Jichi Medical University
Medical Simulation Center

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Director's Message

Jichi Medical University strives to produce doctors who practice ethically and with advanced medical ability, and nurses who engage in medical treatment and welfare, and contribute to the development of medicine and nursing to improve welfare.
In the simulation center, we are making efforts to:
· Enhance simulation-based education in the university and hospital
· Create and improve educational theory using simulation
· Study and develop new simulators

Significance of Simulation Based Education

Graduates of this university go to local areas and are engaged in community healthcare. In some cases, they have to work without help from others, so they need practical expertise. Simulation-based education is a very useful and efficient way to obtain hands-on experience.
Of course, simulators are different from real patients, and some knowledge and skills are only obtained by learning from real patients.
In some situations, bed-side learning can have risks.
Simulation based learning is low-risk, and easy to learn basic skills and the knowledge of medicine. The learner can study again and again with simulators until they refine their skills and gain self-confidence to perform the procedures.
Map of the Simulation Center

- Break Room
- Simulation Training Room
- Simulation Training Room (useable as a simulated ward with 4 beds)

- Staff Rooms
- Equipment Storage
- Observation Room
- Class Room

Each room has:
- projectors
- video cameras on the ceiling
- movable partition with white boards
BLS (Basic Life Support)

- BLS for Nursing Students
- CPR and AED Training for Clerks

ICLS (Immediate Cardiac Life Support) is the authorized course of the Japanese Association for Acute Medicine. There are many participants, including doctors, nurses, students, etc.

Blood Drawing / Intravenous Administration
Multi-Tasking Exercise

The Multi-Tasking Exercise course is mainly for new nurses. We use a simulated ward with 4 beds to train with this program. Nurses have to decide priorities for multiple tasks in a short time and perform the correct procedures.

Lectures and Training for Medical Safety

This program is conducted by the Division of Safety Promotion. Nurses learn the operation of clinical instruments, such as infusion pumps. They also learn about medical safety.

Extracurricular Study for Students

◆ Medical Safety and Medical Simulation

◆ Mind Map® for healthcare

Research Themes

1. Establish effective training
   - Not only for the individual but also for the team
   - Incident based scenario training
   - Using Mind Map and World Café, etc.

2. Evaluation of training programs
   - Effect of training after a certain period of time

3. Making and improving simulators
   - Tactile feeling with more reality
   - Distance training
   - Inexpensive simulators
   - Using mobile devices like iPhone and iPad
Usable Simulators

- **BLS**
  - Resusci Anne
  - Resusci Junior
  - Resusci Baby
  - AED Trainer

- **ACLS & ICLS**
  - HeartSim
  - Mega Code Kid
  - ALS Baby
  - Newborn Resuscitation Trainer

- **Patient Simulator**
  - SimBaby
  - SimNewB
  - Newborn HAL

- **Diagnosis**
  - "Ichiro"
  - Mr. Lung
  - EYE
  - EAR
  - Ultrasound

- **Palpation**
  - Breast Cancer
  - Rectal Exam
  - Prostate Gland

- **Tracheotomy Trainer**

- **Airway Management Trainer**

- **Puncture / Needles**
  - Blood Drawing / IV
  - Central Vein
  - Lumbar
  - Shoulder Joint
  - Dorsal Hand Vein

- **Suture Training**

- **Aspiration of sputum**

- **Colostomy Care Training**

- **Delivery Trainer**

- **Nursing Simulator**

- **Trainer for the Heimlich Maneuver**

- **Endoscope / Laparoscope**
  - MATT Trainer
  - ProMIS

- **Urethral catheterization**
  - Men
  - Women

- **CPR Teddy**

- **METIMan nursing**

Also, we use actual infusion pumps, defibrillators and consumables.
Actual Performance Records

- Emergency (ACLS / BLS / ICLS)
- Training for New Nurses (ex. Multi-Task Exercise, Medical Safety Course)
- Airway Management
- Blood-drawing and IV Training
- Central Venous Catheter Training Course
- Learning How to Use the Laparoscope
- Suture Training
- Physical Examination Training with Role-playing
- Ultrasound Diagnosis
- Resuscitation of the Newborn
- Thoracostomy Tube Training
- Lumbar Puncture Training
- BSL & Advanced OSCE
- Physical Examination and Health Assessment Course for Nurses

And more...
About Our Staff

Director / Ryutaro Kawano (Professor)
I have experience as an air traffic controller and an investigator of human factors in an atomic power plant, so I have had training with simulators including air controllers and power-generating plant. Training with simulators is needed for safe and high-quality work. In the medical field, we have to increase the amount of education with simulation to keep patients safe.

Medical Director / Alan Lefor (Professor)
My areas of clinical expertise are General Surgical Oncology, Trauma Surgery and Surgical Critical Care. Simulation is an important tool in medical education, because it allows trainees to develop new skills as well as refine skills that they already have in an environment that poses no threat to the safety of patients.

Associate Medical Director / Yoshihiko Suzuki (University Lecturer)
I have worked in emergency medicine. In the emergency field, simulation programs such as BLS and ACLS are common. However, it should become more realistic for learners to use their knowledge and skills in medical practice. Simulation programs using simulators as a bridge between the real practice of medicine and medical education are needed.

Medical Simulation Engineer / Yoshikazu Asada (Research Associate)
I came here from the university with a Doctoral degree in Engineering. I operate the simulation program and create new scenarios for simulation. I am building new educational programs with Mind Map and World Café, and as well as mobile devices such as the iPad. The viewpoint of educational technology is important to improve medical education.

Simulator Maintenance Engineer / Fumito Kuno
I work in the medical simulation center for the management of instruments. I schedule training and maintenance of simulators in the center. I plan the master schedule for simulation training in each facility, such as the medical department and nursing department, and am working to make a user-friendly environment in the simulation center.