An **alternative option** is to take the NRP test online and bring in the completion certificate. The link is below in case you prefer this process.

http://www.aap.org/nrp/provider/provider_overview.html

NRP online evaluation

http://www.aap.org/bst/showprod.cfm?&DID=15&CATID=132&ObjectGroup_ID=820

NRP textbook

Please feel free to contact any of the following CAPE personnel at any time with any questions you may have. All contact will be considered confidential.

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Typical Schedule

0800-0830	Welcome and Introduction
0830-0915	Trigger Video Review
0915-1000	Orientation to the CAPE Simulator
1000-1030	Scenario #1
1030-1115	Debriefing #1
1115-1145	Scenario #2
1145-1230	Debriefing #2
1230-1300	Lunch
1300-1330	Scenario #3
1330-1415	Debriefing #3
1415-1445	Scenario #4
1445-1530	Debriefing #4
1530-1600	Scenario #5
1600-1645	Debriefing #5
1645-1700	Session Wrap & Evaluation

**SIMULATION-BASED TRAINING:
KEY BEHAVIORAL SKILLS
(THE “TEN COMMANDMENTS”)**

- I. KNOW YOUR ENVIRONMENT.**
- II. ANTICIPATE AND PLAN FOR CRISES.**
- III. ASSUME A LEADERSHIP ROLE.**
- IV. COMMUNICATE EFFECTIVELY.**
- V. DISTRIBUTE WORKLOAD OPTIMALLY.**
- VI. ALLOCATE ATTENTION WISELY.**
- VII. UTILIZE ALL AVAILABLE RESOURCES.**
- VIII. UTILIZE ALL AVAILABLE INFORMATION.**
- IX. CALL FOR HELP EARLY ENOUGH.**
- X. MAINTAIN PROFESSIONAL BEHAVIOR.**

Maps & Directions

Directions to CAPE:

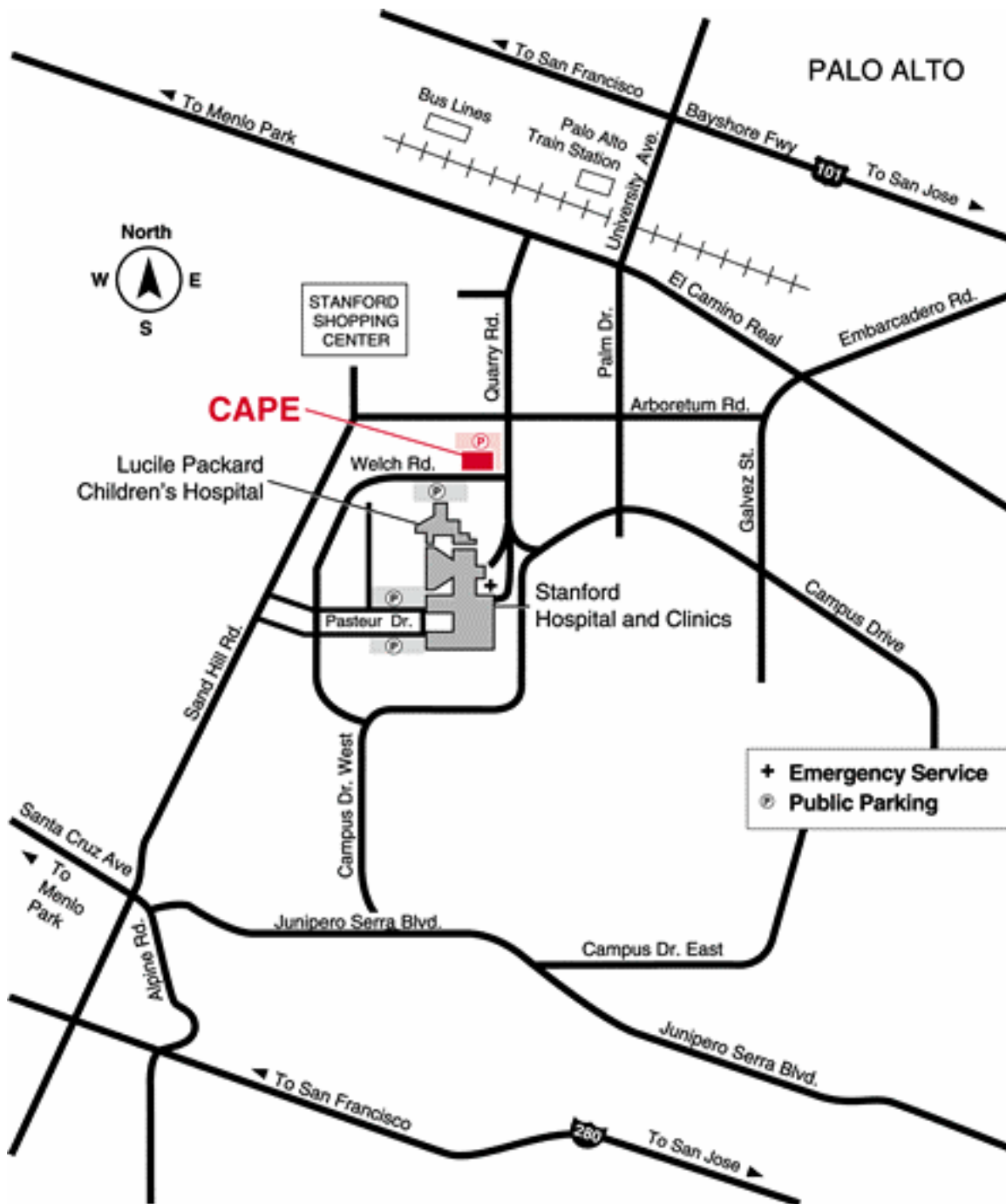
From U.S. 101(Bayshore Freeway)

- * Exit west onto University Avenue (.74 miles)
- * Stay straight to go onto University Avenue/Palm Drive (.05 miles)
- * Stay straight to go onto Palm Drive (.26 miles)
- * Turn right onto Arboretum Road (.27 miles)
- * Turn left onto Quarry Road (.21 miles)
- * Turn right onto Welch Road. (.01 miles)
- * CAPE is located at 700 Welch Road, Suite 200, on the second floor of the Stanford Barn.

From Interstate 280

- * Exit east onto Sandhill Road (2.75 miles)
- * Turn right onto Vineyard Road (.24 miles)
- * Turn right onto Quarry Road (.09 miles)
- * Turn right onto Welch Road (.01 miles)
- * CAPE is located at 700 Welch Road, Suite 200, on the second floor of the Stanford Barn.

GENERAL AREA MAP



Close Up Map

