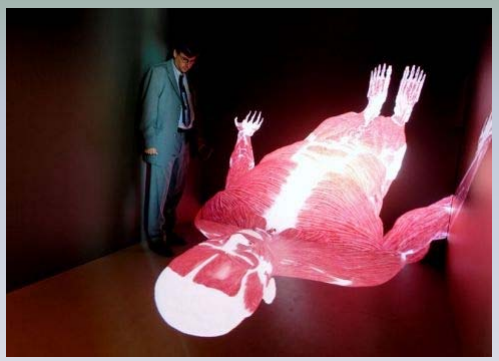
Virtual Patients

Even Better Than the Real Thing



Learning Objectives:

- Information technology, developed for gaming and social networks, has given rise to the "virtual patient." This simulation technology is being used for education and competency assessment for skills ranging from cultural competency to invasive procedures. Virtual patients offer greater standardization, scalability, and cost-effectiveness.

This presentation will help participants understand:

- An overview of computer-based patient simulation.
- Trends in the adoption of patient simulation technology.
- Global efforts to develop virtual patient standards and their benefits.
- Teaching palpation with virtual patients.

Simulation

- A process that attempts to mimic or emulate a system, environment or circumstance.
- For situations involving stress or risk.

Simulation learning assists:

- Competency based assessment
- Competency based learning
- Evaluation of communication skills
- Evaluation of procedural skills
- Foster collaboration in health
- Improve health care

Competency

- the ability to apply knowledge, skills and values to relevant workplace/study-place environments based on the standards/success criteria required by that environment
- a marriage between knowledge and skill

Traditional Educational Approaches

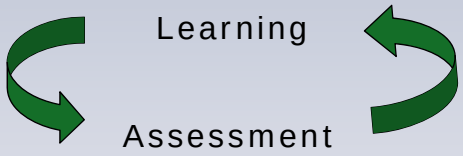
- Lecturing/Demonstrating

- Testing 'Command of Knowledge'

- Experiencing Clinical Apprenticeships

Competency-Based Instruction

- Ability to assess competency at the end of stages of the program to allow promotion, graduation
- Ability to assess competency development as students learn:

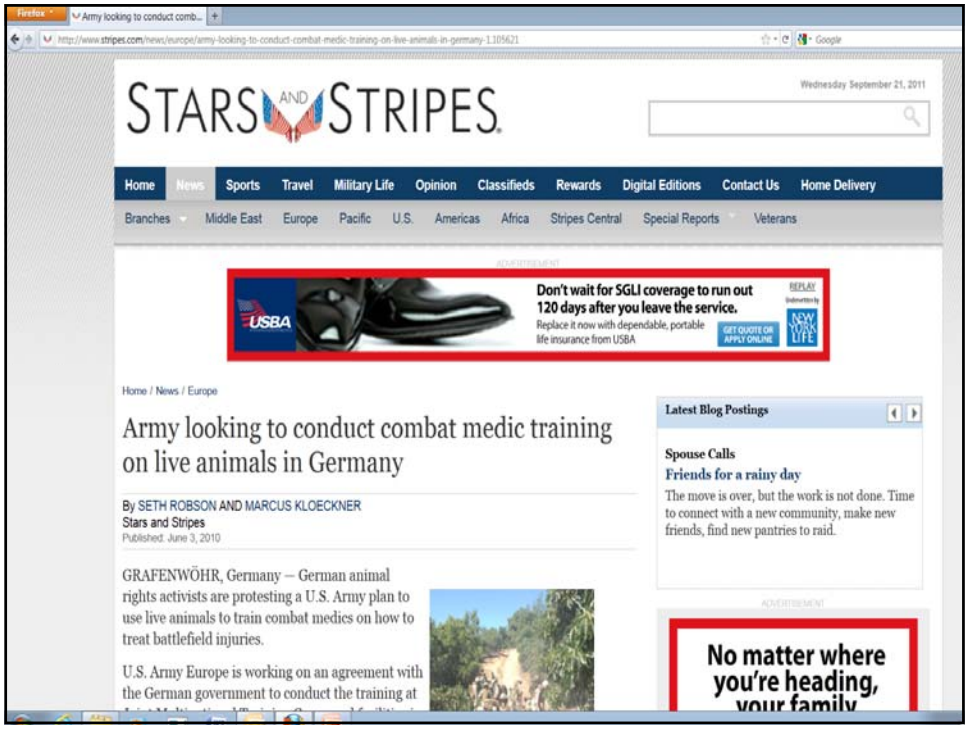


Simulation can be used to teach and evaluate:

- Clinical skills
- History taking
- Physical examination
- Doctor / patient communication
- Interpretation of tests
- Cultural sensitivity
- Procedures
- New technologies
- Educational knowledge and techniques
- Curriculum

Simulation Tools

- Animal models



STARS AND STRIPES

Wednesday September 21, 2011

Home | News | Sports | Travel | Military Life | Opinion | Classifieds | Rewards | Digital Editions | Contact Us | Home Delivery

Branches | Middle East | Europe | Pacific | U.S. | Americas | Africa | Stripes Central | Special Reports | Veterans

Don't wait for SGLI coverage to run out 120 days after you leave the service.
Replace it now with dependable, portable life insurance from USBA
GET QUOTE OR APPLY ONLINE
USBA
NEW YORK LIFE

Home / News / Europe

Army looking to conduct combat medic training on live animals in Germany

By SETH ROBSON AND MARCUS KLOECKNER
Stars and Stripes
Published: June 3, 2010

GRAFENWÖHR, Germany – German animal rights activists are protesting a U.S. Army plan to use live animals to train combat medics on how to treat battlefield injuries.

U.S. Army Europe is working on an agreement with the German government to conduct the training at

Latest Blog Postings

Spouse Calls
Friends for a rainy day
The move is over, but the work is not done. Time to connect with a new community, make new friends, find new pantries to raid.

No matter where you're heading, your family

PCRM

PHYSICIANS COMMITTEE FOR RESPONSIBLE MEDICINE

HOME | ABOUT PCRM | DONATE | SEARCH

- HEALTH AND NUTRITION
- ETHICAL RESEARCH & EDUCATION
  - Action Alerts
  - Education and Training
  - Research
  - Animal Testing and Alternatives
  - Health Care Professionals
- MEDIA CENTER
- LEGISLATIVE FOCUS
- CLINICAL RESEARCH
- FACT SHEETS AND FAQS
- MEMBERSHIP
- SHOP

Medical Schools with No Live Animal Laboratories

Please note that this list includes only schools that do not use live animal laboratories to train medical students and does not refer to basic research that may be conducted at medical schools and universities.

Osteopathic medical schools are denoted with *

- *A.T. Still University Kirksville College of Osteopathic Medicine
- *A.T. Still University School of Osteopathic Medicine in Arizona
- Albany Medical College
- Albert Einstein College of Medicine of Yeshiva University
- *Arizona College of Osteopathic Medicine of Midwestern University
- Baylor College of Medicine
- Boston University School of Medicine
- Brody School of Medicine at East Carolina University
- Brown University School of Medicine
- Case Western Reserve University School of Medicine
- *Chicago College of Osteopathic Medicine of Midwestern University
- Columbia University College of Physicians and Surgeons

Medical School Curricula WI Live Animal Laboratories

Medical School Curricula WI NO Live Animal Laboratories

American Medical Student Association Position

Replacing Animal Laboratori in Medical Education: What Can Do

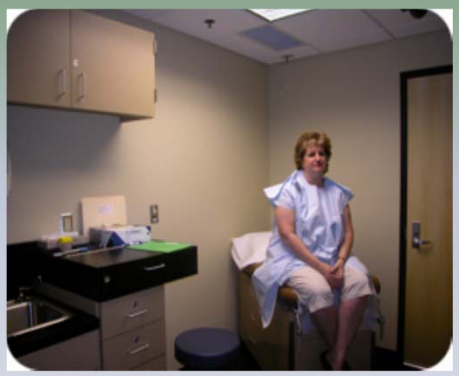
Literature on Animal Laboratories

FAQ: Animal Use in Medical

Simulation Tools

- Animal models
- Standardized patients

Standardized Patients



Standardized Patients: Web-based Assessment

Simulation Tools

- Animal models
- Standardized patients
- Synthetic models and mannequins

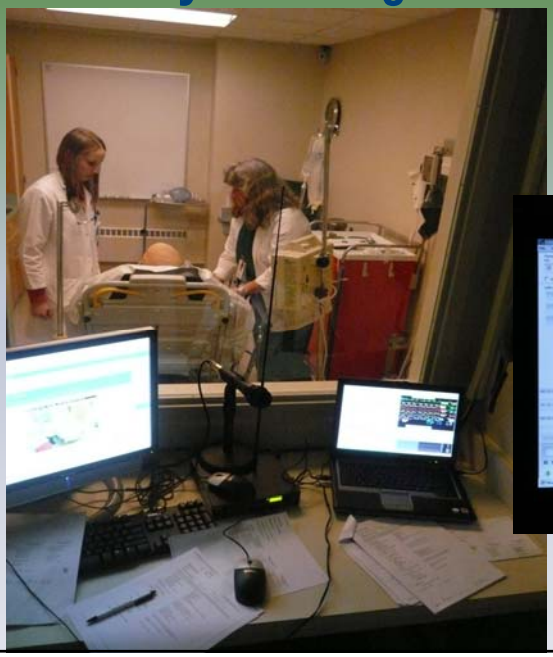
Resusci Anne

Simulation Tools

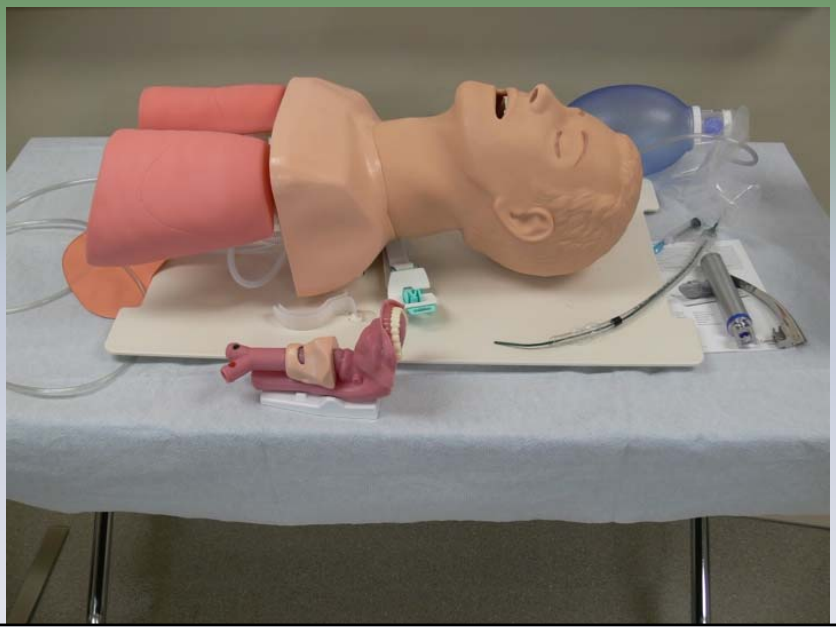
- Animal models
- Standardized patients
- Synthetic models and mannequins
- Computer-driven synthetic models and mannequins

Inpatient Simulation Rooms

Faculty Viewing Room



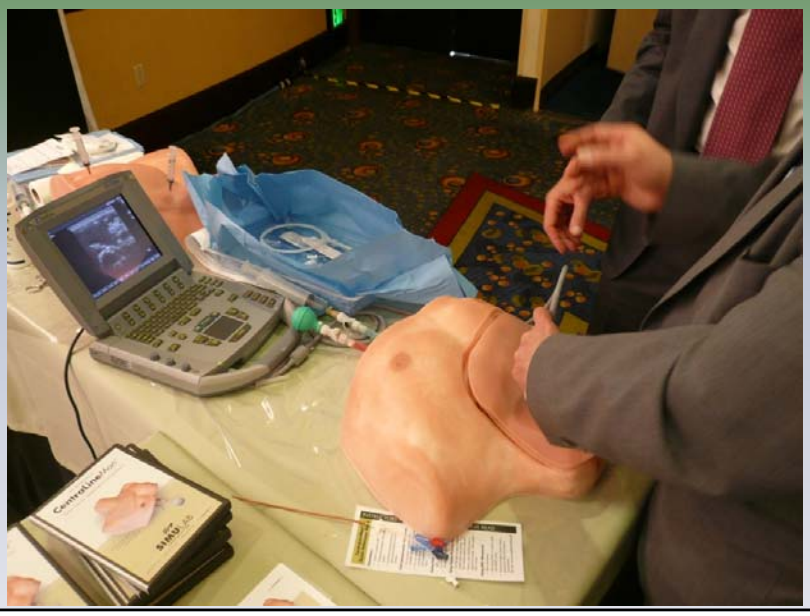
Simulation Tools: Intubation



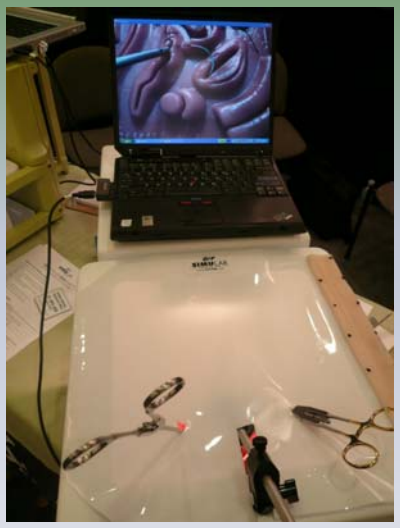
Learning how to intubate:

QuickTime™ and a
decompressor
are needed to see this picture.

Ultrasound guided central lines



Laparoscopic trainers

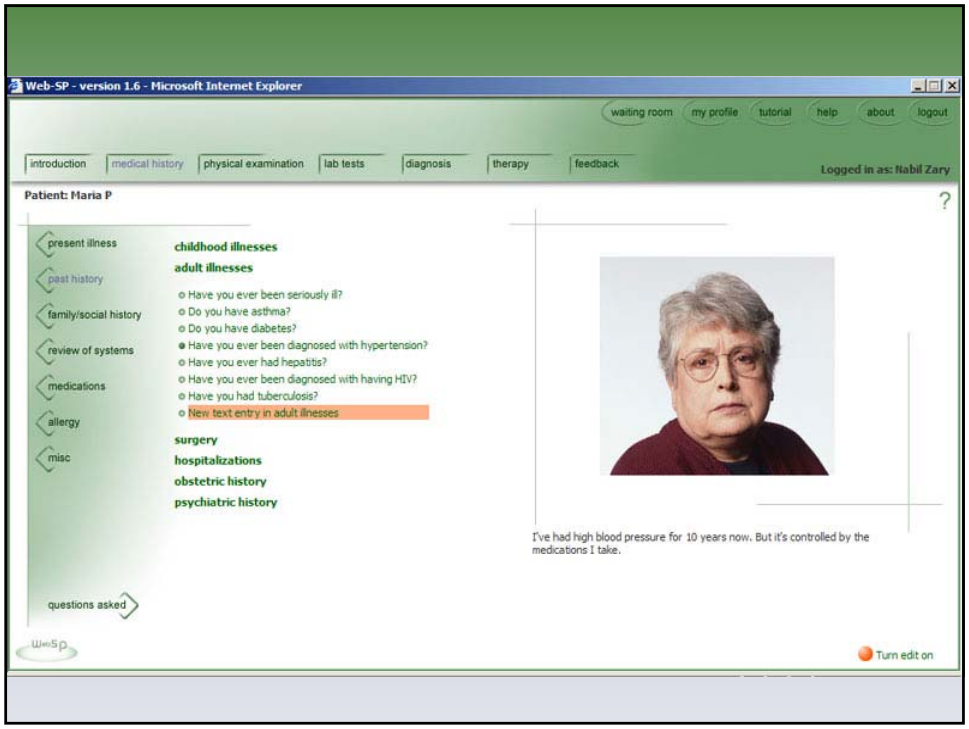


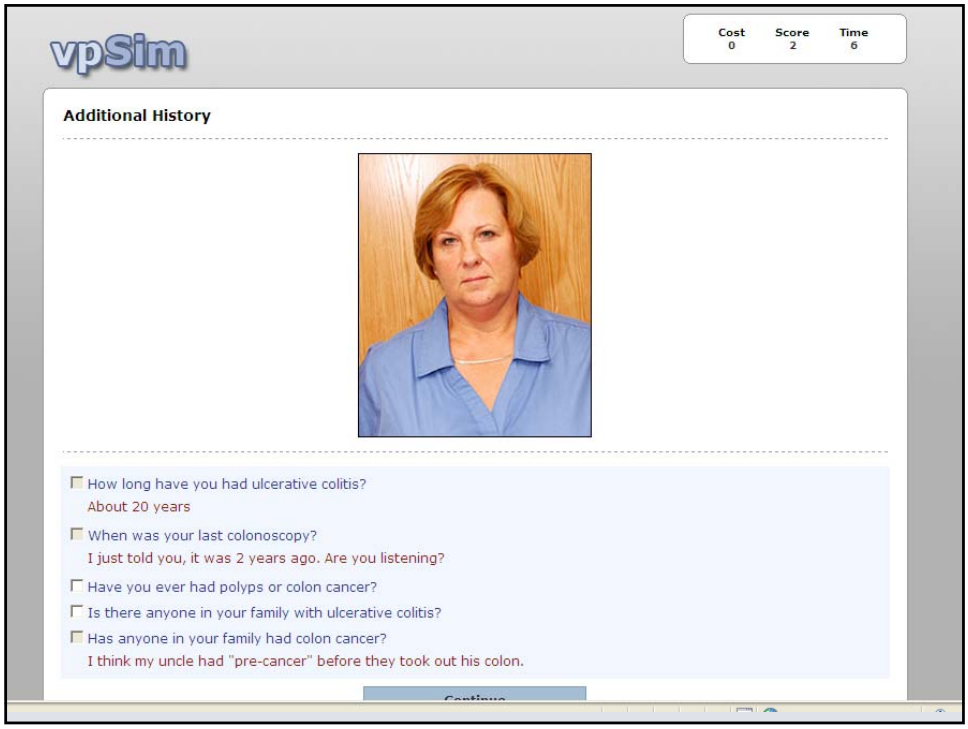
Simulation Tools

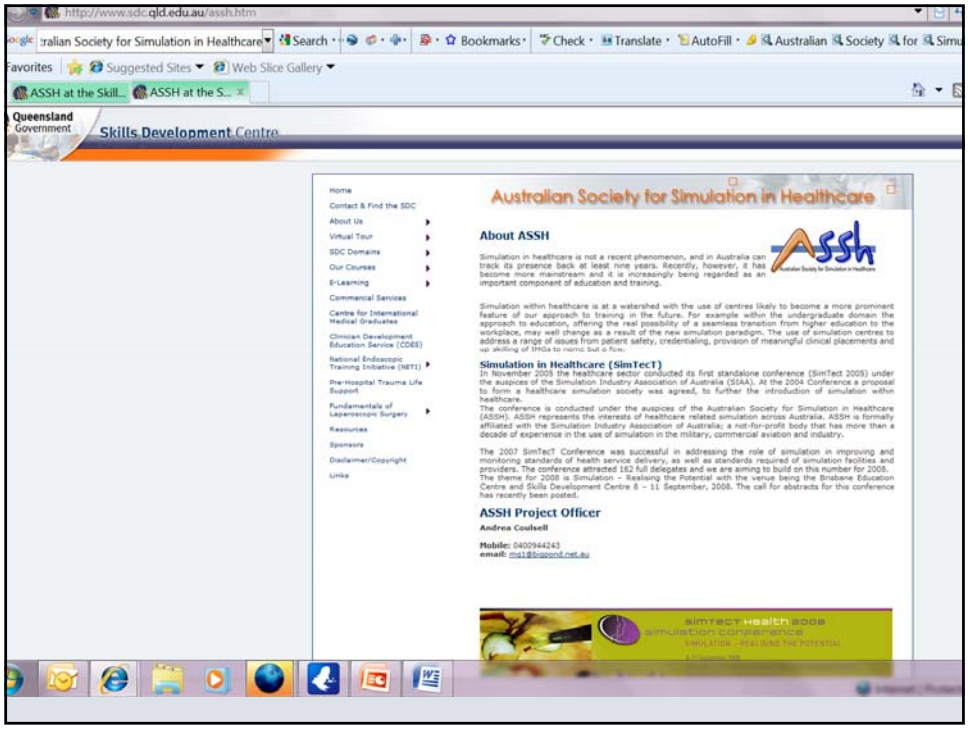
- Animal models
- Standardized patients
- Synthetic models and mannequins
- Computer-driven synthetic models and mannequins
- Virtual patients

Virtual Patients

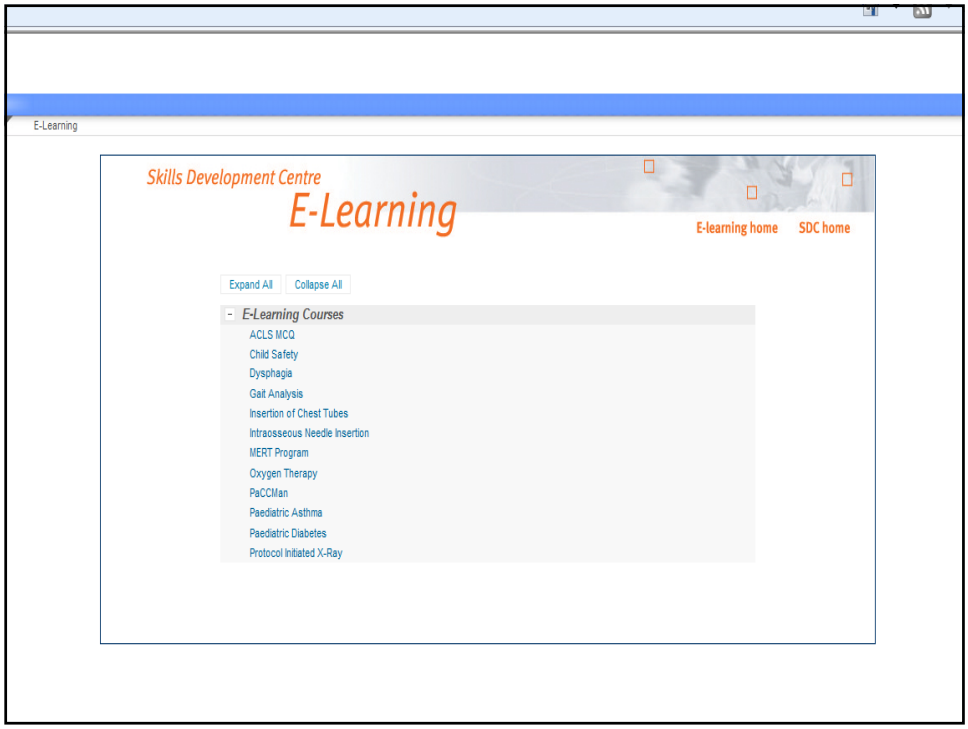
An interactive computer simulation of real-life clinical scenarios for the purpose of medical training, education, or assessment.




vpSim
Cost 0
Score 2
Time 6
Additional History
How long have you had ulcerative colitis?
About 20 years
When was your last colonoscopy?
I just told you, it was 2 years ago. Are you listening?
Have you ever had polyps or colon cancer?
Is there anyone in your family with ulcerative colitis?
Has anyone in your family had colon cancer?
I think my uncle had "pre-cancer" before they took out his colon.


Queensland Government
Skills Development Centre
Australian Society for Simulation in Healthcare
About ASSH
Simulation in Healthcare (SimTecT)
ASSH Project Officer
Andrea Coulsell

Home
Contact & Find the SDC
About Us
Virtual Tour
SDC Domains
Our Courses
E-Learning
Commercial Services
Centre for International Medical Graduates
Clinician Development Education Service (CDES)
National Endoscopic Training Initiative (NETI)
Pre-Hospital Trauma Life Support
Fundamentals of Laparoscopic Surgery
Resources
Sponsors
Disclaimer/Copyright
Links
Queensland Health
Skills Development Centre
Queensland Government
See one . . .
Sim one . . .
Safe practice
capability
safety
innovation


E-Learning
Skills Development Centre
E-Learning
E-learning home
SDC home
Expand All
Collapse All
E-Learning Courses
ACLS MCQ
Child Safety
Dysphagia
Gait Analysis
Insertion of Chest Tubes
Intraosseous Needle Insertion
MERT Program
Oxygen Therapy
PaCCMan
Paediatric Asthma
Paediatric Diabetes
Protocol Initiated X-Ray

Immersive simulations—Second Life

- Virtual world
- Avatars
- Multiple participants
- Interactive
- Build infrastructure

Can Training in Second Life Teach Doctors to Save Real Lives? | Health Policy | DISCOVER Magazine - Shiretoko

File Edit View History Bookmarks Tools Help

Bookmarks | Can Training in Second Life Teach Doctors to Save Real Lives? | He...

Health & Medicine / Health Policy

Can Training in Second Life Teach Doctors to Save Real Lives?

Medical training programs are springing up in virtual reality, and they may bring big changes to the way health-care professionals learn their craft.

by Melissa Lafsky

published online July 16, 2009

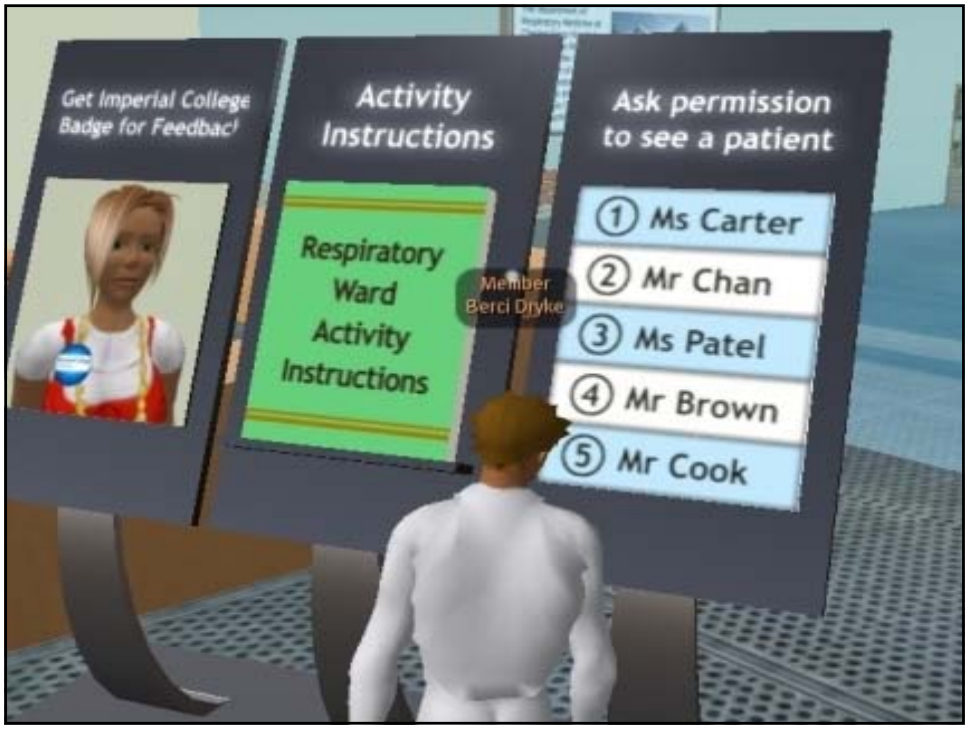
7 diggs digg it | Stumble! 4 | Yahoo! Buzz | ShareThis | A A A

An operating room in Second Life

A nursing student walks into a hospital room where a woman who has just given birth is lying in bed. When the student asks how the new mother is feeling, she admits that she is dizzy, and might need to be sick. Preparing to examine her, the student pulls back the sheet and finds the mattress soaked with blood. The patient is experiencing a post-partum hemorrhage, and could bleed to death in minutes.

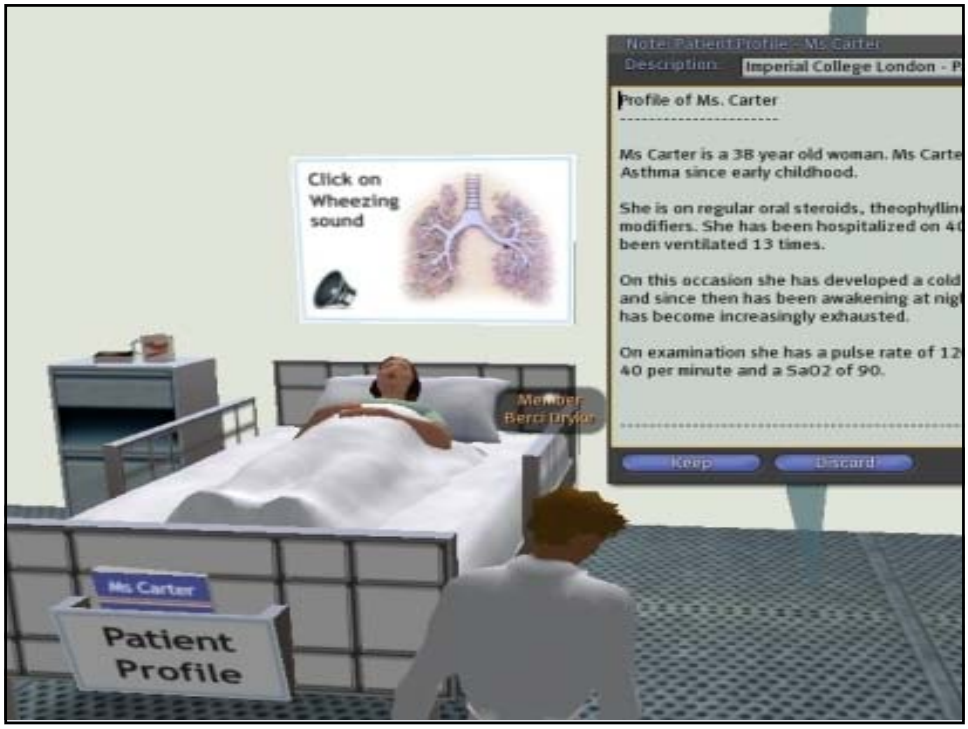
Instantly, the nurse scrambles into action—taking the woman's blood pressure, affixing an oxygen mask, starting an IV. She calls for help, and her colleagues rush into the room, yelling back and forth as they assess

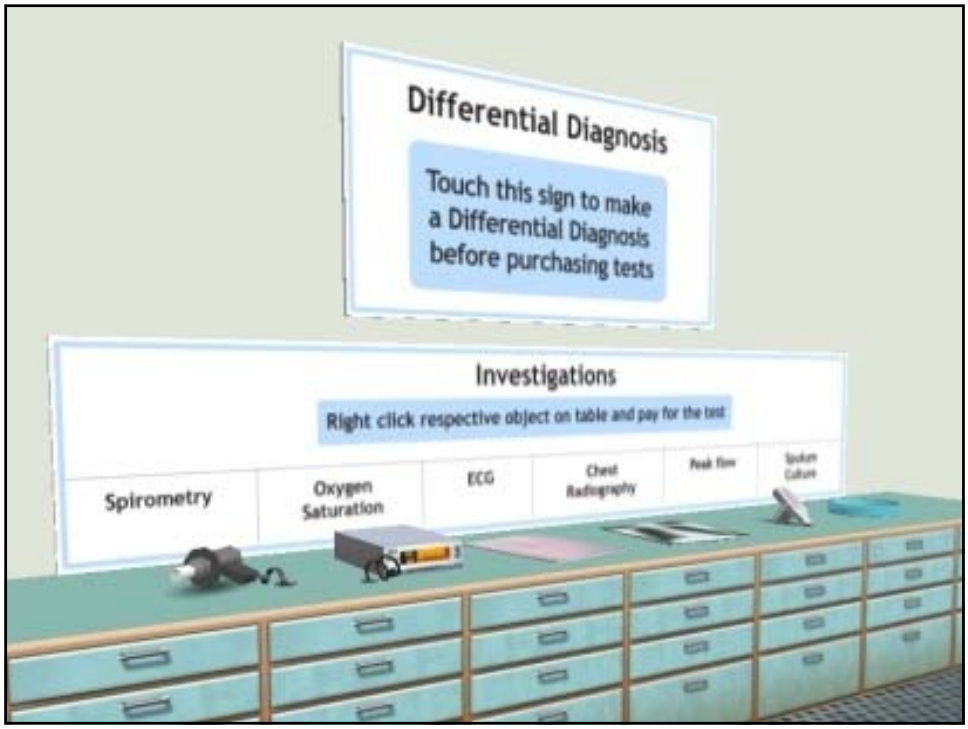
Web Slice Gallery
Virtual Training Facility

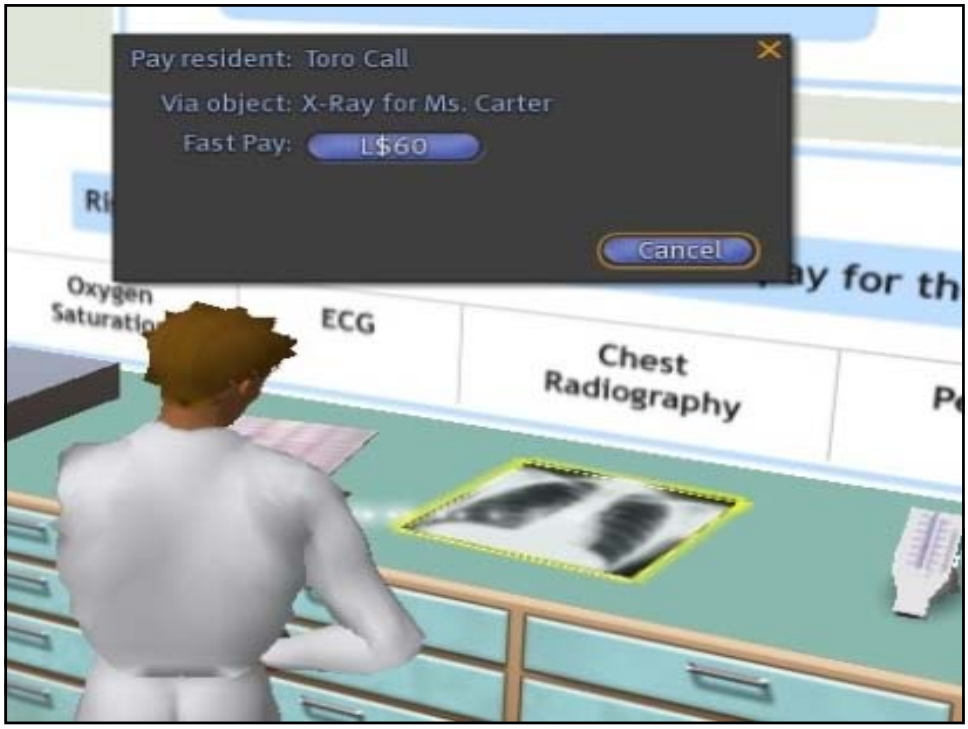

Get Imperial College Badge for Feedback
Activity Instructions
Respiratory Ward Activity Instructions
Ask permission to see a patient
1 Ms Carter
2 Mr Chan
3 Ms Patel
4 Mr Brown
5 Mr Cook

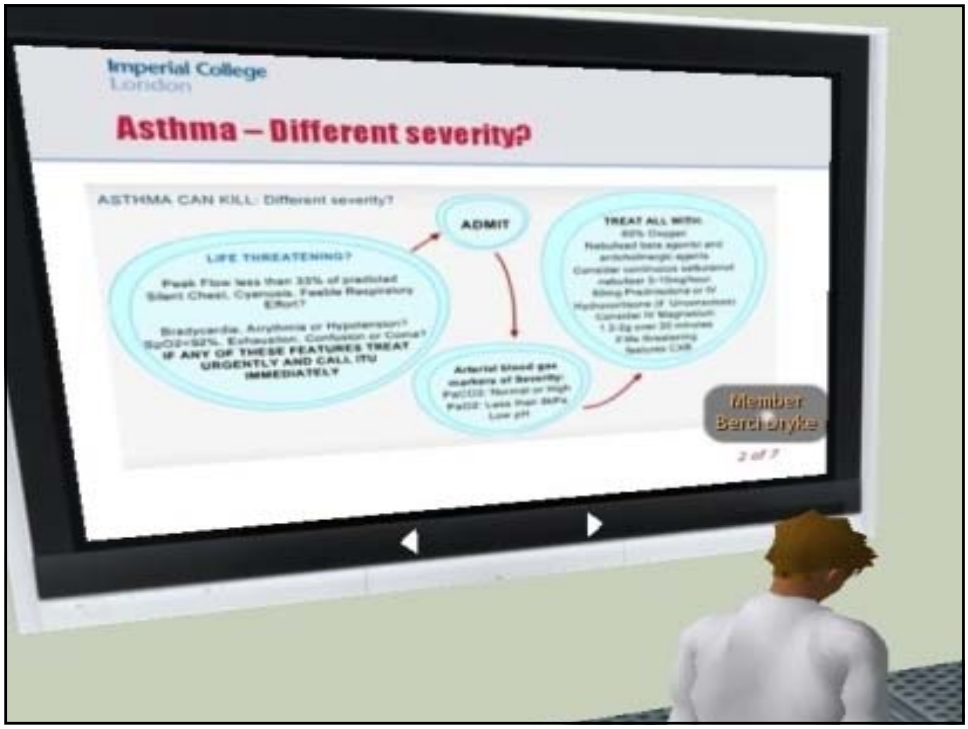
Wash your hands!
Member Berci Dryke

Member Berci Dryke


Click on Wheezing sound
Description
Imperial College London - P
Profile of Ms. Carter
Ms Carter is a 38 year old woman. Ms Carte
Asthma since early childhood.
She is on regular oral steroids, theophyllin
modifiers. She has been hospitalized on 4
been ventilated 13 times.
On this occasion she has developed a cold
and since then has been awakening at nig
has become increasingly exhausted.
On examination she has a pulse rate of 12
40 per minute and a SaO2 of 90.
Keep
Discard
Ms Carter
Patient Profile


Differential Diagnosis
Touch this sign to make a Differential Diagnosis before purchasing tests
Investigations
Right click respective object on table and pay for the test
Spirometry
Oxygen Saturation
ECG
Chest Radiography


Pay resident: Toro Call
Via object: X-Ray for Ms. Carter
Fast Pay: L$60
Cancel
Oxygen
ECG
Chest
Radiography


Imperial College
London
Asthma – Different severity?
ASTHMA CAN KILL: Different severity?
ADMIT
LIFE THREATENING?
TREAT ALL WITH:
Member
Berti Dryke

MedBiquitous Mission

To advance healthcare education through technology standards that promote professional competence, collaboration, and better patient care.

Not-for-profit, member-driven, standards development organization

MedBiquitous Goals

- Better tracking and evaluation of professional education and certification activities
- Easier discovery of relevant education and information resources when and where needed
- Interoperability and sharing of high quality online education
- Coordination and tracking of competence assessment data

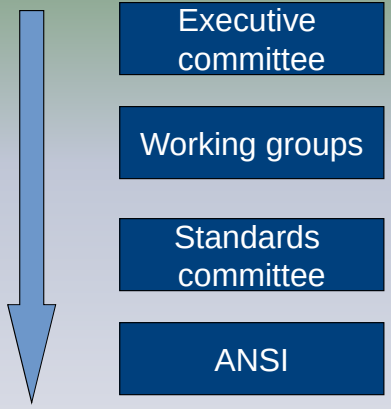
Fast Facts

- 60+ member organizations
- 8 working groups
- Work with leading organizations that can drive adoption

Standards Development Process

American National Standards Institute Accreditation

- Open
- Transparent
- Balanced
- Due process
- Quality assurance



Why Share Virtual Patients?

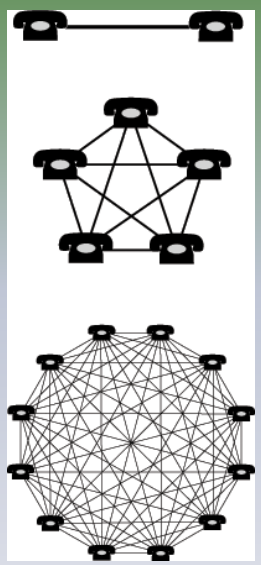
- Cost to develop
- Time to develop
- Technical, subject matter, and pedagogical expertise

Why VP technology standards?

- Leverage content developed elsewhere (VP banks)
- Coordinate develop efforts across a discipline (ex. Geriatrics Education)
- Coordinate with other learning systems (SCORM 2004)
- Provide flexibility in choosing VP authoring and delivery system (protecting your investment)

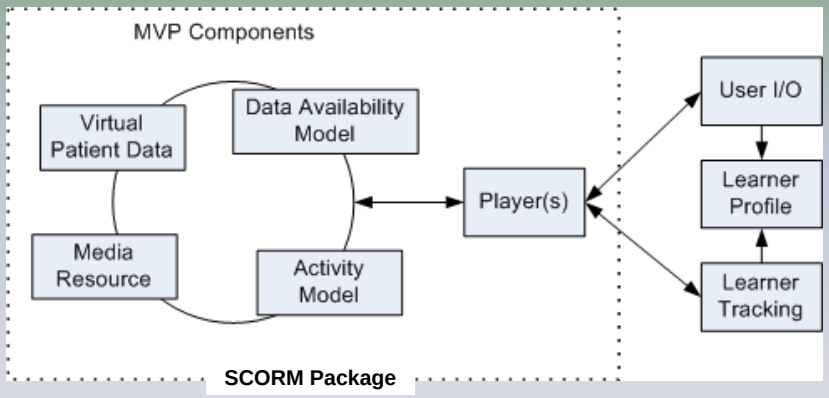
How Technology Standards for Virtual Patients Could Work

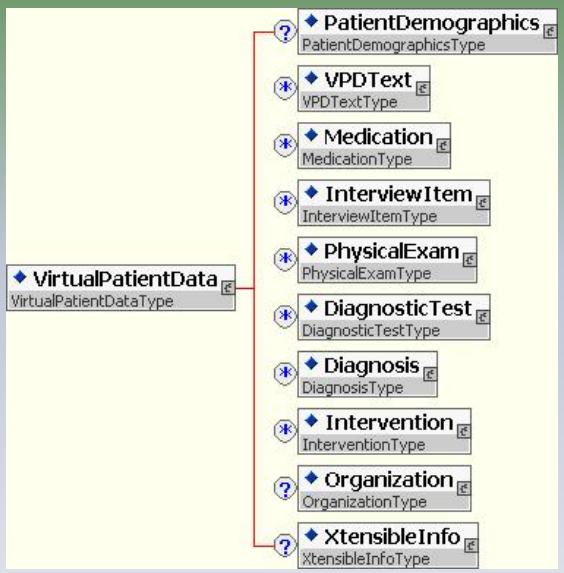
Network Effect

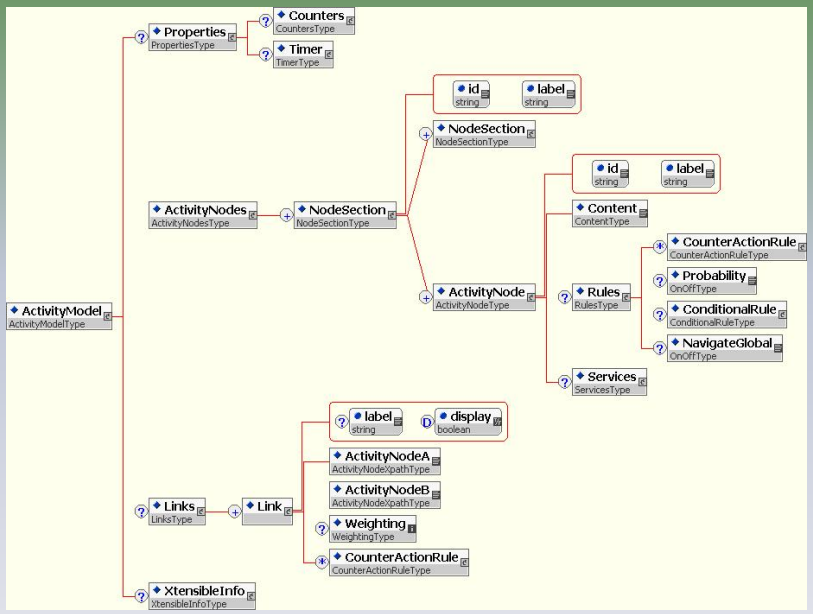


Created by Derrick Coetzee

MedBiquitous Virtual Patient Specification





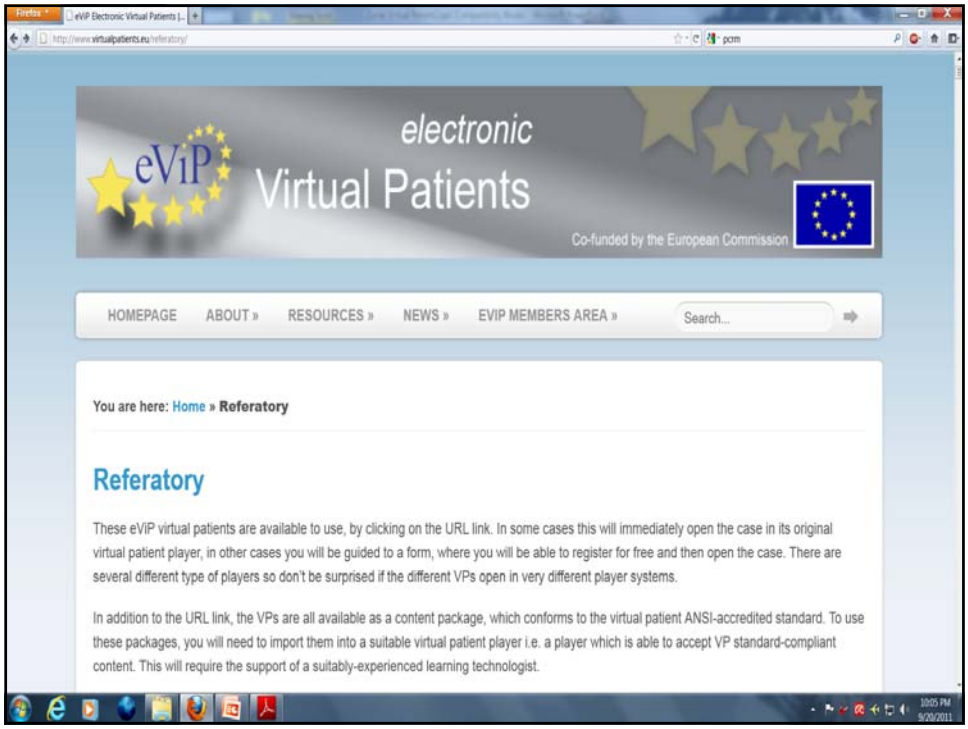


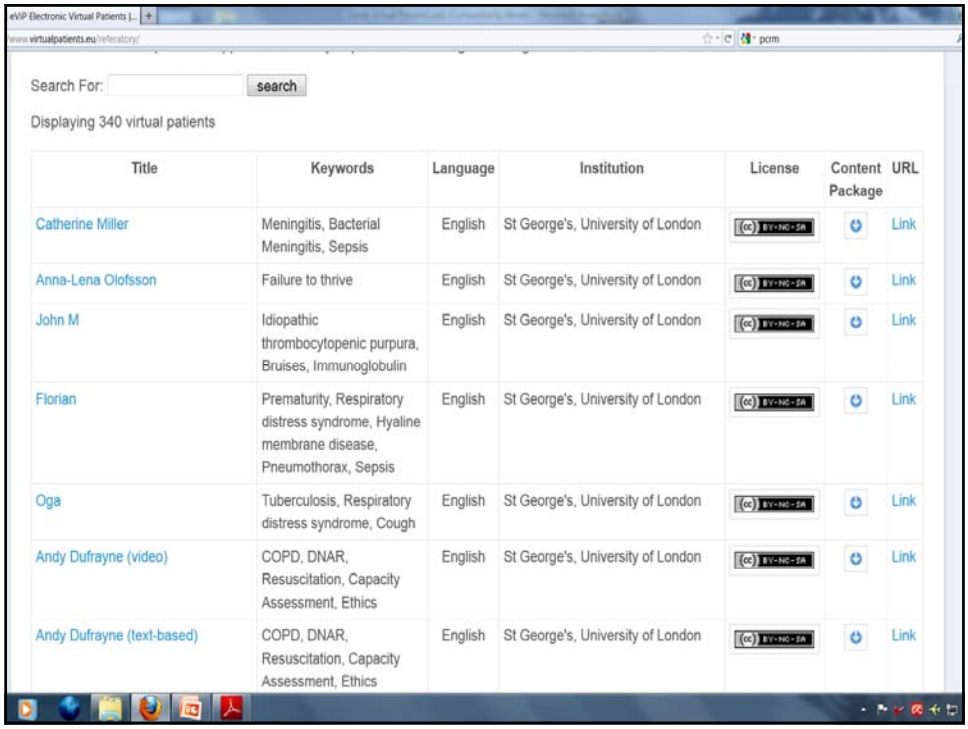
eViP

- European Union funded project - €1.4M
- 8 partner institutions
- Common bank of virtual patients
- Adapted for multilingual and multicultural use
- Enabled by MedBiquitous Virtual Patient specification

http://www.virtualpatients.eu/

electronic
Virtual Patients
Co-funded by the European Commission
HOMEPAGE
ABOUT »
RESOURCES »
NEWS »
EVIP MEMBERS AREA »
Search...
Welcome to the eViP website!
This site is dedicated to bringing you information about the eViP programme, a collaboration between nine universities and MedBiquitous Europe. eViP is co-funded by the European Commission.
eViP aims to create a bank of 320 repurposed and enriched virtual patients. These virtual patients will be available under a Creative Commons Licence.
You can also read news about developments in the eViP programme, and our coverage of meetings and events.
Contact us for further details


electronic
Virtual Patients
Co-funded by the European Commission
HOMEPAGE
ABOUT »
RESOURCES »
NEWS »
EVIP MEMBERS AREA »
Search...
You are here: Home » Referatory
Referatory
These eViP virtual patients are available to use, by clicking on the URL link. In some cases this will immediately open the case in its original virtual patient player, in other cases you will be guided to a form, where you will be able to register for free and then open the case. There are several different type of players so don't be surprised if the different VPs open in very different player systems.
In addition to the URL link, the VPs are all available as a content package, which conforms to the virtual patient ANSI-accredited standard. To use these packages, you will need to import them into a suitable virtual patient player i.e. a player which is able to accept VP standard-compliant content. This will require the support of a suitably-experienced learning technologist.



Search For: search

Displaying 340 virtual patients

Title	Keywords	Language	Institution	License	Content Package	URL
Catherine Miller	Meningitis, Bacterial Meningitis, Sepsis	English	St George's, University of London			Link
Anna-Lena Olofsson	Failure to thrive	English	St George's, University of London			Link
John M	Idiopathic thrombocytopenic purpura, Bruises, Immunoglobulin	English	St George's, University of London			Link
Florian	Prematurity, Respiratory distress syndrome, Hyaline membrane disease, Pneumothorax, Sepsis	English	St George's, University of London			Link
Oga	Tuberculosis, Respiratory distress syndrome, Cough	English	St George's, University of London			Link
Andy Dufrayne (video)	COPD, DNAR, Resuscitation, Capacity Assessment, Ethics	English	St George's, University of London			Link
Andy Dufrayne (text-based)	COPD, DNAR, Resuscitation, Capacity Assessment, Ethics	English	St George's, University of London			Link

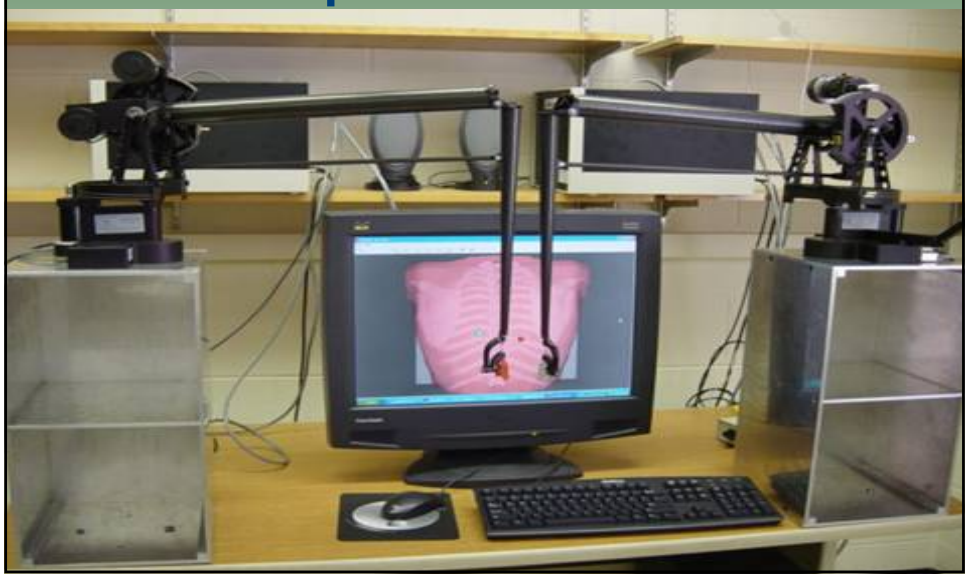
Simulation Tools

- Animal models
- Standardized patients
- Synthetic models and mannequins
- Computer-driven synthetic models and mannequins
- Virtual patients
- Virtual reality

Military Virtual Reality

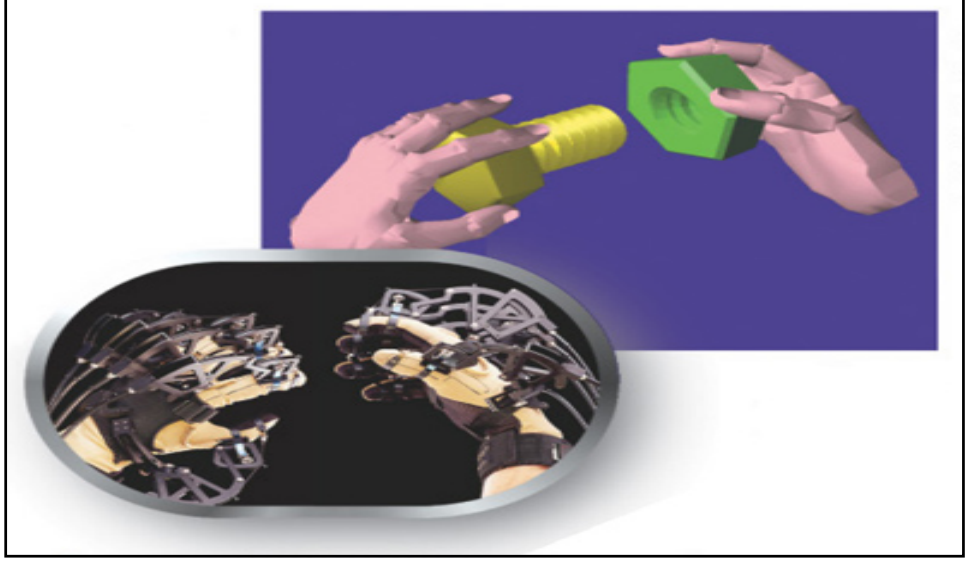
VR display

Virtual Haptic Back

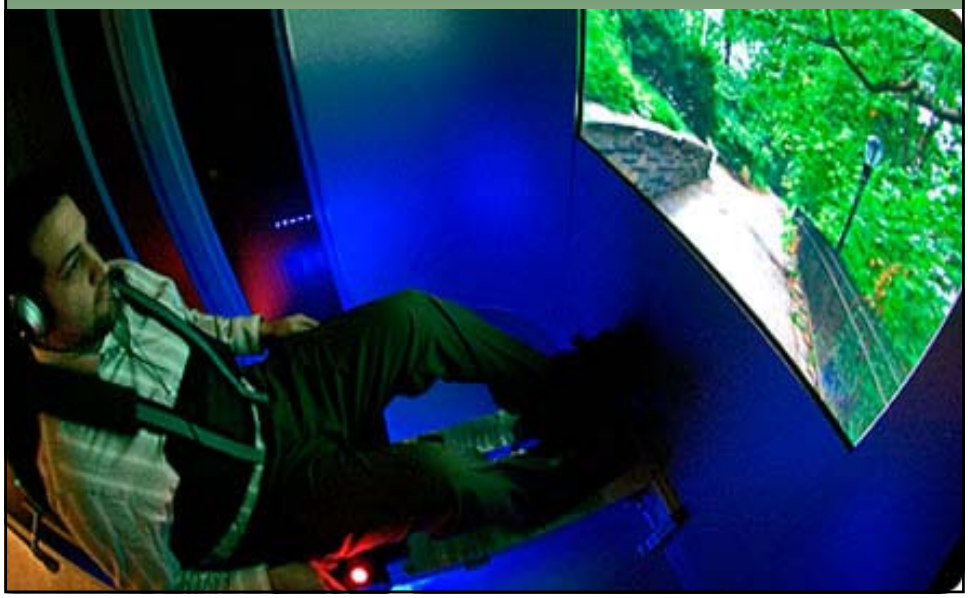


VHB Ohio University

Haptic glove



Heart failure simulator



Questions?

Mike Zarski

mzarski@osteotech.org