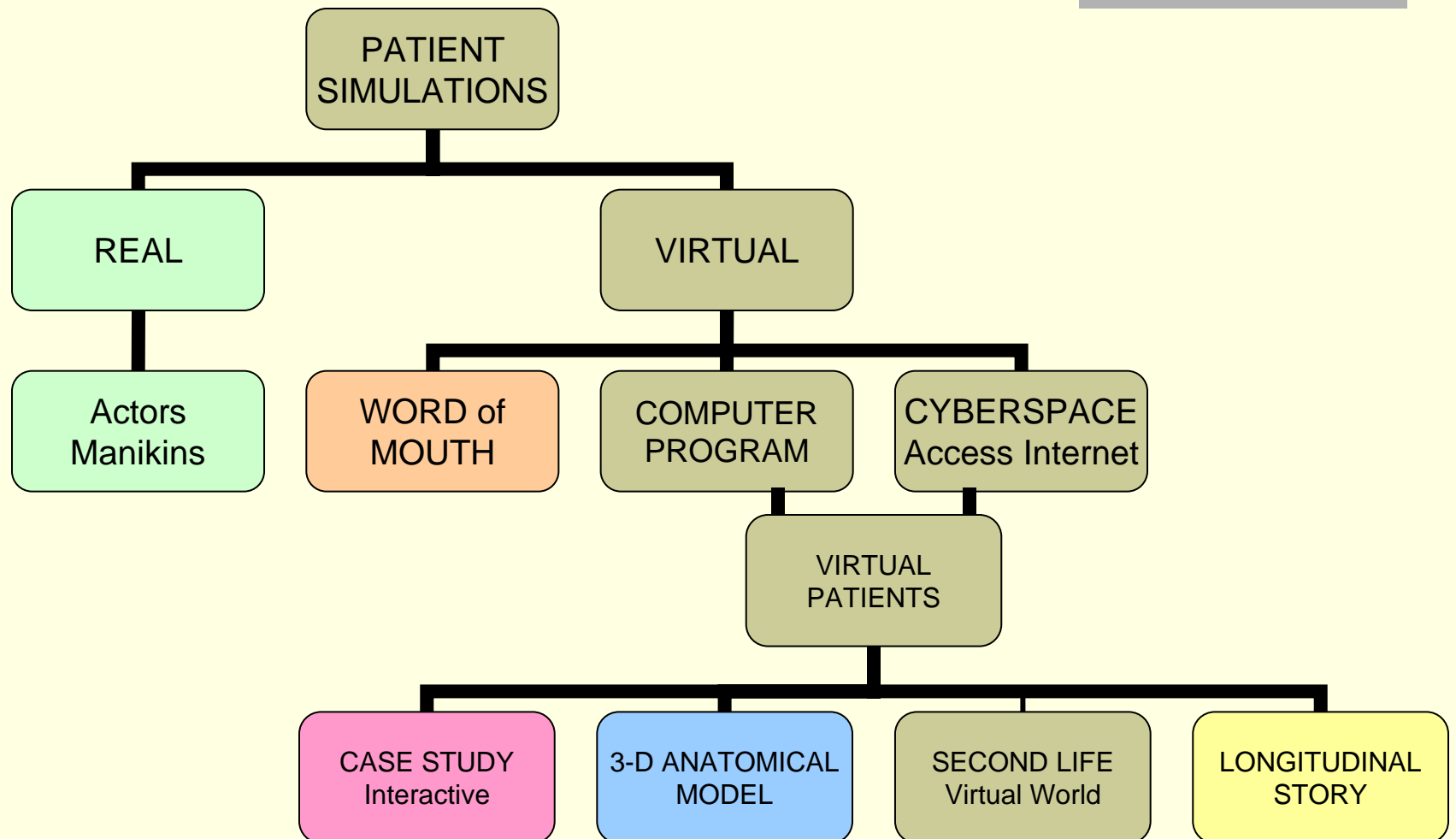# Sharing Virtual Patients with other Medical Schools
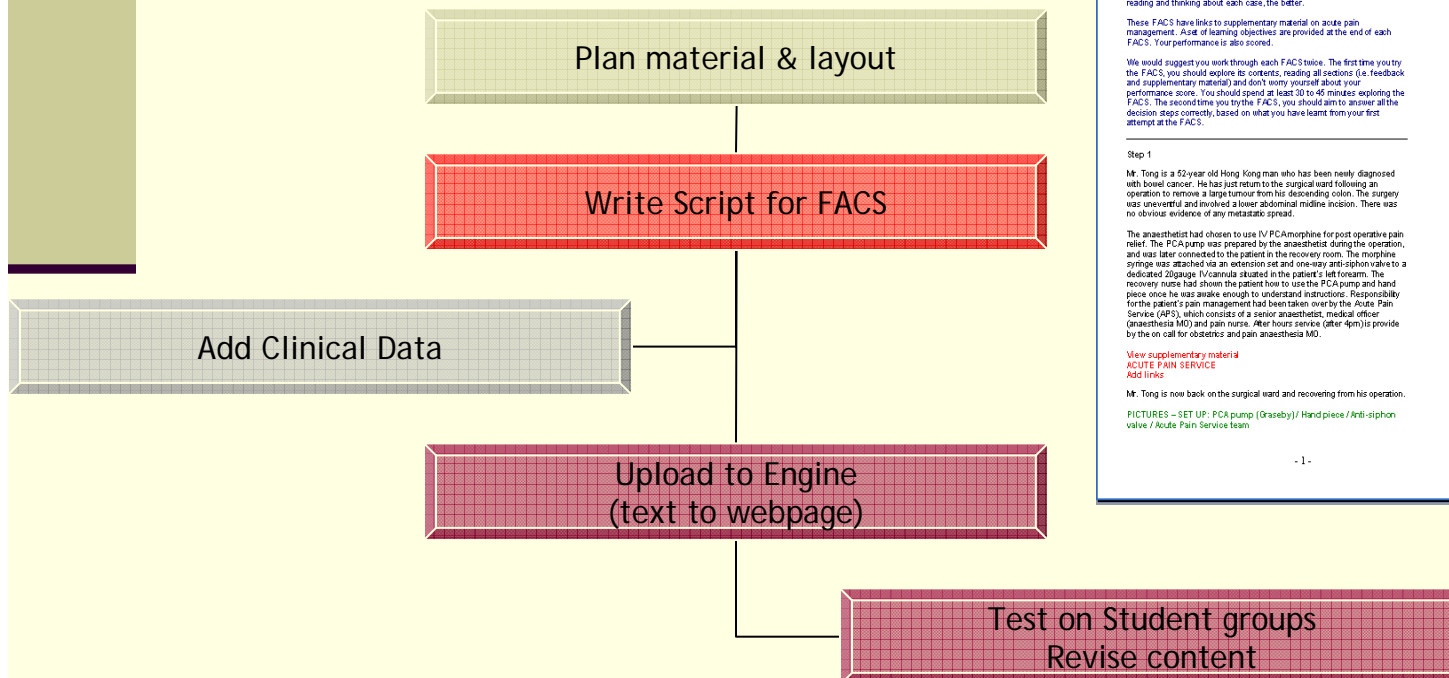
Professor Lester AH Critchley
Dept. Anaesthesia & Intensive Care
Faculty of Medicine
The Chinese University of Hong Kong

What is a Virtual Patient?

Good VPs are difficult to create.

- Time consuming
- Experts in content
- Skill / Experience to write
- Expensive

One solution is SHARING cases:
But with whom can we share?

- Europe – 4 well developed systems
  - CASUS Player
  - CAMPUS
  - WebSP
  - Open Labyrinth

Click on the map for information about eViP partners

- North America – 3 or 4 systems
  - McGill University, VP
  - Maryland VP
  - Pittsburgh University, vpSim
  - NetWoRM (CASUS / multicenter / occupational M)
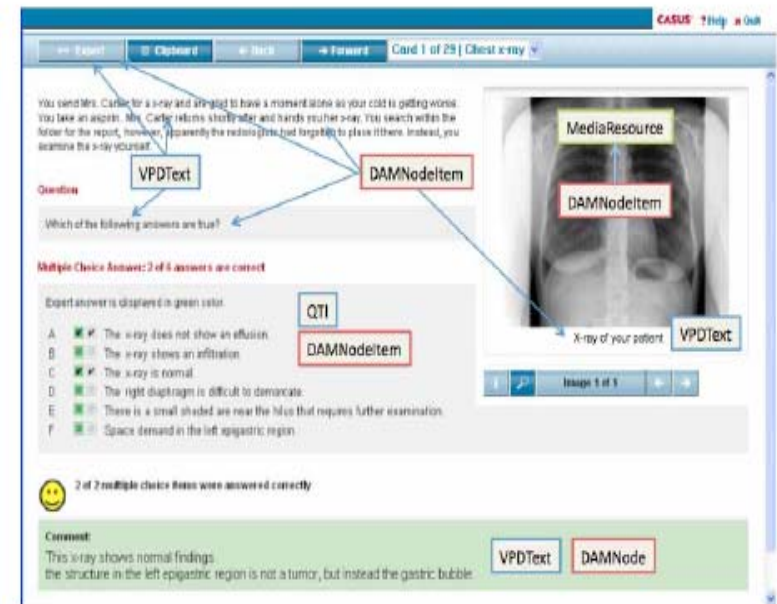
- SE Asia – Hong Kong (FACS & VP) & Taiwan VP

CACUS Player
Munich, Germany

- Since 1993
- Linear design
  - Series of web-pages
  - 9 different question types
    - Scoring system
  - 6 different languages
- 1000 cases
  - Including 125 Law Schools cases

Web-SP
Web-based Simulation of Patients
Dept.of Learning, Informatics, Management & Ethics (LIME)

waiting room | my profile | tutorial | help | about | logout

introduction | medical history | physical examination | lab tests | diagnosis | therapy | feedback

Logged in as: Nabil Zary

Patient: Maria P

- present illness
- past history
- family/social history
- review of systems
- medications
- allergy
- misc

childhood illnesses

adult illnesses

- o Have you ever been seriously ill?
- o Do you have asthma?
- o Do you have diabetes?
- ● Have you ever been diagnosed with hypertension?
- o Have you ever had hepatitis?
- o Have you ever been diagnosed with having HIV?
- o Have you had tuberculosis?
- o New text entry in adult illnesses

surgery

hospitalizations

obstetric history

psychiatric history

I've had high blood pressure for 10 years now. But it's controlled by the medications I take.

questions asked

Turn edit on

CAMPUS
Heidelberg, Germany

- Since 1997
- Clinical Case Design / Linear
  - Classic-Player & Card-Player
    - Case Diagnosis
- Non- Commercial / University funded
- Major users
  - Paediatrics

Virtual Patients

Virtual patients are an interactive, realistic, computer based simulation of patient care, with the goal of simulating real-life medical practice. Virtual patient cases can be used to begin the education into a medical speciality, as an indepth review, as continuing education, or as a testing modality.

CAMPUS system virtual patients are continually evaluated revised and improved by our centre. CAMPUS centre virtual patients are in use at Heidelberg University and many other German and international institutions.

Further information may be found under "CAMPUS-Software".__
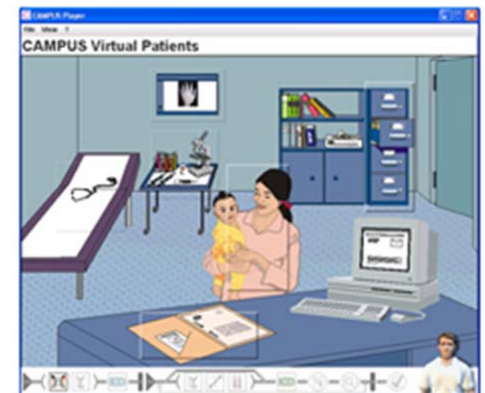
Screenshot CAMPUS-Software

Reasons for the implementation of virtual patients:

Play systems

- Design:
  - LINEAR (serial)
    - CACUS, CAMPUS
  - BRANCHING
    - Open Labyrinth

- Navigate the system
  - forward only
  - back & forth
  - loops / network

- *Similarities to FACS*

History / Exam

Lab. Data → Alternative Diagnosis

Diagnosis

Management

Management Plan 2

Outcome
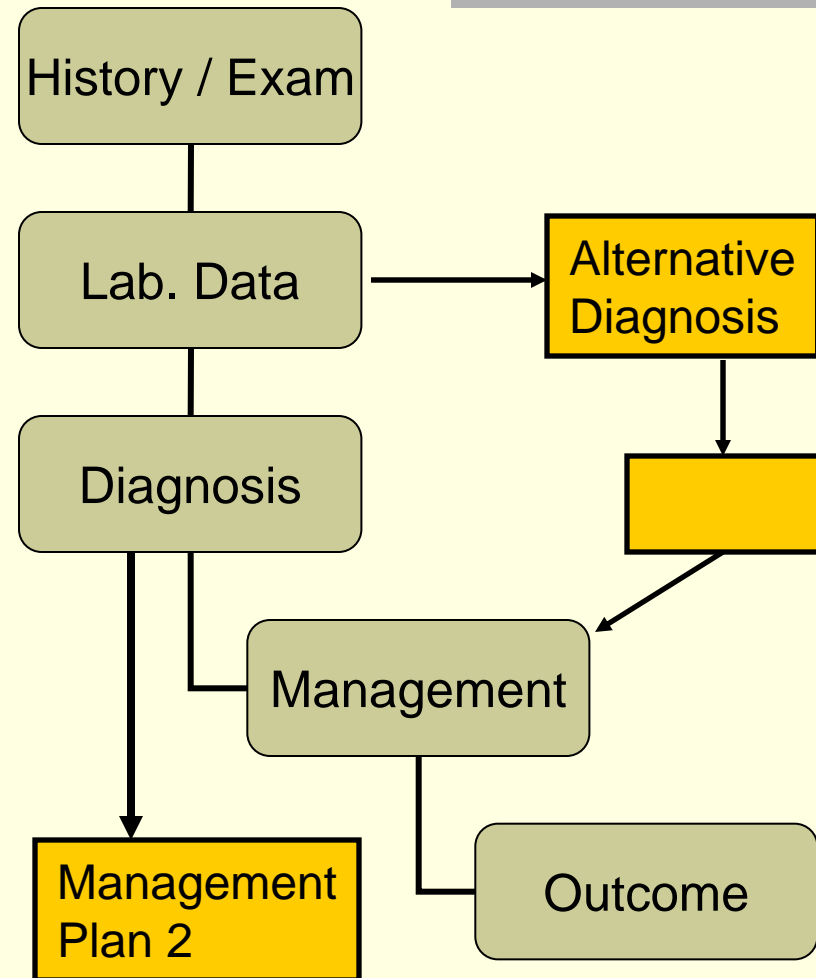
Patient Presentation

St. George's Medical School, London, UK
Design for use in PBL tutorials
G4 Project
Branching VPs

Mrs Pat Hurst enters the consulting room of her General Practitioner's surgery. Below is a transcript of the initial conversation between her and her GP:

GP: How old are you Pat?
Pat: I am 65.
GP: What's the problem?
Pat: Terrible backache! Really, really bad.
GP: How long have you had this for?
Pat: I've had it for quite a while. I keep thinking that it's because I've done too much work. It's so persistent now, getting out of bed is a bit difficult.
GP: You've had it for a while. Can you put some kind of estimate on that? Months? Weeks?
Pat: I've had it for months and months. It's just one of those things.
GP: As much as a year?
Pat: Could be over a year.
GP: You say it's persistent?
Pat: Yes.
GP: Day and night?
Pat: Yes.
GP: Is it enough to keep you awake at night?
Pat: Yes, very often.
GP: Is it worse when you're walking or carrying shopping?
Pat: Yes, definitely, yes.

Patient Presentation and History

Case Pathway

Review your pathway

Case Score

Can they be shared?

- YES,
  - *but problems:*
- Compatible software
  - i.e. player-systems:
  - Supports case design
- Data needs to be in transferable format:
- Other Issues:
  - Common Licenses
  - Depersonalized
  - Ownership
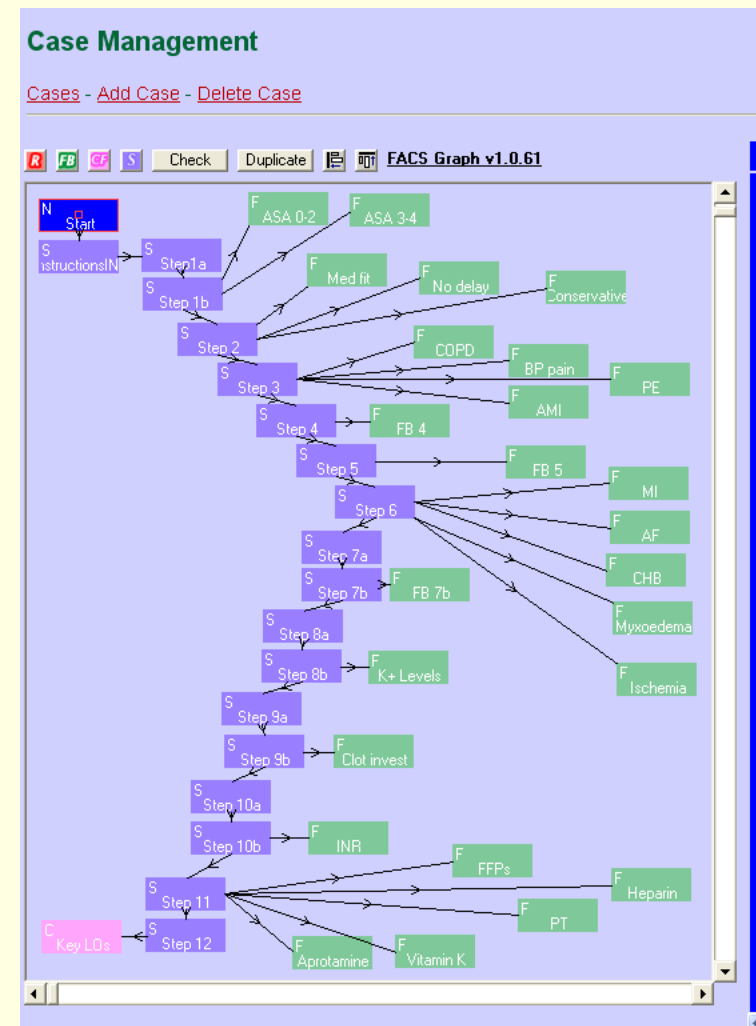
Developing Virtual Patients is like a cottage industry with many tribes and many designs

- *Quote by Rachel Ellaway*
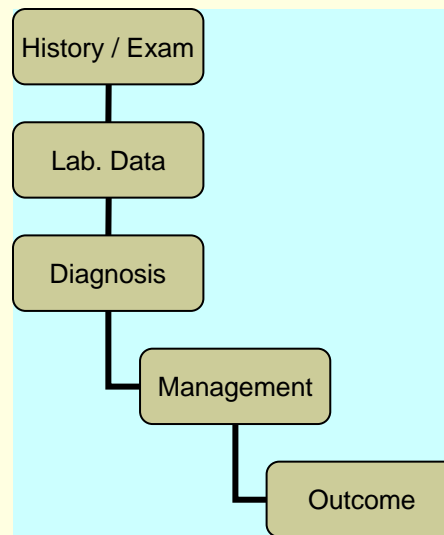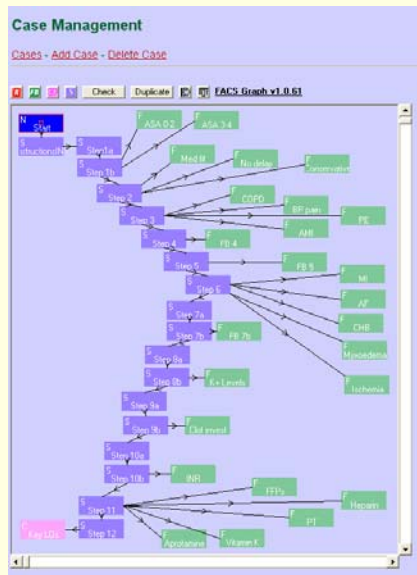
- ## We need to develop standards:
  - VP Players
  - Authoring cases

MedBiquitous ▸ **WORKING GROUPS**

Enabling collaboration for healthcare education

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SEARCH

Follow us

US Organization that sets:
Technical Standards in Health Care
***Virtual Patient Standards**

Discussion List
Virtual Patient Discussion List

Workspace
Virtual Patient Working Group Wiki

Documents
- Virtual Patient Data Draft Specification (PDF, 2 MB)
- Virtual Patient Player Draft Specification (PDF 787 KB)
- Virtual Patient Schemas (ZIP 5 KB)
- Working Group Charter (PDF, 31 KB)

Co-Chairs
- Rachel Ellaway, Ph.D., Northern Ontario School of Medicine
- J.B. McGee, M.D., University of Pittsburgh

Members
- Spenser Aden, Healthstream

Group of medical schools interested in developing and sharing Virtual Patients within Europe
European Union Grant for 3-year

Home   About eViP   Virtual Patients   eViP News   Resources   Contact

Welcome to eViP

Welcome the eViP website! This site is dedicated to bringing you information about the eViP programme, a collaboration between nine universities and MedBiquitous Europe.

eViP aims to create a bank of 320 repurposed and enriched virtual patients. These virtual patients will be available under a Creative Commons Licence.

All virtual patients are repurposed using MedBiquitous Virtual Patient Technical Standards.

eViP
Electronic Virtual Patients
www.virtualpatients.eu

YouTube

0:00 / 1:15

AMEE 2009
Malaga, Spain

Click here for news, commentary & analysis

Who we are

eViP Partners

eViP is a collaboration between nine universities located across Northern Europe and MedBiq
(Europe) who lead the field of technical standards and specifications for e-based healthcare
Click on the institution logo for more information.

Click on the map for information about eViP partners

eViP Associates

eViP also works closely with MedBiquitous (Europe), the University of Northern Ontario in Canada, and is co-funded by the European Union. Click on the logos below for more information.

Aims of eViP

- Create a bank **320 reusable** VPs
  - Develop **Technical standards**
  - **Repurpose** existing cases

- Contact *"like minded"* centers
  - 1st International Conference
    - Krakow, Poland - June 2009
    - London, England - April 2010

Developing reusable cases
Repurpose & Enrichment

- Dr. A in country B has a case that I would like to use on my course to teach my students

- *However!!!*
  - The case is written in German not English
  - Some of the histology slides need improving
  - The picture with a religious cross may be offensive to my muslin students
  - Should I be using photos that may identify the patient?

Repurpose & Enrichment

Strip the CASE down to basic structure & contents

Enrich it with new pictures & laboratory data

Depersonalize & remove any cultural aspects

Translate into different languages

Make it available in a bank of cases / VPs

Conforms to MedBiquitous standards format

Now I can import the case into my system and use it

Ownership of cases:

- "I have put a lot of time and effort into developing my VP cases".

- "How do I get credit for all my hard work?"

Authoring Virtual Patients:
Association of American Medical Colleges

- **MedEdPORTAL** (www.aamc.org/mededportal) is a free **peer-reviewed publication service** and **repository** for medical and oral health teaching materials, assessment tools, and faculty development resources.

- All copyright and patient privacy issues are addressed during the submission process so users around the globe can download and utilize any and all of the published resources for educational purposes without legal infringements.

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News

Notes from the Editor

MedEdPORTAL strives to maintain a comprehensive pool of expert reviewers. At this time MedEdPORTAL is asking the community to nominate reviewers for the following specialty areas: Pediatrics, Anesthesiology, Neurology, General Surgery, Dermatology, and Psychiatry.

MedEdPORTAL Recognizes Published Authors and Peer Reviewers

In the summer of 2008, MedEdPORTAL mailed formal thank you letters to each reviewer who had completed a review within the prior academic year. Based on the positive feedback that was received from this effort, MedEdPORTAL decided to repeat this annually to recognize these individuals and their invaluable contributions to the program. MedEdPORTAL would like to extend our thanks to our reviewers once again for volunteering their time and expertise in order to ensure the quality of each and every MedEdPORTAL publication.

AAMC 2009 Annual Meeting: The MedEdPORTAL Agenda

The Association of American Medical Colleges (AAMC) will host its 2009 annual meeting in Boston, MA from November 6-11, 2009. These sponsored sessions will be held at the Hynes Convention Center, Marriott Copley Place, and Sheraton Boston. MedEdPORTAL ® will conduct sessions which will take place on Saturday, November 7, 2009, in the Hynes Convention Center.

Read More News

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Featured Publications

Unprofessional Behaviors Identified by SPs During an OSCE
Eric Alper, MD
University of Massachusetts
*Special Clearance Required

Pediatric Medical Spanish Vignettes
Angelika Rampal, MD
University of California Los Angeles David Geffen SOM

Fixed Prosthodontic Learning Dossier Assignment
Vanessa L. Swain, DMD, MSc
University of Manitoba Faculty of Dentistry

Contact Dermatitis: A Learning Module
Lauren Cao, B.S.
Case Western Reserve University School of Medicine

Browse All Publications

Featured Collections

ACER — Radiology

admsep — Psychiatry

Project L.I.V.E. — Pediatric Virtual Patients

TEAM BASED LEARNING COLLABORATIVE — Team-Based Learning

Partner Collections

ADEA — Dental

McGill Molson Medical Informatics — Multimedia Assets

Plogoe — Geriatrics

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Questions? Contact MedEdPORTAL

Monthly News

October 2009

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MedEdPORTAL Featured Publications

Notes from the Editor: The Anatomy of Peer Review

Join MedEdPORTAL for a Poster Session, Award Ceremony, and Reception

MedBiquitous Annual Conference and 2nd International Conference on Virtual Patients

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MedEdPORTAL Featured Publications

The MedEdPORTAL team would like to feature the following publications:

Scholarship of Application: When Service is Scholarship - A Workshop for Medical Educators
Linda Tewksbury, M.D.
New York University School of Medicine

Gallery of Prosthodontic Procedural Technique Videos
Ranier M. Adarve, DMD,MS, MHPE
University of Minnesota School of Dentistry

Cultural Competencies Online for Medical Practice (CCOMP): A Clinician's Guide to Reduce Cardiovascular Disparities
Carlos Estrada, MD, MS
University of Alabama School of Medicine

A Quality Improvement Curriculum for Internal Medicine Residents
Darcy A. Reed, MD, MPH
Mayo Medical School

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Published 09/29/2009

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Title: Scholarship of Application: When Service is Scholarship - A Workshop for Medical Educators

MedEdPORTAL ID#: 7734

Version: 1

Resource Type: Faculty Development Materials

Description: This workshop is designed for delivery to a group of health care educators interested in advancing their scholarship in medical education. A detailed instructors' manual provides all information necessary for facilitators to conduct the workshop. The goal of this workshop is to provide participants with practical guidance for turning their educational service into scholarship. Through this workshop, participants will develop a firm understanding of the scholarship of application, one of the four types of scholarship outlined by Ernest Boyer in 1990.

The scholarship of application involves service and the use of knowledge to solve problems of individuals or society. Examples of applying knowledge in medical education include curriculum development, clerkship restructuring, and development and implementation of evaluation tools or new programs. While medical educators typically engage in such activities, many do not recognize that such activities have the potential to qualify as scholarship. Participants will have the opportunity to go through the process of moving an educational project through the steps necessary for it to qualify as high quality scholarship, based on Glassick¿s six characteristics of scholarship. Finally, participants will have the opportunity to apply the characteristics of scholarship to their own educational endeavors and discuss opportunities for the dissemination of such work. This workshop was developed by the Research and Scholarship Task Force of Council for Medical Education in Pediatrics (COMSEP) to support and recognize scholarship of medical educators.

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Specialty/Discipline:

- Medicine: Undergraduate Medical Education

Educational Objectives:

1.) To be able to define the scholarship of application and the six characteristics of high-quality scholarship;
2.) To be able to critique, review examples of application in medical education for evidence of scholarship;
3.) To be able to apply the characteristics of scholarship to their own educational applications.

Resource Keyword/Symptom:

- Medical Education
- Scholarship
- Scholarship of Application

Accreditation Council for Graduate Medical Education (ACGME) Competencies Addressed:

- Practice-Based Learning and Improvement

Intended Learner Audience:

- Medical Fellows
- Continuing Medical/Dental Education (CME) for Faculty Self Learning

Intended Faculty Audience:

- Clinical Science Faculty
- Clerkship Director / Clinical Science Course Director
- Residency Program Directory

Effectiveness and Significance of Publication:

This workshop has been evaluated in the following ways by participants of the workshop at the annual meeting of a professional organization for pediatric medical educators (Tewksbury L, Hanson J, Christy C, English R, Spoto-Cannons A & Talib N (2008) The Scholarship of Application: When Service is Scholarship. Council on Medical Student Education in Pediatrics Annual Meeting, Atlanta, GA, Apr. 2008). Participants included educators with a range of experience, from junior faculty new to medical education to senior faculty with significant educational experience. Educators were from institutions from across the country (Northeast, Southeast, West Coast, and Midwest all represented) as well as Canada.

Twenty-five of approximately 30 participants completed the meeting¿s standardized evaluation form required for CME. Nearly all rated the workshop ¿excellent¿ (5 on a 5-point Likert scale) in delivery, content, objectives met, interactivity and overall effectiveness, with an average score of 4.8 for overall effectiveness. Twenty-nine of approximately 30 participants completed a workshop peer feedback form developed specifically for this workshop, designed to provide information that would help the planners revise the workshop for future presentations. Nearly all agreed or strongly agreed that the workshop allowed them to be fully engaged, helped them see how to turn their projects or service into scholarship, provided a balance between theoretical and practical information, and provided useful resources.

This workshop was initially developed as a 90 minute workshop but could easily be adapted to a 120 minutes. Ideal participant:facilitator ratio is 1:6. Detailed guidelines are provided in the Instructors' Manual.

Lessons Learned:

In preparing for this workshop, facilitators themselves (all experienced medical educators) initially struggled with the definition of Scholarship of Application as applied to medical education, finding little published in the literature. As we further explored and discussed this topic, all agreed that there was tremendous opportunity for medical educators for this type of scholarship, but little practical guidance for how to take an educational project and turn it into scholarship. In addition, facilitators found the process of creating and working through the steps provided by the workshop themselves to be very beneficial for their own professional development. Each facilitator was able to identify a current or past project and develop a better understanding of the specific steps needed to ensure that the project met criteria for high-quality scholarship.

Immediately following the workshop, all facilitators debriefed on the experience, reflecting on the comments provided by participants both verbally and on the peer feedback forms that were immediately available. Facilitators discussed strengths and challenges of the workshop and discussed potential modifications for future workshops. Facilitators were impressed by the overall positive response to the workshop and how valuable and relevant it was to the participants' work. Recommendations for improvement emphasized the need for more time (one reason we provided an alternative schedule for a two-hour workshop in this instructor's guide) and requested a more complete bibliography of published examples of the scholarship of application (now included in the reference section of the instructor's guide).

Publications, Presentations, and/or Citations For This Publication:

Tewksbury L, Hanson J, English R, Spoto-Cannons A, Talib N. The Scholarship of Application: When Service is Scholarship. Workshop presentation, annual meeting of the Council on Medical Student Education in Pediatrics, April, 2008, Atlanta, GA

Sponsorship (Funding Source):

None.

Citation Formats:

- **NLM:**

Tewksbury L , English R, Christy C, Gigante J, Spoto-Cannons A, Talib N, et al. Scholarship of Application: When Service is Scholarship - A Workshop for Medical Educators. MedEdPORTAL; 2009. Available from: http://services.aamc.org/30/mededportal/servlet/s/segment/mededportal/?subid=7734

- **APA:**

Tewksbury, L., English, R., Christy, C., Gigante, J., Spoto-Cannons, A., Talib, N., et al. (2009). Scholarship of Application: When Service is Scholarship - A Workshop for Medical Educators. MedEdPORTAL: http://services.aamc.org/30/mededportal/servlet/s/segment/mededportal/?subid=7734

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Thank you