



**Northeast Group on Educational Affairs
2008 Annual Educational Retreat**

April 12-13, 2008

**University of Vermont College of Medicine
Burlington, Vermont**





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Dear Colleagues,

Welcome to the 2008 Northeast Group on Educational Affairs (NEGEA) Annual Educational Retreat hosted by the University Of Vermont College Of Medicine in Burlington, Vermont! The purpose of the NEGEA is to promote excellence in the education of medical students, residents, and physicians through the professional development of medical educators. Our regional meetings provide a forum for exchanging ideas, learning new strategies, and developing plans that may facilitate your own work. The theme of this year's meeting is Collaboration Across the Continuum and we hope to engage participants in all levels of medical education: undergraduate, graduate and CME.

Opening on Saturday morning, we have a wonderful plenary session with Robert Galbraith talking about "New Approaches to Supporting Self-Learning Across the Curriculum." This talk will foster innovative thinking in medical education regarding how best to support our learning processes. The remainder of the meeting includes many short communication presentations, interactive workshop sessions and poster presentations facilitating new ideas and skills.

The NEGEA has always valued innovations in medical education and, as such, has established an Innovation Award Program. This year, there are five categories for these awards: Preclinical Medical Student Education; Clinical Medical Student Education; Residency Medical Education; Continuing Medical Education and a new category this year, Unassigned Medical Education - crossing educational boundaries. Be sure you attend the Sunday morning business meeting to hear about these innovative projects and to congratulate the winners.

Once again, we are asking all of the meeting participants to help us select the "Best Poster" award. At registration, you will receive a "judging slip" to write down your votes for the top four posters. Please return your slips to the conference registration desk by 5:00pm on Saturday. The poster garnering the most votes will win the NEGEA 2008 Best Poster Award and will be announced at the Sunday morning business meeting with the other awards.

We hope you will join us for a reception of heavy hors d'oeuvres and beverages on Saturday evening at the University's wonderful Fleming Museum. Exhibitions will include a stunning dichotomy of photographs of atomic explosions over Nevada and the Pacific Ocean in the 1950's and 1960's; a juxtaposition of prints and artifacts depicting the human mind and body and the relationships between science and healing; and a fabulous array of elaborately carved and painted masks used in dance and folk rituals of Sri Lanka.

Finally, I wish to offer my sincere thanks to the University of Vermont Continuing Medical Education Office - Terry Caron, Linda Saia, Natalie Remillard and the entire CME staff - for their outstanding work in planning and implementing every detail of this meeting. I truly could not have accomplished this work without them.

I look forward to meeting with all of you.

Sincerely,

Karen Richardson-Nassif, PhD
Chair, NEGEA
Associate Dean for Faculty and Staff Development and Diversity
University of Vermont College of Medicine



NEGEA Steering Committee

Karen Richardson-Nassif, PhD, Chair
University of Vermont College of Medicine

John F. Mahoney, MD, Membership Coordinator
University of Pittsburgh School of Medicine

Steven L. Kanter, MD, Past-Chair
University of Pittsburgh School of Medicine

Lee Ann Manchul, MD, CME Representative
University of Toronto Faculty of Medicine

Joel Bartfield, MD, GME Representative
Albany Medical Center

Elza Mylona, PhD, UME Representative
Stony Brook University School of Medicine

Benjamin (Jim) Blatt, MD, UME Representative
The George Washington University
School of Medicine

Michele P. Pugnaire, MD, Member-at-Large
University of Massachusetts Medical School

Steven J. Durning, MD, FACP, Member-at-Large
Uniformed Services University of the Health Sciences

Alex Stagnaro-Green, MD, MHPE, Member-at-Large
Touro University College of Medicine

Janet P. Hafler EdD, RIME Representative
Tufts University School of Medicine

AWARDS (Abstracts Displayed on Page 35)

Preclinical Innovation Award: Interactive Brain Atlases: Supporting Integrative and Individualized Student Learning

University of Massachusetts Medical School

Susan Billings-Gagliardi, PhD, Charlene Baron, MEd, Ken Wolf, MD, Jeanne Keller, MD, Sam Gorstein, MS3

Clinical Innovation Award: Pandemic Influenza Preparedness: A Patient Care and Team Training Simulation for Medical Students

University of Pittsburgh School of Medicine

John F. Mahoney, MD, Joe Suyama, MD, Francis Guyette, MD, MPH, Samuel Stebbins, MD, MPH

Resident Innovation Award: First-Time Use of a Standardized Student OSTE in a Controlled Evaluation of an Obstetrics & Gynecology Resident

George Washington University

Benjamin Blatt, MD, Charles Macri, MD, Nancy Gaba, MD, Larrie Greenberg, MD

Continuing Medical Education Innovation Award: The Informed Consent Dialogues

Montefiore Medical Center

Robert Morrow, MD, Michael Mulvihill, DPH, Nancy Moynihan, RN, Chester Edelman, MD

Unassigned Innovation Award: Simulation as an Educational Modality for Multidisciplinary Training Experience in the ICU

Baystate Medical Center Simulation Center

Patrick T. Mailloux, DO



Pre-Conference Events

Friday, April 11

8:30 AM	Bus Transport to UVM Campus	Hotel Lobby Entrance
9:00-12:00 PM	Medical Education Research Certificate (MERC) Workshop Part I: Searching and Evaluating the Medical Education Research Literature	UVM Campus
12:10	Bus Returns to Sheraton	
1:00-5:00	The Consortium on Medical Education and Technology (COMET) Annual Meeting	UVM Campus
1:30-4:30	Medical Education Research Certificate (MERC) Workshop Part II: Questionnaire Design and Survey Research	Sheraton - Willsboro
2:00-4:00	Librarians in Medical Education (LIME)	Sheraton - Kingsland
2:00-6:00	Poster Set-up	Emerald III
6:00-10:00	Friday Evening Hospitality	Diamond I

Conference Agenda

Saturday, April 12

7:45-8:30	Registration / Continental Breakfast / Posters / Exhibits	Emerald Promenade
8:30-8:45	Welcome	Emerald III
8:45-10:00	KEYNOTE ADDRESS: New Approaches to Supporting Self-Learning Across the Curriculum <i>Robert M. Galbraith, MD, MBA</i>	Emerald III
10:00-10:15	Coffee Break	Emerald Promenade

CONCURRENT WORKSHOPS / SHORT COMMUNICATIONS

10:15-11:15	WORKSHOPS I	
	A1 Where Do We Go With This? The Promotions Committee Challenge <i>Laurie Brown, MA</i>	Shelburne
	A2 MedEdPORTAL & Educational Scholarship: Publishing Products of Scholarly Work in Teaching and Education <i>Robby Reynolds, MPA</i>	Willsboro
	A3 Envisioning the New CME: Better Methods, Better Learning, Better Outcomes <i>Dave Davis, MD, Lee Manchul, MD</i>	Kingsland
	SHORT COMMUNICATIONS I	Emerald II
	a1 Improving Your EBM Curriculum: How Collaborating With Your Medical Library Can Help <i>Lauren Maggio, MA, MS (LIS)</i>	
	a2 Simulated IV Skills Training: Graduate Nursing Students Collaborating with Medical Students <i>Janet Fraser Hale, PhD, APRN, BC, FNP</i>	
	a3 Medical Student / Nurse Partnership Program: A Pilot Study of Pre-Clerkship Medical Student / Nurse Interactions <i>Maria Blanco, EdD</i>	



Program Schedule

11:25-12:25	WORKSHOPS II	
	B1 Interprofessional Teaching and Learning: Getting Started and Getting It Right <i>Susan Pasquale, PhD</i>	Shelburne
	B2 Advising Programs for Students -- Why Do We Bother? <i>Maryellen E. Gusic, MD</i>	Willsboro
	SHORT COMMUNICATIONS II	Emerald II
	b1 Residency Specialty Choice in Primary Care: When Do Medical Students Make Their Decision and Why? <i>Alice Fornari, EdD</i>	
	b2 Teaching Residents to Question and Challenge Their Teachers: A Simulator-Based Approach to Improve Education <i>May C. M. Pian-Smith, MD, MS</i>	
	b3 Governance of an Integrated Curriculum: An Innovative Model that Works <i>Lewis R. First, MD</i>	
	SHORT COMMUNICATIONS III	Kingsland
	b4 An Analysis of Students' Experiences Using a Team-Based Learning Strategy <i>Nagaswami S. Vasan, DVM, PHD</i>	
	b5 Using Complementary Assessments of a Curriculum Innovation to Demonstrate that it Works <i>Julie A. Jonassen, PhD</i>	
	b6 Performance in an Integrated Foundations Curriculum Predicts Performance on the USMLE Step 1 Examination <i>Cynthia Forehand, PhD</i>	
12:30-1:30 PM	Lunch (Provided)	Emerald III
1:30-2:30	WORKSHOPS III	
	C1 Aligning Learning Styles with New Directions in CME <i>Robert Morrow, MD</i>	Shelburne
	C2 Resources for Developing and Integrating Innovative Curricula in CAM/IM <i>Esther Konigsberg, MD, CCFP, FCFP</i>	Willsboro
	C3 Working Within a Team: Negotiating When You're Low on Power <i>Benjamin Blatt, MD</i>	Kingsland
	SHORT COMMUNICATIONS IV	Emerald II
	c1 Use of Videotape and Webdiver to Teach Compassionate Care in a Rheumatology Patient-Partner Exercise <i>Malgorzata Dawiskiba, Medical Student</i>	
	c2 Using the CurrMIT Database to Assess Nutrition in a Medical School Curriculum <i>Richard Bair, BS</i>	
	c3 Sources of Study Advice and Helpfulness Ratings for Year 1 Medical School Courses: A Pilot Study <i>Norma S. Saks, EdD</i>	
2:40-3:40	WORKSHOPS IV	
	D1 Conflict Resolution: An Essential Skill for Competent Leadership <i>Elza Mylona, PhD</i>	Shelburne
	D2 Enter and Use CurrMIT Data at My Medical School <i>Hameed Ahmed, MS, PMP</i>	Willsboro
	D3 Teaching Awards at Medical Schools: A Conversation About Intended and Unintended Consequences <i>Deepa Rao, MEd</i>	Kingsland



	SHORT COMMUNICATIONS V	Emerald II
	d1 Advanced Anatomy Training in Step with Innovations in Medical Technology <i>Anne M. Gilroy, MA</i>	
	d2 A Novel Web-Based “Just-In-Time” Learning System for End Of Life/Palliative Care Education <i>James B. McGee, MD</i>	
	d3 Optimization of Clinical Skills Assessment Program via Distribution of Content through RWJMS iTunes <i>Carol A. Terregino, MD</i>	
3:40	BREAK	
4:00-5:00	WORKSHOPS V	
	E1 Collaborations and CME: Educating and Enhancing Performance of the Health Care Team <i>Lee Manchul, MD, MHPE</i>	Shelburne
	E2 Redesigning the 4th Year <i>Marilyn London, EdD, Elza Mylona, PhD</i>	Willsboro
	SHORT COMMUNICATIONS VI	Emerald II
	e1 Associated Medical Schools of NY’s Institute for Professional Development <i>Sharon K. Krackov, EdD, Jo Wiederhorn</i>	
	e2 What do Graduating Students Think About Research During Medical School? <i>David C. Jones, MS-III</i>	
	e3 Creating a Student Enrichment Program: Distinction in Medical Education (DIME) <i>Norma S. Saks, EdD</i>	
6:15	Bus Transport from <u>Conference Center Entrance</u>	
6:30	RECEPTION AT THE FLEMING MUSEUM	UVM Campus
8:30	BUS RETURNS TO SHERATON	

Sunday, April 13

8:30-9:00 AM	Continental Breakfast and Continued Registration	Emerald III
9:00-10:00	NEGEA Business Meeting	Emerald III
10:00-11:00	WORKSHOPS VI	
	F1 Peer Review of Teaching Study: Designing, Implementing & Evaluating a National Faculty Development Plan <i>Janet P. Hafler, EdD</i>	Shelburne
	F2 The Elusive Competency: Teaching and Assessing Clinical Reasoning through Deliberate Practice <i>Cate Nicholas, EdD, MS, PA</i>	Willsboro
	F3 Giving it and Getting it so That it is Good: Feedback Made Simple & Effective <i>Eileen CichoskiKelly, PhD</i>	Kingsland
	SHORT COMMUNICATIONS VII	Emerald II
	f1 Connecting with the Community for Cross Cultural Health Education <i>Stacey Brown, PhD</i>	
	f2 Cross Cultural Comparison of the Patient-Centeredness of “Hidden Curriculum in Saudi Arabian and US Medical Schools <i>Rasha Al-Bawardy, MS 2</i>	
	f3 Teaching Population Health in Clinical Settings: Public Health Patient Conversations <i>Jan K. Carney, MD, MPH</i>	



Program Schedule

11:10-12:10 PM	WORKSHOPS VII	
	G1 Using the Data from Peer Review: What Outcomes Should We Measure? <i>Maryellen E. Gusic, MD</i>	Shelburne
	G2 Enhancing Curriculum Development: Student-Faculty Collaboration at Work <i>Lynn Y. Kosowicz, MD</i>	Willsboro
	SHORT COMMUNICATIONS VIII	Emerald II
	g1 Training Medical Students to Recognize and Refer Children with Reading Disabilities: A Unique Curriculum <i>Blanche Podhajski, PhD</i>	
	g2 Learning On-Line Using WIKI Technology: A Pilot Study in a Pediatric Clerkship <i>Anthony Frisby, PhD</i>	
	g3 An Inter-Professional Teaching with Technology Program That Takes Teaching to a Higher Level <i>Lyn Riza, MS</i>	
12:10-1:30	LUNCH (Provided)	Emerald III
1:30	Conference Adjourns	
POST CONFERENCE EVENT		
3:15-5:15	CurrMIT Workshop (Pre-Registration Required)	Amphitheater



New Approaches to Supporting Self-Learning Across the Curriculum

This talk will foster innovative thinking in medical education about how best to support our learning processes.

Robert M. Galbraith, MD, MBA

Dr. Galbraith trained in London at King's College Medical School. He completed an Internal Medicine residency at Hammersmith and Brompton Hospitals, and a Hepatology Fellowship at the King's College Hospital Liver Unit. Following a period of clinical service and research as a Hepatologist, he joined the Medical University of South Carolina in Charleston as an NIH Fogarty International research fellow. On the basic science side, he built an NIH-funded basic research lab, obtained a Research Career Development Award, and became Professor and Chair of the Department of Microbiology and Immunology. On the clinical side, he became Chief of the Hepatology section, and implemented a Liver Transplant Program for which he served as Medical Director.

Joint interest in both basic and clinical sciences and broad educational experience led to service on several committees related to USMLE Steps 1 and 2 at the NBME, and in 1995 he joined the staff as Senior Medical Evaluation Officer and Deputy Vice President. Recently, with reorganization of the NBME, he became co-Director for the Center of Innovation. His major interest is in envisioning important changes in the role of the physician and the delivery of health care, and developing appropriate assessment approaches that support these activities.



Sessions

Session A: Workshops and Short Communications

Saturday, April 11 10:15-11:15

WORKSHOPS I

A1 Where Do We Go With This? The Promotions Committee Challenge

Laurie Brown, MA, Scott Schroth, MD, MPH and Suzanne Rose, MD, MSED

Background: In recent years, there has been an explosion in the literature of articles on all aspects of professionalism in medicine and professionalism as a competency. Lawrence Smith, MD in his "Generations" keynote at the national GSA meeting in the spring of 2006 discussed this phenomenon, noting that in the 1980's there were less than 40 articles per year on the general topic of professionalism; and by 2003, there were around 170 articles on this topic. In response, many schools now employ incident reports, physicianship, or other forms to assess professional behaviors. With systems in place to collect the data on unprofessional behaviors, we have entered the next phase of the process: what do we do when students have multiple or egregious incidents of unprofessional behavior? Recently, at both Mount Sinai School of Medicine (MSSM) and The George Washington University School of Medicine (GW) there has been a substantial increase in cases of unprofessional behavior and dismissals related to such behavior. This presents challenges to school promotions committees. In addition, establishing appropriate remediation plans for such students requires new and complex collaborations between educational and student affairs administrators.

Data: At MSSM, a review of three years worth of data was conducted. From January 2005 to December of 2007 the numbers of cases which came to the Promotions committee steadily rose. Of all cases reviewed by the committee in the past 3 years, just over 60% were due to unprofessional behavior. At GW, from 1996 to 2003 there were no cases of unprofessional behavior that reached the promotions committee. In the past 4 years, 3 students have been dismissed for unprofessional behavior and a fourth case is in progress.

Discussion: At MSSM, we have learned there is value in the process whereby students are brought to the committee. Our efforts at remediation have had mixed results. At GW, the use of a small subcommittee of the promotions committee has permitted detailed assessment of student performance and the development of focused remediation plans. However, to date none of the proposed plans have been successful in achieving student retention. This workshop will center around our experiences of 1) what remediation aspects have worked and what does not work from both the educator and student affairs perspectives and 2) provide a forum for sharing collaboration ideas between student affairs and educators about these difficult student cases.

A2 MedEdPORTAL & Educational Scholarship: Publishing Products of Scholarly Work in Teaching and Education

Robby Reynolds, MPA, Eric Wilkerson

Context: Faculty invest significant time and effort into creating teaching materials, assessment tools, and faculty development resources. Peer-review and sharing of such educational materials encourages creation of high quality educational scholarship and promotes adoption of innovative materials in education. The AAMC developed MedEdPORTAL to serve as a prestigious publishing venue and dissemination portal through which medical educators around the globe can share their educational works.

Objectives: By the end of the workshop, participants will be able to: 1. Provide examples of various types of materials published in MedEdPORTAL. 2. Explain the submission and peer review process for MedEdPORTAL and how this compares to traditional forms of peer-reviewed publication (e.g., journal articles). 3. Identify how faculty members may receive scholarly recognition and enhance academic career advancement through publishing educational resources in MedEdPORTAL. 4. Assess the extent to which one's educational material meets accepted criteria/standards of educational scholarship and identify additions or revisions that might enhance its scholarly value.

Key Message: Medical educators are generally not informed about opportunities to publish educational materials or the format and criteria by which these materials are judged by peers for dissemination. In addition, individuals are not necessarily fully informed about contemporary views on educational scholarship, or how consensual attributes of scholarship apply to teaching and educational materials. This workshop will enhance each participant's general knowledge about educational scholarship and the opportunities to publish educational materials.

Conclusion: Participants will enhance their understanding of opportunities and success with disseminating teaching and educational materials through MedEdPORTAL

A3 Envisioning the New CME: Better Methods, Better Learning, Better Outcomes

Dave Davis, MD, Lee Manchul, MD

Target Audience: CME providers and scholars. UME and GME educators with an interest in teaching and evaluating health professional competencies and performance

Background: The recent Josiah Macy Foundation-sponsored conference "Continuing Education in the Health Professions: Improving Healthcare Through Lifelong Learning" and the AAMC IIME publication "Educating Doctors to Provide High Quality Medical Care" cite the poor performance record of traditional CME: too many lectures with inadequate emphasis on enhancing



performance of health care professionals, health care teams and the health care system (1,2).

Workshop Goal: Through interactive discussion and group tasks, this workshop will explore a new vision of CME that enables enhanced performance of the health care professional, the health care team, and the health care system to improve health.

Objectives: This workshop will allow participants to:

Describe a vision of CME to enhance performance of the health care professional, the health care team, and the health care system; Identify key stakeholders in the new CME and strategies to engage them in developing educational initiatives to enhance performance and health outcomes; Identify performance and health care indicators to measure to evaluate the effectiveness of these strategies; Explore how these initiatives may be implemented across the medical education continuum

References: 1. Fletcher, SW (Conference Chair) Chairman's Summary of the Conference: Continuing Education in the Health Professions: Improving Healthcare Through Lifelong Learning. November 2007. pdf accessed from the Josiah Macy, Jr. Foundation Website, February 6, 2008.

2. Report of the ad hoc Committee of Deans, Institute for Improving Medical Education, Educating Doctors to Provide High Quality Medical Care. AAMC, October 2004.

SHORT COMMUNICATIONS I

a1 Improving Your EBM Curriculum: How Collaborating With Your Medical Library Can Help

Lauren Maggio, MA, MS (LIS), Megan Bresnahan, MSI (LIS); Peter Shaw, PhD; Wayne LaMorte, MD, MPH, PhD

Objectives: In collaboration with Boston University School of Medicine's (BUSM) Office of Medical Education (OME) and School of Public Health (BUSPH), the Alumni Medical Library designed and executed an Evidence-Based Medicine (EBM) training program for incoming medical students. To introduce the skills necessary for searching and obtaining the biomedical literature, the Library offered case-based hands-on sessions, developed online learning tools, and provided collection and reference support in conjunction with the courses Essentials of Public Health (EPH) and Integrated Problems (IP).

Methods: Traditionally, the Library has provided basic information skills training for incoming BUSM I students. This training was expanded significantly in 2007 when the Library joined BUSM's initiative to integrate EBM across the first-year curriculum.

Collaborating with OME and BUSPH faculty, the Library supported the EPH and IP courses by introducing two interactive EBM online tutorials and an EBM-focused training. In the new EBM training, the Library's lesson plan was based on a clinical case written by librarians and BUSM faculty that required the application of EBM skills, including formulating a clinical question and locating evidence to compliment the critical appraisal skills introduced in EPH and IP. As a result of the Library's new role in the EBM curriculum, librarians purchased new EBM resources and increased reference service relating to EBM search methods.

Preliminary review of evaluations indicates the Library services were well received. The Library plans to increase its participation in 2008 by offering an advanced search skills training.

a2 Simulated IV Skills Training: Graduate Nursing Students Collaborating with Medical Students

Janet Fraser Hale, PhD, APRN, BC, FNP; Mary L. Zanetti, EdD; Laura A. Sefton; Sheldon Hollins, BS, RN; Linda Chellali, BS, RN; Steven DeGurski, BS, RN; Sarah McGee, MD; Mitchell A. Cahan, MD

This presentation discusses the origins, process, and outcomes of graduate nursing students teaching medical students (MS) IV cannulation. Over a two semester advanced practice nursing (APN) role and population health course, students complete 45 hours of community-service learning. Since 2000, one group teaches 1st year MS to administer IMs for community flu clinics. A natural progression was to respond to a medical school need to include IV cannulation into the initiative. Incorporating the evidence for best practices, APN students developed a 2 hour curriculum for 3rd and 4th year MS that included pre/post tests, a short presentation, handouts, one-on-one hands-on practice in the Simulation Center and evaluations. One hundred thirty-eight out of 200 3rd and 4th year MS desired IV skills training- 72 % of whom participated. Data analysis by the Senior Director (M.Z.), Research and Evaluation revealed average scores of: pre-test - 75% and post-test - 95%. On a four-point scale - no confidence to very confident; pre-training 20 % of the students rated themselves somewhat or very confident at selecting a vein and starting an IV. After training, 87 % rated themselves as somewhat or very confident. Both student groups rated the experience as positive and valuable. The Surgical Clerkship Director (MC) included the training for the remaining 2 Surgical Clerkships in academic year (AY) 06-07 and into all 4 Clerkships for AY 07-08. The initiative is now institutionalized in both schools and MS are requesting additional skills training by APN students.

a3 Medical Student / Nurse Partnership Program: A Pilot Study of Pre-Clerkship Medical Student / Nurse Interactions

Maria Blanco, EdD, Scott Epstein, MD, Mary Brunton, MSN, RN, BC, Nancy Gaden, RN, Gayle Gravlin, EdD, RN, CNA-BC, Therese Hudson-Jinks, RN, MSN, Mary Sullivan Smith, RN, MSN, Elizabeth Wilder, MD

Collaboration and interdisciplinary collegiality is undervalued in medical education(i). Our hypothesis is that early intervention will enhance nurse-medical student interaction as well as student learning at the workplace. We proposed to design and implement a pre-clerkship medical student/nurse partnership program to: (a) Explore promoting student/nurse interaction on the wards; (b) Assess the impact of nurse's work on student perceptions of the role of nurses and physicians in patient care, and their own educational experience on the wards; and (c) Examine teaching contributions of nurses. The study is based on a comparison group



design combining both qualitative and quantitative methods. Fifty-six pre-clerkship students, rotating through four sites for their Physical Diagnosis training, are participating. One hundred and sixteen pre-clerkship students, rotating through other thirty-four sites, comprise the control group. Participating students will shadow a nurse-partner. Data sources are: student pre- and post-program survey; participating student (PS) reflective-practice journal; PS program questionnaire; participating nurse (PN) pre-program survey; PN program questionnaire; PS focus group; thirty-minute semi-structured nurse program coordinator interview. Responses to the pre-program survey will be reported at this presentation. Findings address: (a) Student ratings of the importance of the role of physicians and nurses in patient care; level of knowledge of nurses' role, core competencies and responsibilities; suggested interaction between physicians and nurses. (b) Nurse rating of the level of interaction between physicians and nurses and students and nurses at their institution; suggested tasks for students on the wards. (c) Challenges to successful interactions and nurse contribution to student learning. i. Barrere, C. & Ellis, P. (2002). Changing Attitudes Among Nurses and Physicians: A Step Toward Collaboration. *Journal for Health Quality* 24(3): 9-15. Casanova, J., Day, K. & Dorpat D. (2007). Nurse-Physician Work Relations and Role Expectations. *The Journal of Nursing Administration* 37(2): 68-70.

Session B: Workshops and Short Communications

Saturday, April 11 11:25-12:25

WORKSHOPS II

B1 Interprofessional Teaching and Learning: Getting Started and Getting It Right

Susan Pasquale, PhD, Michele Pugnaire, MD; Jim (Benjamin) Blatt, MD; Norma Saks, EdD; Karen Harrington, MSW; Allen Humphrey, PhD; Susan LeLacheur, PA

Background: If members of the medical professions intend to work as peers, more programs for joint training of professionals need to be created and to become an integral part of professional development.¹ The goal of this workshop is to facilitate the development of such programs for interested educators. Objectives Provide participants with: 1. Exposure to models of successful interdisciplinary training programs 2. A forum to discuss their own work in implementing interdisciplinary curricula Method Different models of inter-professional teaching and learning (IPTL) curricula will be presented in plenary (20 minutes). Additional models will be summarized in a comprehensive hand-out. The first source for these models: five regional medical schools -- University of Massachusetts Medical School, University of Pittsburgh School of Medicine, University of Connecticut School of Medicine, UMDNJ-Robert Wood Johnson Medical School, and George Washington University Medical Center. The second source: IPTL initiatives gathered from 12 medical, nursing and osteopathic schools at a session facilitated by this same group of presenters at the 2007 AAMC meeting.

Topics to be covered include: 1. benefits of inter-professional teaching and learning (IPTL); 2. challenges and opportunities for building IPTL into courses and programs; 3. interventions to address implementation challenges; 4. interventions to harness resources; 5. assessing benefits. After the presentation, participants will discuss IPTL issues in small groups (20 minutes), including present efforts and future plans. Finally, the large group will report key points, common themes, and effective strategies to further enable participants to advance their own IPTL programs (20 minutes). Reference 1. Munding, M. Twenty-first century primary care: New partnerships between nurses and doctors. *Academic Medicine*. 2002; 77(8):776-780.

B2 Advising Programs for Students -- Why Do We Bother?

Maryellen E. Gusic MD, George F. Blackall, PsyD, Laurie A. Brown, MA

Advising programs are widely accepted as a central component of medical student development and support systems. Advisors serve as advocates for students, monitors of academic progress, and counselors in career decision making. Some programs integrate the role of advisor with teaching and mentoring activities. Programs must be designed to meet specific objectives, and schools must define and measure outcomes that demonstrate impact. This workshop is designed to explore critical issues in developing and sustaining advising programs. Participants will discuss challenges and discover strategies to ensure continued success of their programs. They will work together to define key outcomes that demonstrate value and impact. The audience will share experiences from their own institutions and use "lessons learned" from this experience to create a list of challenges in establishing effective advising programs for students. The authors will use the model developed by Kirkpatrick to emphasize the importance of defining multi-level outcome measures in the design of advising programs. The audience will then work in facilitated small groups to consider what outcomes of advising programs would provide evidence of value to the stakeholders at their institution. The group will come together for a large group discussion to share what they have discussed. Participants will receive a summary of the work products created during the session and leave the session with an outcomes-focused framework to use in designing and evaluating their own advising programs.

SHORT COMMUNICATIONS II

b1 Residency Specialty Choice in Primary Care: When Do Medical Students Make Their Decision and Why?

Alice Fornari, EdD, Maria Santos, MD, Darwin Deen, MD

The number of US medical school graduating seniors choosing primary care in the National Residency Match Program declines



each year and compared to other primary care residencies, family medicine has experienced the highest number and percentage decline. Past studies have shown a number of variables to be associated with a school's production of family physicians. Of particular interest to the educators was to understand variables specifically influencing students' choice of a specialized primary care specialty i.e. general pediatrics, general internal medicine or family medicine. In addition, as medical school faculty, we were interested in decision making on the selection of OB-GYN and/or ER residencies over primary care programs, since many students initially expressing interest in family medicine shifted to one of these specialties as their final decision. A residency choice survey was designed for 4th year students attending an urban private medical school. It was distributed post match day electronically using web based survey software. The survey focused on both when the residency choice decision was made and what variables influenced the decision. Quantitative results were reported as frequency and percentage for each question. Qualitative questions were looked at for themes and trends in responses. These results on factors influencing residency choice in an urban private medical school will be shared, as well as the residency choice survey instrument. Discussion will focus on, how to maintain an early and often, multiple point contact system with students to promote Primary Care as a career choice?

b2 Teaching Residents to Question and Challenge Their Teachers: A Simulator-based Approach to Improve Education

May C. M. Pian-Smith, Robert Simon; Rebecca Minehart; Marjorie Podraza; Jenny Rudolph; Toni Walzer; Daniel B. Raemer

Introduction: Residents gain medical knowledge and clinical judgment within a hierarchical system in which effective communication is crucial to quality and safety. Anesthesiology residents may feel compelled to question their teachers if they disagree, have safety concerns, or when treatment plans are unclear. We sought to determine if an educational intervention that emphasizes collaborative inquiry (advocacy and inquiry) can improve the frequency and effectiveness with which residents "speak up" to their superiors or other colleagues during simulated obstetric emergencies.

Methods: In a simulated OR, anesthesiology trainees were presented with opportunities to challenge co-workers (e.g., scripted orders to administer a relatively contraindicated medication). Challenges involved the anesthesiology attending, obstetrician, and nurse (confederates). During debriefing, subjects were taught the theory and language involving "advocacy" (stating resident's observation and concern) and "inquiry" (open, curious request for the other's reasoning). Subjects then participated in another scenario with new opportunities to challenge. Videotaped scenarios were evaluated by two investigators; trainee language was rated on a 5-point scale.

Results: Forty trainees participated. Overall use of advocacy and inquiry increases after debriefing, with fewer oblique statements or absent challenges. Subgroup data suggest that the debriefing curriculum specifically improves quality of resident challenges directed toward other physicians, without impacting resident challenges directed towards nurses. **Discussion:** This intervention improves how residents "speak up" against authority gradients during simulated obstetric emergencies. The program was well-received by the participants. Overcoming communication barriers within the medical hierarchy may improve learning opportunities and further assure patient safety.

b3 Governance of an Integrated Curriculum: An Innovative Model that Works

Lewis R. First, MD

The need to oversee an integrated four year curriculum requires a centralized governance structure that supports integration while still respecting the identities of the individual departments that contribute to that curriculum. Through input from chairs, faculty, and students, we have created a unique governance structure that allows innovation, continuous quality improvement, policy development, and research activity to be implemented and sustained. Our governance structure empowers three different "level" subcommittees (made up of faculty and students) combined with one subcommittee composed exclusively of students to oversee the various components of our curriculum. These four subcommittees feed into an interdisciplinary curriculum oversight committee (composed of department chairs, basic science and clinical faculty, and students) in which no course directors or curriculum leaders (with the exception of the dean for education) can sit (or vote) to avoid inherent bias. Since the inception of our governance structure three years ago, the curriculum oversight committee has been responsible for a continuous quality improvement process for all curricular levels and courses as well as for design and implementation of numerous policies ranging from selection and evaluation of course directors and faculty to uniform grading policies for all courses. In addition, the curriculum oversight committee is responsible for the planning and orchestration of a yearly two day retreat open to all faculty and students whose purpose is to design innovations or improvements in key areas of our curriculum. We believe this centralized governance model can be generalized to other such integrated curricula seeking an effective structure for oversight.

SHORT COMMUNICATIONS III

b4 An Analysis of Students' Experiences Using a Team-Based Learning Strategy

Nagaswami Vasan, David DeFouw and Scott Compton

In recent years, numerous medical schools adopted Team-based learning (TBL) in the delivery of basic sciences, clerkships and residency programs. We adopted TBL in human anatomy, because it requires students to learn anatomical facts, from which they develop anatomical concepts for clinical problem solving. TBL also requires consistent preparation and class attendance to insure student's active participation. While TBL strategy is being adopted in medical curricula, student's experiences with the TBL



approach have not been analyzed. Following several focus group meetings with the students, we developed an instrument to measure students' perceptions of the effectiveness and desirability of TBL. We created 27 questions, which focused on assessing student preference for TBL, their perceptions of the effectiveness of TBL pedagogy, and perceptions of successful interpersonal relationships within groups. Respondents (n=317; 89% response) were asked to rate the extent that they agreed (-2=strongly disagree; -1=disagree; 0=neutral; 1=agree; 2=strongly agree). A principal components factor analysis with varimax rotation was carried out on the complete data set, and identified two 8-item factors with eigenvalues greater than 1.0. The sixteen items comprising the two factors were determined to represent "preference for TBL" and perceptions of "Teamwork". Internal consistency for each factor was assessed by means of Cronbach's alpha, and was noted to be 0.908 (Preference for TBL) and 0.884 (Teamwork), respectively, indicating very a high level internal consistency. The results are consistent with the concept that TBL, including interpersonal relationship within groups was preferentially perceived by students as an effective pedagogical strategy for learning anatomy.

b5 Using Complementary Assessments of a Curriculum Innovation to Demonstrate that it Works

Julie A. Jonassen, PhD, Michele P. Pugnaire, MD

Background: Interclerkships—1-day, intense interdisciplinary courses interspersed between clerkships—were a curriculum innovation introduced in 1995 in response to our recognition that many "hot topics" that transcend traditional biomedical domains and intersect multiple areas of medical practice were not being effectively addressed in medical school. Interclerkships are developed through collaborative efforts of both clinical and nonclinical faculty from the medical school and greater community. Interclerkships utilize lectures, real/standardized patient interactions and intensive small-group workshops to consider basic science, clinical, psychosocial, legal and ethical perspectives on family violence, end-of-life care, disabilities, healthcare policy, multiculturalism, geriatrics, patient safety, and complementary medicine.

Methods: Extensive evaluations let us gauge the ongoing success of the program. Short-term impact is measured by pre- to post-changes in relevant knowledge, attitudes and skills. Programmatic evaluations assess students' impressions of content, format and relevance. Longer-term impact is monitored by graduation questionnaire (GQ) and "one-year-out" residency surveys tracking retrospective satisfaction with medical school curricula.

Results: Significant pre-to-post improvements in knowledge, skills and attitudes are consistently observed after each Interclerkship ($p < 0.01$, paired t-tests). Most students agree that Interclerkships address topics essential to medical practice and use appropriate teaching formats. GQ data indicate that significantly fewer of our graduates ranked as "inadequate" the time devoted to a majority topics addressed by Interclerkship than did students graduating from other US medical schools (?2 analysis). **Conclusion:** Complementary outcomes measures indicate that interclerkships effectively and efficiently address topics essential for physician trainees, providing evidence that this is a curriculum innovation that really works.

b6 Performance in an Integrated Foundations Curriculum Predicts Performance on the USMLE Step 1 Examination

Cynthia Forehand, PhD, Mary Beth Cacciola, BA, Sheri Youngberg, BS, Joan Skelly, MS and Karen Richardson-Nassif, PhD

The University of Vermont implemented the Vermont Integrated Curriculum (VIC) with the Class of 2007. This curriculum replaces all discipline-based courses in the pre-clerkship curriculum with a set of integrated courses in what is called the Foundations Level. To determine the best approach to advising students about how to prepare for their USMLE Step 1 exam, which they must take at the end of Foundations in March of their 2nd year, we have assessed the relationship of a variety of potential predictors to the USMLE Step 1 scores over the first 3 cohorts of students. The potential predictors included undergraduate GPA, MCAT scores, performance in individual VIC courses, aggregate performance across the Foundations Level and performance on a comprehensive end of first year exam. Minimal correlation was observed for undergraduate GPA and MCAT scores, and for performance in short (two week) courses. Performance in other courses and the score on the end of year exam predicted Step 1 performance with correlations above 0.5. The best predictor of Step 1 performance was aggregate performance across Foundations. The correlation between performance in individual courses and the aggregate performance increased with each cohort. For the Class of 2010, the correlation coefficient for aggregate Foundations performance predicting Step 1 scores was 0.82. We conclude that the best advice we can give our students regarding preparation for USMLE Step 1 is to focus on their curriculum.

Session C: Workshops and Short Communications

Saturday, April 11 1:30-2:30

WORKSHOPS III

C1 Aligning Learning Styles with New Directions in CME

Robert Morrow, MD, Alice Fornari, EdD

The agenda of CME has changed in recent years to focus on clinical outcomes related to learning. This trend reflects the interests of new funders, such as health plans and government, and is on a convergent path with quality and practice improvement agendas. The interests of other accreditors, such as professional specialty boards and state licensing boards, and of the academic community, have also led to new owners of the CME curricula, with attention to real public needs for improved care and error



reduction, based on clinical practice. This workshop will review our experiences and that of our colleagues with new models of outcomes-based CME. The workshop is addressed to those involved with CME, as well as those interested in the context of training across the continuum. We will use interactive discussions and demonstrations to model forms of peer facilitated interactive education, with an emphasis on clinical simulations that are reflective of the world of practice. We will also look at experiences in the use of networked facilitators for training, and the role of trainer training in practical contexts. We will reflect on how these formats can accommodate interprofessional and team learning. We will also look at the role of learning styles as they relate to these developments, and connect different aspects of learning to different forms of training and assessment. We will examine various methods of measurement of patient and learner outcomes and explore how the shift in funding mechanisms affects the practicality of new models of CME.

C2 Resources for Developing and Integrating Innovative Curricula in CAM/IM

Esther Konigsberg, MD, CCFP, FCFP, Ben Kligler MD, Nadine Katz MD, Alan Neville MD, Anthony Ardolino MD, Mary Guerrero MD, Tania Bertsch MD

Academic leaders are currently challenged to teach medical students, residents and physicians Complementary and Alternative Medicine (CAM) and Integrative Medicine (IM), as it is increasingly utilized by the public. This Workshop aims to update academic deans and faculty on novel approaches, practicalities and available resources to assist in integration of IM education into medical schools and continuum of medical education. The Consortium of Academic Health Centers for Integrative Medicine (CAHCIM) is a collaborative association of 39 medical schools with IM education, research and/or clinical services in their centers. CAHCIM has published IM competencies and a curriculum guide to assist medical schools to integrate IM education into their curricula and continuum of medical education.

Session Objectives: 1. To learn about CAM/IM curricula/approaches in 3 medical schools in the North-eastern region; 2. To learn about CAM/IM competencies/curricula that include CAM providers and physician educators in teaching; 3. To learn to access resources to strengthen IM/CAM curriculum integration at undergraduate and post graduate levels.

Methods/Session Format: The moderator will begin the panel presentation/workshop with a 10 minute overview of CAM/IM education and the role of CAHCIM as a resource for medical schools. Either a faculty member or Dean from Albert Einstein, McMaster, and the University of Connecticut will give a 10 -15 minute presentation describing innovative strategies and curricula successfully implemented at their own institutions. The remaining time will be used for discussion between the panel and audience. Participants will receive a resource list of CAHCIM schools, IM faculty experts, and curriculum materials.

C3 Working Within a Team: Negotiating When You're Low on Power

Benjamin Blatt, MD, Matthew Mintz, MD, Claudia Ranniger, MD

Background Clinical clerks experience conflicts with peers, attendings, residents, nurses, other health care workers and administrative personnel. 55% of junior students at the George Washington University School of Medicine reported having significant conflicts with residents 'sometimes' or 'often'. These conflicts may be especially challenging when they involve a person in a position of greater power. Since "working within a team" is an ACGME competency, it is important to have negotiating skills to resolve these conflicts and minimize their influence on patient care.

Objectives 1. To learn strategies for negotiating from a position of less power 2. To develop an approach to teaching these strategies to clinicians-in-training Description This workshop will offer participants 1. A first hand opportunity to experience negotiation in the setting of a power differential through role play 2. The results of a workshop (including student survey and narrative data) on this topic for 3rd year medical students conducted at George Washington University 3. The opportunity to share ideas, develop negotiating strategies, and discuss curriculum implementation at their home institutions

Schedule 1. 20 min Presentation: George Washington workshop for junior medical students—description, student experience narratives and evaluation data 2. 20 min Role play 3. 20 min Discussion—developing strategies and teaching them to students.

SHORT COMMUNICATIONS IV

c1 Use of Videotape and Webdiver to Teach Compassionate Care in a Rheumatology Patient-Partner Exercise

Malgorzata Dawiskiba, Medical Student, Robert Kalish, MD, Maria Blanco, EdD, Janet Hafler, EdD

Compassionate care is a curricular key theme at Tufts University School of Medicine. This study explored how compassionate care interactions could be recognized and systematically assessed during student—rheumatology patient-partner encounters, and how videotaping the encounters could provide students with opportunities to engage in self-reflection and self-assessment, and to receive preceptor feedback. Eight third-year TUSM students rotating through the ambulatory block of the Internal Medicine Clerkship volunteered to participate. Prior to the videotaped patient-partner encounter, students reviewed rheumatologic history and physical examination skills and a compassionate care interaction global rating form. After the encounter all the students completed the form, first before and then after viewing the videotape. Students tagged video segments for compassionate care interactions using Webdiver software. The preceptor viewed the videotaped encounter, completed the rating form and provided students with feedback by Webdiver tags. Following all completed interactions and feedback all the students participated in a one



Sessions

hour focus group. Data were analyzed by content analysis and open coding. Students agreed that the videotaped encounter provided ample opportunity for self-assessment and reflection on compassionate care interactions. They expressed differing opinions about its validity and utility/efficacy for receiving preceptor feedback and the intrusiveness of the videocamera. Students questioned whether the cuing of compassionate care skills was too directive. This study demonstrated that the integration of compassionate care learning into the setting of an outpatient clinical skills exercise is a feasible and valuable component of a medical school curriculum.

c2 Using the CurrMIT Database to Assess Nutrition in a Medical School Curriculum

Richard Bair

Purpose Illustrate the application of the CurrMIT database to identify deficiencies and redundancies in specific content areas of instruction in medical school curricula.

Method • A task force was charged to assess how and where nutrition was taught in the Penn State College of Medicine's curriculum. • The CurrMIT Administrator, a task force member, first identified keywords/topics (e.g. malnutrition, lipoprotein). In excess of two-hundred CurrMIT Reports were run to locate specific instructional methods (e.g. lectures, small and large group work, laboratories) where nutrition was taught. • Task force members reviewed findings with National Institute of Health guidelines and identified areas of deficiency or redundancy. • A full report was submitted with recommendations for curricular revision.

Results The task force found that while many nutritional topics were being taught, there were essential areas left uncovered and the integration of nutritional topics was lacking across courses and years. Over 100 recommendations regarding nutritional topics were suggested across the four-year curriculum. Conclusions CurrMIT can play a vital role in curriculum reviews Benefits of CurrMIT utilization: • Reduced faculty search efforts resulting in savings of both time and money • Promoted a systematic approach to the curriculum review • Improved the quality and consistency in the approach to the review Barriers of CurrMIT utilization: • Results are dependent upon having search terms built into the data • Data search inconsistency due to multiple names for the same topic

c3 Sources of Study Advice and Helpfulness Ratings for Year 1 Medical School Courses: A Pilot Study

Norma S. Saks, EdD, Robert Lebeau, EdD, Maris Cutting, MS

Purpose: To investigate student perceptions of sources and helpfulness of study advice received in two first-year courses. Although there is some knowledge of successful study strategies, less is known about the communication of those strategies.

Method: Students in Fall, 2007 Biochemistry and Anatomy courses at Robert Wood Johnson Medical School were invited to complete two 16-question online surveys. Students were asked to comment and rate the helpfulness of advice received from: (1)Course materials/course directors, (2)M1 peers, (3)M2 students, (4)faculty in the Cognitive Skills Program (CSP), an academic support program. Results: 40% of Anatomy students and 35% in Biochemistry completed surveys. Sources of advice were course materials/directors (74% of respondents), M2 students (63%), M1 students (52%) and CSP (40%). Students reported receiving advice from each other more often in Anatomy (52%) than in Biochemistry (26%). Advice from course materials/directors was rated always/usually helpful by 74% of students in Biochemistry, and 51% in Anatomy. Ratings for CSP advice were more consistent (64% in Biochemistry and 69% in Anatomy rated always/usually helpful). Student comments revealed that student-to-student advice appears to be more directed and limited in scope (e.g., books to use/whether to attend lecture) than that from the course and CSP faculty.

Conclusions: Variations in student perceptions are linked to the quality of study advice received, and to the manner in which it is delivered/modeled. Further investigation across different courses will help illuminate features of helpful advice, how to improve student awareness of it, and how to most effectively provide it.

Session D: Workshops and Short Communications

Saturday, April 11 2:40-3:40

WORKSHOPS IV

D1 Conflict Resolution: An Essential Skill for Competent Leadership

Elza Mylona, PhD, Norma Saks, EdD, Peter Williams, JD PhD

Background: People within the same institution bring multiple experiences, values, beliefs, assumptions and habits to their work. Although this diversity is valuable for learning and innovation, it can also become a source of conflict. Conflict in any organization is inevitable and itself is neither bad nor good. Poorly managed conflict adversely affects human relationships, morale, efficiency and creativity. Well managed conflict can be energizing and productive. The ability to deal constructively with conflict is considered



an essential characteristic of a competent leader.

Objectives: Participants will develop awareness of how perceptions, emotions and behaviors affect the manner in which conflict unfolds, and will identify skills that will help prevent, defuse, or resolve it. Participants will: 1. Define conflict and recognize its myths and false assumptions. 2. Develop self-awareness of what triggers conflict. 3. Identify constructive approaches for dealing with conflict. 4. Recognize the role of communication as both a barrier and tool for conflict resolution.

Method: 1. After a brief introduction, participants will break into small groups and reflect on a conflict they have witnessed or have had with a colleague. The focus of discussion will be on the source and impact of the conflict and how the conflict resolved, or might be resolved, either positively or negatively. (20 min.) 2. In large group, research findings and a constructive model used in conflict resolution will be presented. (15 min.) 3. In small groups, participants will discuss 2 case scenarios illustrating conflict situations, identify and model responses, and consider alternatives. These discussions will be reported back to the whole group. (20 min.) 4. The workshop will end with a summary and distribution of a bibliography. (5 min.)

D2 Enter and Use CurrMIT Data at my Medical School

Hameed Ahmed, MS, PMP, Frank Schimpfhauser, PhD, Rick Bair, BS, Terri Cameron, MA

Since 1999 the Association of American Medical Colleges (AAMC) has been providing the Curriculum Management and Information Tool (CurrMIT). CurrMIT is a password-protected, online database that offers a full array of support service designed to help medical schools manage and report on their curriculum. A number of schools have entered a substantial amount of data in order to better utilize CurrMIT. While entering data in CurrMIT is not difficult, schools sometimes find some aspects of curricula, such as problem-based learning and clerkship experiences, more challenging. This workshop will cover the basics of data entry, as well as offer tips for entering these more challenging aspects

The following topics will be covered: 1) How to enter your data in CurrMIT, this would include what techniques were used to get your faculty involved (i.e. get them to give you data) 2) How the data is used, after it is collected? Format: Panel. Audience: Deans for medical education and curriculum, curriculum managers and staff, faculty, and medical education researchers. Objectives: Following the session, participants will be able to: • explain to others the purpose and functions of CurrMIT • understand how using CurrMIT can help schools prepare for LCME site visits • educate faculty and administrators on the value of utilizing CurrMIT Activities: 1. Getting faculty to provide curriculum data. 2. How CurrMIT assists with curriculum management 3. How CurrMIT can be utilized in preparing for LCME site visits 4. List ways schools are utilizing CurrMIT 5. Questions and discussion

D3 Teaching Awards at Medical Schools: A Conversation About Intended and Unintended Consequences

Deepa Rao, MEd, Boyd Richards, PhD, Sharon Krackov, EdD Henry Pohl

Background/Context Awards honoring exemplary teaching have grown in number in higher education recently. Nevertheless, only a modest literature exists, mostly outside medicine, about the nature and relative impact of such awards. A working group of the Society of Directors of Research in Medical Education have initiated a process to sample institutions in all four GEA regions about their teaching awards. Objective/Purpose We believe a better understanding of the nature of teaching awards is needed to inform decisions regarding the use of limited resources, their role in career advancement, and development of evaluation systems to assess the consequences of these awards. Our specific focus is on the types of teaching awards currently used at medical schools, their effects, and the kinds of investigations that might inform our understanding of this tool for recognizing teaching excellence. To assure broad participation in this conversation, we have submitted this abstract to all four GEA regional meetings. We will propose a follow-up session at the AAMC annual meeting to synthesize and expand the regional discussions. Workshop Plan: • Introduction, Purpose, and Plan • Distribution of summary document on types of awards; Q & A • Small Group Activity; large group debriefing • Group Discussion: What kinds of scholarly investigations might inform our understanding of the nature and impact of teaching awards? • Next steps: Continued conversation via email or participation in scholarship about teaching awards.

SHORT COMMUNICATIONS V

d1 Advanced Anatomy Training in Step with Innovations in Medical Technology

Anne M. Gilroy, MA

The Senior Clinical Anatomy elective for 4th year medical students at the University of Massachusetts Medical School is a component of a Longitudinal Program in Clinical Anatomy. Since its inception in 1989, the course has anticipated the most forward thinking trends in medical education and continues to evolve with advances in medical technology and surgical techniques. Topics covered reflect specific interests of the students as defined by their intended residency programs. The format addresses several important goals: review of basic anatomy and its integration with clinical medicine through collaborative student-faculty presentations and cadaver dissections; skills training in interactive small group sessions such as laparoscopic cadaver labs, and imaging workshops; and the development of essential non-academic professional skills through the preparation of formal presentations and a constructive peer review process. The most recent and exciting innovation to the program includes exposure to the latest advances in simulation technology and its implementation in medical research, training and practice. Using 3 dimensional images that they create from patient radiographic files, students design mini research projects that can range from the quantification of an



anatomic variant to the advanced planning of surgical procedures. With this assignment, students move away from passive learning through lectures and reading, and beyond the useful but academic process of dissection. Here they become fully engaged in the practicality of medicine and research in which anatomy is valued as an essential tool in the repertoire of skills used in clinical decision-making.

d2 A Novel Web-Based “Just-In-Time” Learning System for End Of Life/Palliative Care Education

James B. McGee, MD, David Barnard, Winifred G. Teuteberg, Peter M. Kant

Background: Medical student education in end of life and palliative care issues in this country is recognized as an area requiring improvement. **Hypothesis** The authors predict that an educational program that delivers contextual learning at the point of care should result in improved student acceptance, retention and application of new knowledge and skills. **Methods** The Palliative Care Section and the Laboratory for Educational Technology at the University of Pittsburgh implemented a web-based training program in end-of-life care for third-year medical students on their clinical rotations. This program delivers online learning modules in a “just-in-time” fashion to students in the context of caring for patients with palliative care needs. The system delivers concise educational content on palliative care topics selected by students from a menu triggered by electronic entry of the patient’s diagnosis of a life-threatening disease. It automatically alerts a student’s supervisory resident and attending when a student completes a palliative care module.

Results: This system is being progressively rolled out to each of the clinical clerkships at the University of Pittsburgh. Initial response, utilization and evaluation by students are all positive. **Discussion** This novel “just-in-time” learning system delivers a much-needed curriculum to medical students at the point of care. It adds educational value to the task of recording patient encounters and engages a student’s resident and attending in the process. This system integrates well into students’ workflow and is adaptable to other clinical topics. Objective follow-up evaluation of the system’s effect on learning will be conducted after full implementation.

d3 Optimization of Clinical Skills Assessment Program via Distribution of Content through RWJMS iTunes

Carol A. Terregino, MD, Alexander Izaguirre, PhD

Background: The ideal formative and summative clinical skills assessment system provides a durable patient encounter record to track student performance longitudinally and across clinical clerkships, an accessible record for faculty feedback and student self-assessment, multiple viewer access, and flexible viewing times.

Objective: To improve clinical skills assessment process through implementation of an efficient, effective, and economical digital based solution via **Methods:** 1. Conversion of the current analog video capture process to digital; 2. Strategic improvement of supply chain logistics: exam creation, student/room scheduling, video capture, processing and distribution, faculty grading, and archiving mechanism 3. Distribution and ubiquitous access of digital media to faculty through the RWJMS iTunes U.

Results: Benefits of the system include expedited feedback to students as a result of increased accessibility of video content to faculty through RWJMS iTunes U, decreased administrative effort and faculty time, and improved faculty satisfaction, longitudinal student record availability and an implementation cost under \$60,000.00. **Conclusion:** Creative strategic planning has led to an efficient, effective, and economical educational solution for our clinical skills program. It has afforded optimization of faculty evaluation and feedback time and has added significant operational value to the clinical skills program while remaining within budgetary constraints. The durable patient encounter record through RWJMS iTunes U adds depth to the longitudinal student portfolio and allows earlier identification of students needing remediation of their clinical skills. Student self-assessment of their digital patient encounter enhances future clinical performance.

Session E: Workshops and Short Communications

Saturday, April 11 4:00-5:00

WORKSHOPS V

E1 Collaborations and CME: Educating and Enhancing Performance of the Health Care Team

Lee Manchul, MD, MHPE, Dave Davis, MD

Target Audience: Continuing health professions (CME) providers and scholars, and UME and GME educators with an interest in teaching and evaluating health professional competencies and performance

Background: The recent Josiah Macy Foundation-sponsored conference “Continuing Education in the Health Professions: Improving Healthcare Through Lifelong Learning” cites the poor performance record of traditional CME: too many lectures with inadequate emphasis on enhancing competence and performance of individual health care professionals and health care teams (1). The goal of this workshop is to develop strategies to address the learning needs and enhance the performance of the health care team across the medical education continuum in order to improve health.

Objectives: This workshop will allow participants to: · Develop strategies to determine and address the learning needs of the



health care team · Explore how these strategies may be implemented across the medical education continuum · Identify team performance and health care indicators to measure to evaluate the effectiveness of these strategies

Reference: 1. Fletcher, SW (Conference Chair) Chairman's Summary of the Conference: Continuing Education in the Health Professions: Improving Healthcare Through Lifelong Learning. November 2007. pdf accessed from the Josiah Macy, Jr. Foundation Website, February 6, 2008.

E2 Redesigning the 4th Year

Marilyn London, EdD, Elza Mylona, PhD, Ryan Spencer, MD, Benjamin Stein, MD, Richard Bronson, MD, Peter Halperin, MD, David Tompkins, MD

Recent changes in the medical school curriculum have mostly been focused in the first two years of medical school. Many schools have not yet explored the third and fourth years for enriching possibilities. While some schools have most of the fourth year dedicated to elective time, others have more structured programs. During the session, we will provide you with a literature review and some examples of how some schools have addressed the 4th year. We will use interactive techniques and case studies to involve participants in creative solutions to the issues at hand.

Goals: 1. Report on existing models of the 4th year curriculum 2. Identify 4th year curricular problems 3. Identify solutions and develop approaches to address the problems

Learning Objectives: 1. Identify and evaluate existing models of 4th year curricula 2. Use the models to solve a case study 3. Select approaches to meet individualized needs

SHORT COMMUNICATIONS VI

e1 Associated Medical Schools of NY's Institute for Professional Development

Sharon Krackov, EdD, Jo Wiederhorn (DEGREE?)

The Associated Medical Schools of New York (AMSNY) Institute for Professional Development operates under the auspices of the 15 medical schools and five dental schools in New York State (NYS). The Institute's mission is to foster and support excellence and effectiveness in medical education and leadership competence. It is the home for two comprehensive tracks: medical/dental education and leadership development and offers a curriculum that can lead to a certificate of advanced study. Each of the two tracks is summarized briefly below. • Medical /dental education track: The AMSNY medical/dental education track will advance the educational mission of the State's medical and dental schools through a collaborative effort that supports the faculty educators at each of the schools. Through its programs, it functions as a place where educators can meet to talk across institutional and departmental boundaries, discuss scholarly approaches to teaching, acquire ideas for value-added programs or strategies to bring back to their institution, and develop a deeper understanding of educational scholarship.. • Leadership development track: The AMSNY leadership development track will advance the knowledge and skills of those faculty from the 15 NYS medical schools and 5 NYS dental schools who are recognized as leaders in their institutions. The leadership curriculum will focus on topics such as: organizational design, strategic planning, negotiation skills, leading and implementing change, medical/dental school management and operations. Participants will have opportunities to discuss leadership problems and develop solutions with colleagues from other schools

e2 What do Graduating Students Think About Research During Medical School?

David Jones, MS-III, John Mahoney, MD

Background There is an imminent shortage of physician-scientists. Many medical schools (MEDSCH) are implementing mandatory medical student (MS) research projects, to enhance critical thinking skills and stimulate interest in academic careers. This study sought to characterize MS perceptions about the benefits of research experiences (RES-EXP) during MEDSCH. Methods Population: 141 senior MS prior to Match Day. The school encouraged but did not require MS research. A 12 question survey used Likert scale and multiple choice questions to assess MS research interest upon entering MEDSCH, upon graduating from MEDSCH, and the perceived impact of RES-EXP on competitiveness for residency positions.

Results 60% completion rate (84 returns). 95% had RES-EXP prior to MEDSCH. 81% participated in research during MEDSCH. 62% planned to continue scholarly activity after MEDSCH, increased from 42% who were planning a research career before MEDSCH. 74% felt research was at least a moderately important residency application factor. 57% felt RES-EXP did not make them better physicians. Conclusion Almost ¾ of respondents felt research would help them with their residency application, but over half felt that it would not make them better physicians long-term. Self-report of plans showed that substantially more MS were considering research as a career component by the end of MEDSCH. It is undetermined whether this increase is due to specific MEDSCH experiences or a natural progression of scientific maturation. Self-selection of the polled student body may also have influenced the results. These results, at Kirkpatrick level 1, highlight the need for further work in this field.



Sessions

e3 Creating a Student Enrichment Program: Distinction in Medical Education (DIME)

Norma S. Saks, EdD, Lauren Pellino, MS 4

Goal: To create an enrichment and recognition program for students involved in educational activities and interested in pursuing careers in academic medicine.

The need: Distinction programs at Robert Wood Johnson Medical School had been implemented for two of the four missions of the school: Distinction in Research (DIR) and Distinction in Service to the Community (DISC). We wanted to enrich and recognize students involved in medical education activities and those preparing for careers in academic medicine.

Method: Faculty who have distinguished themselves in academic medicine through excellence in teaching, publishing, curriculum design, and the design of instructional materials, and students, were involved in the creation of the Distinction in Medical Education (DIME) program. The requirements and rigor of the program are based on the two existing Distinction programs and include a commitment to DIME by the M2 year and completion of a scholarly project in education.

Results: The DIME program was approved by the faculty in Spring, 2007; the program was initiated in the 2007-08 academic year. 50+ first and second year students are involved in the DIME non-credit elective, a requirement for the Distinction program. The class of 2011 will be the first eligible to fulfill the requirements to graduate with the notation of Distinction in Medical Education. **Challenges:** Challenges to full implementation of DIME include creating a sufficient number of medical education electives in years 3 and 4, identifying mentors to assist students in implementing projects, and agreeing on criteria for judging scholarly projects in education.

Session F: Workshops and Short Communications

Sunday April 12

10:00-11:00

WORKSHOPS VI

F1 Peer Review of Teaching Study: Designing, Implementing & Evaluating a National Faculty Development Plan

Janet P. Hafler, EdD, Maria A. Blanco, EdD; Carol F. Capello, PhD; Maryellen E. Gusic, MD

Medical schools recognize the need to better measure and reward faculty member's educational contributions and clinical care performances, including the development of guidelines and valid and reliable comprehensive evaluation systems. This workshop will provide a review of the literature on the use/impact of peer review and describe a national project that includes a study to design, implement and evaluate a national peer review of teaching program based on observations and feedback. The ultimate goal is to develop a program that can be adapted by interested medical schools. Included in the program will be tools that can be used across institutions to standardize effective teaching in the lecture and small group formats. Within the program, as we train faculty members to observe teaching and give feedback, we will aim to develop and validate two instruments: one for lectures and one for small group teaching. The workshop will include a small group interactive session with participants completing the assessment tools provided while observing vignettes; a summary discussion and group refinement and enhancement of the tools; discussion of next steps for the project; and recruitment of faculty to participate in peer reviews.

F2 The Elusive Competency: Teaching and Assessing Clinical Reasoning through Deliberate Practice

Cate Nicholas, EdD, MS, PA, Alan Rubin, MD

Over the last 3 decades, researchers have attempted to understand and articulate the nature of clinical reasoning hoping to translate that knowledge into teaching and assessment methods for learners across the continuum of medical education. Yet, the questions still remain- "Can clinical reasoning be taught and can competence be assessed?" During this workshop, we will • Offer a brief review of the literature in clinical reasoning and the concept of deliberate practice (training activities most closely associated with consistent improvements in performance) as a way to attain expertise. (15 minutes) • Use a modified Delphi technique, with the workshop participants as our panel of experts; to test the validity of our method of teaching clinical reasoning to our pre clerkship students (45 minutes) At the end, each participant will 1. have a deeper understanding of the current clinical reasoning models 2. use the concept of deliberate practice in curricular design 3. participate in an exercise to validate tools used to teach and assess clinical problem solving of pre clerkship students

References: 1. Ericsson, KA. (2004) Deliberate Practice and the Acquisition and Maintenance of Expert Performance in Medicine and Related Domains. *Academic Medicine* 79 (10) Oct. Supplement S70-S81 2. Eva, KW. (2004) What every teacher needs to know about clinical reasoning. *Medical Education*: 39: 98-106 3. Higgs & Jones. (2000) *Clinical Reasoning in the Health Professions* Butterworth/Heinemann Oxford. 4. Norman, G. (2005) Research in clinical reasoning: past history and current trends. *Medical Education*: 39: 418-427



F3 Giving it and Getting it so That it is Good: Feedback Made Simple and Effective

Eileen CichoskiKelly, PhD

The purpose of this workshop is to demonstrate proven strategies for engaging faculty and students in delivering (and eliciting) effective feedback in clinical and class environments. I. Interactive discussion with the audience to identify criteria for useful feedback by exploring the purpose for feedback and the audience member's own experiences giving and receiving feedback. II. Didactic presentation of Steps for Effective Feedback III. audience observation and rating using those steps of a video role play scenario. IV. A large group discussion to evaluate how well the video complied with the suggested steps for giving effective feedback. V. A didactic presentation will demonstrate how to elicit effective feedback from others. VI. Large group discussion reacting to these steps. VII. Audience practice using the steps for giving effective feedback in small groups during role play scenarios. Groups will include the giver of feedback (a resident or teacher), the receiver of feedback (a student) and one or two observer/s of the process. Small groups will process the role play and how closely the effective feedback steps were followed. VIII. Large group discussion regarding utility of the steps and a closing evaluation where members will identify one point they will incorporate into their skill set. References: fß Ende J. Feedback in clinical medical education. JAMA 1983; 250:777-81. fß Hewson MG, Little ML. Giving feedback in medical education. Verification of recommended techniques. J Gen Intern Med 1998; 12:111-16. fß Pangaro L. A new vocabulary and other recent innovations for improving descriptive in-training evaluations. Academic Med 1999;74:11; 1203-16.

SHORT COMMUNICATIONS VII

f1 Connecting with the Community for Cross Cultural Health Education

Stacey Brown, PhD, Judy Lewis

OBJECTIVES: Participants will learn the importance and viability of university-community partnerships in developing and implementing activities directed at eliminating health disparities. **BACKGROUND:** Global disparities in health care access and outcomes have been well documented. Multiple approaches have been proposed; medical education and community collaboration are one solution. The University of Connecticut School of Medicine (UCSOM) is committed to cross cultural skills development in collaboration with community partners which focus on many skills including those related to gender, race, ethnicity, disabilities, sexual orientation, literacy, and effective communication. Teaching methodologies are varied and integrated across the 4 years of medical education.

METHODS: UCSCOM conducted focus groups with community partners, faculty and students. This research resulted in new curricula which include: (1) communities and health orientation, (2) tour of the local community, (3) diversification of patient panels, (4) programs on local ethnic groups, (5) skills for working with interpreters, and, (6) a seminar on the interconnections of culture, biology and the environment.

RESULTS: Evaluations for each of the proposed new curricula have been positive. To illustrate, consider the following: 82% of students find the community orientation and tour useful and relevant; 95% of students positively evaluate the content and presentation of community panels; 90% of students find the interpretation cases instructive.

CONCLUSION: Community-university collaboration provides an important means of developing cross cultural curricula and skills to address health disparities. Health professions education that is skills based and developed with communities is an effective method of addressing access to health care and health disparities.

f2 Cross Cultural Comparison of the Patient-Centeredness of "Hidden Curriculum in Saudi Arabian and US Medical Schools

*Rasha Al-Bawardy, MS 2, Benjamin Blatt, MD, Saad Al-Shohaib MD**, Samuel J. Simmens PhD, MA***, Basim Baragabah***

Objective: To characterize the patient-centeredness of a Saudi Arabian medical school, King Abdul Aziz University Medical School (KAAU), and compare it to that of nine U.S. medical schools. **Background:** A growing body of literature supports the importance of patient-centeredness on illness outcomes. Though patient-centeredness is taught in the explicit, formal curricula of most medical schools, the implicit, "hidden curriculum" sometimes undermines patient-centeredness. The C3, an instrument which samples the hidden curriculum, has been validated in 9 US medical schools. **Methods:** Saudi medical students in their 6th (last) year completed the C3. They also completed a second instrument, the Patient-Provider Orientation Scale (PPOS), to measure their personal attitudes toward patient-centered behavior.

Results: 139/300 (46%) Saudis completed the C3 and 122/300 (41%) completed the PPOS. Means for the C3 instrument's 3 domains (0-100 scale) were lower for KAAU than those the 9 American medical schools: role modeling, 60 vs. 62; student experiences in patient-centered care, 47 vs. 55; and support for students' own patient-centered behaviors, 54 vs. 68. The mean Saudi PPOS score was 4.0 (SD=.5); for the American medical schools, 4.8 (SD=.8) (1-6, least to most patient-centered) **Conclusion:** In each of the C3 categories the Saudi scores suggest that the Saudi hidden curriculum is less patient-centered than the American. Also, the PPOS results suggest that Saudi students have less patient centered attitudes than Americans students. The C3 can help educators to evaluate their hidden curricula in a cross cultural as well as a local context, bringing a broader perspective to their curricular decision-making.



f3 Teaching Population Health in Clinical Settings: Public Health Patient Conversations

Jan K. Carney, Thomas Delaney, Jill Jemison

Integrating public health into medical education is challenging, especially as students advance to clinical clerkships, and shift their focus to individual patients. We tested an innovative approach, linking public health information to clinical settings. Five public health audio-video modules (vignettes) were developed in areas of adult immunization, smoking cessation, HIV prevention, physical activity, and adolescent injuries. Each was designed to simulate a physician-patient conversation in an office setting, and consisted of an introductory slide with still-view bulleted public health information from the CDC, (also heard on a voiceover), that was followed by a video of a physician-patient conversation, and a second summary information slide. Vignettes were from 3.5 to 7 minutes long. The UVM College of Medicine Educational Tool (COMET), an integrated teaching and learning tool was used as a learning platform. Students could watch or listen to vignettes multiple times for a 7 day period, then completed a brief on-line test, containing 3 questions for each vignette, (2 from public health information and 1 from the conversation). 72 3rd year medical students completed the test. Mean number of times students viewed each vignette ranged from 2.89 to 3.07 (all medians = 2). Percent correct responses ranged from 66% to 100%. Overall, 89.6% of information based items were answered correctly along with 93.5% of conversation based items (Fisher's test $p = .28$, not significant). Students in clinical clerkships learned public health information using this vehicle. Further studies will focus on additional topics and testing in a subsequent class cohort.

Session G: Workshops and Short Communications

Sunday April 12

11:10-12:10

WORKSHOPS VII

G1 Using the Data from Peer Review: What Outcomes Should We Measure?

Maryellen E. Gusic, MD, Nancy Kheck PhD

Peer evaluation can be both formative (fostering critical reflection) and summative (assessing the quality of teaching). The authors will use models for clinical teaching and curriculum review from their institutions to promote discussion of key issues to consider in planning, implementing, and evaluating programs of peer assessment. They will use the framework developed by Kirkpatrick and will emphasize the importance of defining multi-level outcome measures in the design of programs and of evaluation strategies. Participants will spend the majority of the workshop in facilitated small groups. They will have the opportunity to plan a peer review program and design assessment tools to assess teaching effectiveness. Plans will be shared with the large group for comment. The groups will then work to formulate an evaluation plan for the peer review program they have developed. This plan must include a discussion of how the tools created during the first break out session, would demonstrate that learning has been enhanced. They will also explore how this information may be incorporated into the current system of faculty evaluation for promotion and tenure. Small group work would again be shared with the entire audience to allow participants to share ideas. Participants will receive a summary of the work products created and will leave the session having had the opportunity to: 1. critically reflect on peer assessment at their institution 2. create tools for use at their institution 3. develop action steps to address challenges in planning, implementing, and evaluating a system of peer review.

G2 Enhancing Curriculum Development: Student-Faculty Collaboration at Work

Lynn Kosowicz, MD, Karen Harrington, MSW

The social and cognitive congruence that contribute to the success of peer teaching can be important contributors to effective curriculum development. Such participation may also help students learn to identify barriers to institutional change and to develop skills of negotiation, project planning, project implementation and program evaluation necessary for future medical educators. At the University of Connecticut, students have been successfully involved in several curriculum development projects in diverse areas such as health literacy, behavior change counseling, clinical anatomy, cardiac auscultation and focused history and physical examination skills. Objectives: At the end of the workshop participants will have 1. A better understanding of what roles upper class students can play in curriculum development and teaching of their colleagues. 2. An implementation plan for at least one program that could be developed at their own institution. Introductions: Background, Experience, and Interests in involving students in curriculum development (10 minutes) Review of literature on theory and practice of student involvement in teaching and curriculum innovation. (5 minutes) Description of one completed project as a model: needs assessment, objectives, methods, and evaluation. Discussion of benefits and challenges of student involvement (15 minutes) Implementation strategies: participants work in small groups on a topic of common interest to discuss specific implementation strategies and outcome measures (25 minutes) Wrap-up in large group: (5 minutes)



SHORT COMMUNICATIONS VIII

g1 Training Medical Students to Recognize and Refer Children with Reading Disabilities: A Unique Curriculum

Blanche Podhajski, PhD, Cynthia Forehand, PhD, Lewis R. First, MD, Jane Nathan, PhD

Research over the past two decades has clearly documented the benefits of early identification and treatment of reading and learning problems in young children. Pediatricians are in a unique position to play an integral part in early detection but often lack basic training in reading research and development to identify problems. To address this problem, the University of Vermont, College of Medicine engaged in a collaboration with the Stern Center for Language and Learning (a non-profit literacy organization) to develop an on-line, self-taught interactive computer module on basic literacy and recent advances in reading research that could be inserted easily into medical school curriculum. The goal was to teach future physicians how to identify, refer, and/or counsel patients who might have reading difficulties. Analysis of the data suggest a statistically significant increase in medical student's knowledge of literacy concepts immediately after taking the module (24% improvement; $p < .05$) with 67% of that knowledge maintained one year later ($p < .05$). Overall satisfaction with the module has been high with 89% of student's finding the content informative and 85% believing it to be moderately to extremely relevant to their medical practice. Methods and results of this successful and important program are discussed.

g2 Learning On-Line Using WIKI Technology: A Pilot Study in a Pediatric Clerkship

Anthony J. Frisby, PhD, J. Lindsey Lane

Methods Students on the Pediatric Clerkship at Jefferson Medical College research case-vignettes in 20 topic areas and discuss their answers in small group with a faculty facilitator to achieve the learning objectives. Using the Blackboard course management system and Learning Objects ExpoLx software one topic area, with 10 case vignettes, was transferred to on line learning and piloted by 14 students divided into 5 groups. Instructions for use of the WIKI communication forum were provided on-line. Each group was assigned 2 case-vignettes. Outcomes data was obtained from questionnaires and student interviews. Results: No student had prior experience with online learning. Although students reported the WIKI as 'easy to use' none used it for sharing and collaboration; they used email, phone or in person communication instead. Positives of the WIKI compared to small group format were: high quality, in depth answers; excellent learning from reading the answers; ability to work anytime, anywhere. Negatives were: time – students estimated they spent 5 times as long researching and writing their answers; clinical thinking was not learned as well; social interaction was missing; answers were too detailed and took a long time to read. Students indicated they would like to have online activities such as this as part of their clerkship.

Conclusions: On-line instruction on how to use a WIKI was insufficient for this group of students. Further research needs to be done on depth versus breadth of learning, time on task, clinical thinking, social interaction and collaboration using WIKI on line learning.

g3 An Inter-Professional Teaching with Technology Program That Takes Teaching to a Higher Level

Lyn Riza, MS, Susan Pasquale, PhD; Andrea Lydon, EdM; Andrea Barrett; Len Levine, MSLiS, MA

Overview A challenge to school-wide adoption of a course management system for online teaching is the support faculty need to feel effective in the use of the teaching technology. This short communication will describe a successful program for integrating a course management system into the teaching and learning infrastructure of a medical school in a supportive, synchronized manner.

Description In 2004 the University of Massachusetts selected a new online course management system. In response, a collaborative faculty development effort was championed by the medical school's Office of Faculty Administration, Information Services, and Library, and Phase I of a development program for faculty and staff was implemented. The result has been pedagogically sound use of technology and increased faculty adaptation, with online course offerings growing from approximately 120 to 330. Progression from workshops to deskside training defined Phase II. Phase III, an 'Innovations in Teaching with Technology User Group', evolved in September 2006 from faculty and staff seeking to enrich teaching in collaboration with colleagues. A Virtual User Community was added in 2007 to cultivate community and conversation beyond face to face meetings. The Innovations Group represents the only inter-professional collaborative campus forum of designers, faculty, technologists, educators and librarians coming together to enhance teaching with technology. Designed around participant requests, sessions provide ongoing assessment of needs and opportunities for innovation. Evaluation Of 72 session participants in 2006-2007, 100% "strongly agreed" or "agreed" that sessions were "relevant to needs"; "skills/ideas taught are useful"; "would recommend the session to a peer", and found "handouts/materials useful".



P1 Daily Debriefing Form to facilitate Didactic Communication and Resident Feedback

Rishmani Adsumelli MBBS, FFARCS, Joy E. Schabel, MD, Ellen Steinberg MD,

Background: A survey was sent to all current residents and faculty to critically evaluate all aspects of our educational program. The survey revealed that inadequate clinical teaching and the lack of highly effective resident-faculty communication were major deficits in an otherwise strong didactic educational program. Since the vast majority of the resident's learning experience occurs in a clinical environment, it was felt that a clinically relevant daily debriefing exercise, performed by both the resident and attending, would best address these deficits. **Hypothesis:** Maximizing resident learning and providing frequent feedback can be daily challenges for academic anesthesiologists. The completion of a daily debriefing form by both resident and attending will enhance faculty-resident didactic communication in the clinical setting as well as provide and document daily, formative, competency-based feedback to the resident. **Curriculum Design:** A Daily Debriefing Form was created to include the list of cases performed each day, feedback of the preoperative assessments, a list of the chosen topics for discussion as decided during the preoperative phone call the day prior, a review of critical events, a review of clinical skills and knowledge checklists and competency-based feedback. (see attached form) **Outcome:** We will solicit feedback from the residents and attendings and make necessary modifications to the form. We will then resurvey our faculty and residents to assess improvements in resident-faculty communication.

P2 Interactive Brain Atlases: Supporting Integrative and Individualized Student Learning

AWARD WINNER

Susan Billings-Gagliardi, PhD, Charlene Baron, MEd, Ken Wolf, MD, Jeanne Keller, MD, Sam Gorstein, MS3

Overview To support multiple ways of learning and to encourage students to develop an understanding of brain structure and function that they can apply clinically, Sue Billings-Gagliardi and her faculty/student team at the University of Massachusetts Medical School have developed Interactive Brain Atlases. Description 12 PDF-based Atlases of the human brain and spinal cord incorporating more than 200 images (sections, slices, MRI) have been labeled with interactive drawings and questions that direct students to key information, explain why it is important, and guide students to continually integrate neuroanatomic with clinical information. Ways students can use the Atlases for individualized learning • View teacher-generated comments and mark-ups, and mouse-over them to get additional information. • Select individual categories of comments (IDENTIFY, CONNECTIONS/FUNCTIONS, CLINICAL) to view depending on their own immediate learning needs. • Quiz themselves on questions posed by the teacher and get immediate feedback • Temporarily 'erase' an atlas by hiding all comments and drawings. • Add their own comments and drawings directly on atlas images • Exchange comments with peers for collaborative learning. • Search all Atlas comments. **Innovative Features** The Atlases guide students toward an integration of multiple types of information essential for clinical practice, enabling them to set the pace of learning and to customize the materials to meet their own needs. In contrast, traditional atlases tend to focus students' attention on names, and not on the anatomic and functional relationships that are important for clinical medicine. Other available online or CD brain atlases provide limited support for individualized learning and quizzing features focus primarily on structure naming. **Evidence of Effectiveness Evaluation:** in the last two years, 96% of our first-year students gave the Atlases the highest possible rating as helpful learning tools (5-point scale; n=199; 98% response rate). **Additionally:** exceptional student performance on tests of clinical problem-solving; continued use of Atlases in later years of curriculum; 2 RIME abstracts; MedEdPORTAL publication. **Use of Atlas Features** (5-point scale 'a lot' to 'not at all' 2006 and 2007 combined, n=199) 89% studied the instructor-generated comments and used the quizzing feature 'a lot.' 86% used the integrative basic - clinical information 'a lot.' 53% utilized the Atlases for initial learning 'a lot' 96% studied and reviewed with them 'a lot' 50% added a number of their own comments or drawings to their Atlases 39% shared comments with other students, using the Atlases collaboratively **Sample Student Comments** • I liked that the answers were available but not immediately there, so one had to think first. Or if you didn't want to think and wanted the answers right away, you could do that too. • The best thing was they provided a framework. Great for [developing an] understanding of functions, connections and clinical importance of different structures. • I liked being able to draw and annotate myself – very hands-on and interactive • Great teaching of basic concepts in a clinical fashion. • I liked that answers often had another level of explanation or information linking to another concept. [View an Atlas](http://www.umassmed.edu/cellbio/atlas.aspx) <http://www.umassmed.edu/cellbio/atlas.aspx>

P3 First-Time Use of a Standardized Student OSTE in a Controlled Evaluation of an Obstetrics & Gynecology

AWARD WINNER

George Washington University

Benjamin Blatt, MD, Charles Macri, MD, Nancy Gaba, MD, Larrie Greenberg, MD

Goals: To design and implement a residents as teachers (RATS) program for obstetrics and gynecology (Ob-Gyn) residents and evaluate it in a controlled fashion using a standardized student objective structured teaching examination (OSTE). **Background:** Nine controlled evaluations of RATS programs are reported in the literature. Only two of these used an OSTE to evaluate outcomes and neither of these was an Ob-Gyn program. Reported here is the first controlled evaluation of an Ob-Gyn residents-as-teachers program using a standardized student OSTE.

Description: From November, 2004 to January, 2005, at George Washington University, 24 Ob-Gyn residents completed a controlled trial of a RATS program. Thirteen residents were assigned to the intervention group, 11, to the control group, based on convenience. The intervention group took part in six 1.5 hour interactive workshops during their protected education time: Mini-lectur-



ing, Giving Feedback, Teaching in the Setting of a Case Presentation, Teaching a Skill, Bedside Teaching, and Orienting a Learner. Practice with standardized students or role play was emphasized in each workshop. After the intervention, both groups completed a six station OSTE. The OSTE stations were manned by senior students from our TALKS senior students as teachers program, trained to be standardized students. They were blinded as to whether a resident was in the intervention or control group. Both groups also completed self-assessment questionnaires of their teaching. Results: The overall mean of the intervention group for the six stations was seventeen percent higher than the control group ($p = .001$), and they scored statistically higher on 4/6 stations ($p = .01-.03$). On the other two stations the intervention group also scored higher than the control group, but not at a statistically significant level. On a baseline self-assessment of teaching abilities, the two groups were similar (intervention 3.5; control, 3.4); post intervention, the intervention group rated their abilities 4.0.

Impact: In medical schools across the nation Ob-Gyn clerkships are not rated as highly as others (per the AAMC Medical School Graduation Questionnaire). Our institution is no exception. The impact of our program on students' evaluation of the clerkship is in the process of being measured. We have high expectations, however, considering the impact the program has already had on departmental culture. As a result of the success of the residents-as- teachers program, faculty report that participating residents developed new enthusiasm about their teaching roles and new confidence in their teaching skills. Furthermore, the faculty themselves have renewed their enthusiasm for education. They chose the most important gathering of the year, the annual departmental formal banquet, to present the participating residents with framed teaching certificates. They also decided to make the RATS program a required part of the residency. Faculty enthusiasm was further fanned when they perceived the program to be a powerful recruitment tool for residency applicants. Finally, the RATS program concept has begun to have impact on other departments, and at the faculty as well as the resident training level: we have just instituted a similar program (referred to as FATS—faculty as teachers) for general internal medicine faculty.

P4 Assessing Medical Students' Knowledge and Changing Attitudes towards Public Health

Jan K Carney, MD, MPH, Thomas Delaney, PhD

As part of educational efforts to integrate public health in medical education, medical students participated in a brief (8 item) computer-based assessment of public health knowledge and attitudes. Two cohorts represented entire classes of first year students (101 and 104 students); the third was a sample of clinical (3rd year) students. First year cohorts were compared with the third year cohort to assess differences; comparisons used Fisher's Exact test ($\alpha = .05$, 2 tailed). Regarding knowledge, first year students were more likely to endorse the target (best) answers for the definition of public health (85% vs 68%, $p = .004$) and the most important determinant of public health (29% vs 16%, $p = .04$). First years were less likely to identify obesity/poor nutrition as the fastest growing public health topic in the US (71% vs 85%, $p = .03$). Regarding attitudes, first year students were much more likely to strongly agree that public health is an important topic to master in their education (66% vs 31% , $p = .001$); first year students were less likely to strongly agree that public health research is best guided by studying groups of patients (8% vs 20%, $p = .01$). First and third years did not differ in their strong agreement about new technology constituting the most effective means for improving public health (7% vs 3%, $p = .37$). Findings highlight expected differences between pre-clinical and clinical years, identify educational gaps, and provide a simple longitudinal measure of public health education in the medical curriculum.

P5 Teaching Empathy Across Disciplines: Integrating Empathy Skills in the Physical Diagnosis Examination

Luz Rebecca S. DeGuzman, M.S., M.D., Sally Schwab, Ph.D., M.S.W.

Effective communication skills improve the quality of the medical encounter. Good interpersonal and communication skills increase patient and provider satisfaction, contribute to improved health outcomes, better adherence, lead to decreased frustration and fewer malpractice claims and shortened hospital stays. Physician Assistant students (PA's) who communicate effectively use time more efficiently, demonstrate better clinical performance and have improved rapport with patients. Faculty are expected to teach and model effective communication skills in busy clinical settings as well as in the classroom. This poster will describe the unique curriculum taught by faculty representing diverse disciplines including a physician and medical educator/social worker from The Mercy College Physician Assistant Master's Program. Empathic communication taught to PA students must be attitudinally, behaviorally and skills based. Examples of key behavioral empathic communication skills used during the physical examination includes: taking time to give clear instructions; maintaining eye contact and appropriate space; gentleness in positioning and placement of medical equipment/apparatus during the examination. Examples of action oriented communication skills in building relationships with patients include: escorting patients; coordinating referrals; tracking down laboratory results and making follow-up calls. In order to enhance the connection between patient and provider, the following process skills must be applied including: patience, respect, being non-judgmental; allowing the patient to talk without interrupting; following their lead and reflective listening. "Hands on" practice in the classroom is key to developing skills. Students evaluate this teaching positively, highlighting their feelings of being treated respectfully and empathically by instructors who model empathic teaching in the classroom.



P6 Using Computerized Tomography (CT) Imaging of Cadavers to Enhance Student Learning in Anatomy

Scott K. Epstein, MD, Stanley Jacobson PhD (first author), Joseph Polak MD, Scott K. Epstein MD, Sarah Frisken, Susan Albright, Blair Hough

TUSM is undergoing a major curriculum revision with emphasis on translational education – enhanced integration of basic and clinical science across the 4-year continuum. Emphasizing clinical correlation during early classroom and laboratory work can improve student learning by highlighting the relevance of content. To provide clinical correlation for the 1st year Anatomy Course we performed Computerized Tomographic (CT) imaging on a series of cadavers to be used for dissection. Thirteen cadavers underwent total body CT imaging using a Siemens Somatom Sensation 64 Scanner in the Department of Radiology at T-NEMC. The images were converted into jpeg format and labeled, a movie was generated using QuickTime. The CT images were analyzed and, together with knowledge of the reported cause of death, were used to construct a plausible clinical case. Case features were specifically designed to highlight abnormal anatomic findings that students would encounter during the cadaveric dissection. Simultaneous viewing of the CT images via “bedside” laptop facilitates immediate radiologic-pathologic correlation. Cases are posted on TUSK (Tufts University Science Knowledgebase) using an interactive Case Simulator. Elements of each case were deployed sequentially to correspond to the segment of cadaveric dissection being taught (e.g. limb, thoracic, abdominal/pelvic). Students view the case narrative, associated CT images (with simultaneously available normal images for comparison) and answer short answer questions emphasizing clinical-anatomic-pathophysiologic correlation. The cases and annotated answers provide links to additional TUSK based learning resources. Additional digital photographic imaging of key anatomic findings at dissection allows for creation of a virtual library for future use.

P7 The Development and Testing of an Instrument to Measure Faculty Development Needs of Clinician-Educators

Cathleen A. Greenzang, Susan E. Farrell

THE DEVELOPMENT AND TESTING OF AN INSTRUMENT TO MEASURE FACULTY DEVELOPMENT NEEDS OF CLINICIAN-EDUCATORS Susan E. Farrell, Harvard Medical School; Cathleen A. Greenzang, Columbia University, College of Physicians and Surgeons Purpose: To develop and pilot-test a generalizable instrument to measure physicians' confidence in clinical teaching skills, as an inference of faculty development need. Method: We developed a 23-item, 5-point scale to measure confidence in five sub-domains of clinical teaching: small group teaching, bedside teaching, time management, evaluation and feedback, principles of adult learning. After content validation and cognitive pre-testing to assess item content, clarity, and relevance, we sorted items to minimize the cognitive load on respondents. We included items from an institutional faculty development scale to assess convergent validity. We pilot-tested the questionnaire with a convenience sample of 33 clinician-educators in different disciplines from university-affiliated hospitals in the Northeast. We made three points of internet contact: one pre-notice, an email link to the questionnaire, and one reminder. We calculated descriptive statistics of item responses, inter-item, within- and between- sub-domain correlations.

Results: Within sub-domains, items had a high degree of internal consistency (Cronbach's coefficient alpha: 0.85). Given this, we calculated composite scores for each sub-domain. The between-sub-domain correlations were moderate, but less than within-sub-domain alphas (r range: 0.28 to 0.73), and reached statistical significance in only three cases. Our de novo scale items were highly correlated with the items included for convergent validity (composite $r=0.94$; $p<0.001$). Teaching experience correlated with the composite score of our de novo scale ($r= -0.69$; $p=0.0004$): greater experience correlated with increased confidence in teaching skills. Conclusion: Our instrument is a valid and reliable assessment of physicians' confidence in five related, but distinct sub-domains of clinical teaching.

P8 Incorporating Acupuncture into the Medical School Curriculum: An Innovative, Successful Model

Mary P. Guerrero, MD, FAAFP, Jordan Goetz, MD

Over the past several years, the University of Connecticut School of Medicine has incorporated acupuncture into the required, third year medical school curriculum during an inter-clerkship “Home Week”. This half day session includes a didactic, evidence-based-medicine presentation as well as direct demonstrations and hands-on experiences, with a small faculty-to-student ratio. Evaluation data show that medical students find the session useful and recommend it be continued as part of their educational offerings. Curricular details of this model including the evaluation tool as well as our successes, challenges, and strategies for incorporating the session into the standard curriculum will be shared with those educators wishing to develop similar programs at their home institutions. In addition, resources specific to curricular development in acupuncture will be offered.

P9 Does a Workshop Improve Literature Search Skills and Confidence of Medical Faculty?

Lorie Kloda, Yvonne Steinert, Christopher Popovich

Purpose of the study This study assesses the effectiveness of an educational intervention on improving literature search skills and confidence of medical school faculty.

Methods Participants were invited to attend two interactive faculty development workshops on “Searching the Literature for Evidence Based Teaching and Learning.”



Workshop goals included: searching databases for literature on medical education, especially trials and systematic reviews; searching databases of peer-reviewed literature efficiently; and, determining whether a document is available online or in the library. Prior to the session, an electronic questionnaire, which served as both a needs assessment and pre-test, was distributed to all registrants. During the workshop, participants completed a pre-post instrument to measure their confidence in online literature searching. After the workshop, feedback was solicited via paper questionnaire. To measure participants' retention of search skills and perception of such abilities, a second electronic questionnaire was distributed five months after the workshop. Summary of Results Sixty-five medical school faculty members attended both workshops, which were highly rated. Preliminary data from the pre-test indicated participants had only some basic knowledge required to search effectively. The pre-post instrument demonstrated that although many participants were confident that they could complete several tasks required for a search, they learned more as a result of the workshop. Data from the follow-up questionnaire are being analyzed. Conclusions The revitalization of faculty members' literature search skills is an important component of continuing professional development. This study demonstrates to what extent an educational intervention is effective in meeting this goal.

P10 Teaching Evidence-Based Literature Retrieval to Medical Students and Residents

Len Levin, MS LIS, MA, AHIP, Megan Breshnahan, MSI (LSI), Lauren Maggio, MS LIS, MA, Kerry O'Rourke, MLS, AHIP, Donna O'Malley, MS LIS

With the growth on the emphasis on the importance of Evidence-Based Practice in the 1980's and 90's also came the need for clinicians to have a better understanding of how to find information about best-evidence outcomes in the medical literature. Academic medical librarians responded to this need by creating educational opportunities designed to instruct clinicians in how to most effectively use literature databases to find "the best-evidence needles" in what is often a very-large haystack. Many of these educational opportunities have been directed specifically towards medical students and residents with the goal of providing them with tools that will assist them in using best-evidence in the medical literature as they begin their clinical careers. This poster will demonstrate examples of educational programs focusing upon evidence-based literature retrieval that are in place at many NEGEA affiliated medical school libraries.

P11 Can a Synthetic Framework (PRIME) Improve Written Performance Evaluations for Pediatric Residents?

Joseph O. Lopreiato MD, MPH, Carolyn Oyster, Jan Hanson, Kenneth W. Schor

Faculty written performance evaluations form the backbone of most post graduate assessment programs. PRIME (Professionalism, Reporter, Interpreter, Manager, Educator) is an acronym for an evaluation system faculty can use to assess a learner's performance. A similar tool (RIME) has been shown to have high reliability for assessing learner performance at the undergraduate medical student level. This study assessed the results of introducing the PRIME system into the post graduate medical system. Methods: We retrospectively reviewed written faculty comments on resident performance before (AY 1999-2000) and after (AY 2001-2002) the PRIME system was introduced to faculty in a pediatric training program in the Northeast. Pre-PRIME resident evaluations (n=30) over 9 four-week clinical rotations were compared to Post-PRIME resident evaluations (n=33) over 11 four-week clinical rotations using the constant comparative approach to thematic analysis.

Results: Average numbers of words/resident increased from 21 words/resident pre-PRIME to 126 words/resident post-PRIME. Ten common themes were identified: Professionalism, Reporter, Interpreter, Manager, Educator, Organization, Demonstration of Growth, Improvement Needed, General Comments and Learning Environment. Post-PRIME data contained more detailed comments in all ten themes, especially in the area of professionalism. Discussion: The PRIME evaluation system was successfully implemented into a residency program and increased the quantity and quality of faculty comments about pediatric resident performance. While the same themes were identified in both pre- and post-PRIME data sets, post-PRIME comments included much more detailed and contextual information, providing information that could be used for more specific feedback to trainees.

P12 Pandemic Influenza Preparedness: A Patient Care and Team Training Simulation for Medical Students

AWARD WINNER

John F. Mahoney, MD; Joe Suyama, MD; Francis Guyette, MD, MPH; Samuel Stebbins, MD, MPH

Goals: Improving public health preparedness and preparing to cope with a pandemic depends on functioning in symbiosis with all elements of the healthcare team. This unique simulation exercise provides teams of medical students with an opportunity to treat overwhelming numbers of influenza patients in a mock hospital setting. When students assume the working roles of nurse, nursing assistant, and physician, they immediately gain insight into two subjects that are difficult to teach: 1) the potentially overwhelming nature of an infectious pandemic; and 2) the vital importance of teamwork, cooperation, interdisciplinary respect, and leadership in healthcare endeavors. Description: Beginning 3rd year students were divided into 40-student groups. Students managed a 140 "bed" hospital, created in a large lecture hall using a new, adaptable method for simulating a hospital environment. Each seat was a bed, and each 15-seat row was a hospital unit, staffed by 4 students in roles of physician, nurse and nursing assistant. The cardboard patients came to life as staff members continuously placed paper "action flags" on each patient, to indicate what treatment or evaluation was required (e.g. oxygen, IV fluids). Students "treated" patients by bringing a matching action flag to the bedside. Students also became infected, and were "treated" by colleagues, further burdening the hospital and degrading capabilities. The simulation fidelity and intensity were enhanced by wearing isolation gowns and masks,



supply shortages, and the presence of real news media personnel. Students were closely supervised by medical leaders that serve in key roles during actual emergencies. Impact on learners: Students quickly embraced the scenario and participated with energy and enthusiasm. They valued the hands-on nature of the simulations.

The overall simulation was very well received, and highly rated on student evaluations and comments, 96 % excellent or good, across two class years of students. Students indicated they had: 1) improved knowledge about pandemic influenza; 2) developed greater understanding of broader concepts that are vastly more difficult to teach – Value of communication, 77%; Teamwork and collaboration, 69%; Interdisciplinary respect, 60%; Cooperation, 56%; Leadership, 33%; 3) gained appreciation for the essential roles of every member of the healthcare team in a manner that cannot easily be replicated in everyday experiences. Similarly high evaluations were offered by exercise participants at the 2006 AMSA Regional Conference (students), 2007 AAMC Annual Meeting (faculty), and a 2007 conference of medical school deans at Pittsburgh. This all-new simulation provides a unique venue for student learning about pandemic preparedness and the threat of avian influenza. It also introduces aspects of systems-based care and the importance of functioning in integrated healthcare teams. This exercise achieved an awakening in these domains in less than 2 hours, even before the students entered the wards. Generalizability: This exercise can readily be generalized to other circumstances, health disciplines, and levels of ability, and exported to other institutions. Several US schools are currently at various stages of implementing this exercise. This exercise does not require highly specialized facilities or faculty, and can be conducted for 150 students for under \$500.

Reference: <http://www.omed.pitt.edu/faculty/PandemicPreparednessSimulationExercise.php>

P13 ISimulation as an Educational Modality for Multidisciplinary Training Experience in the ICU

AWARD WINNER

Patrick T. Mailloux, DO, Gladys Fernandez, MD; William T. McGee, MD

Introduction: Intensive Care Units (ICU) manage the sickest and most complicated patients in a multidisciplinary fashion. Critical Care physicians, house staff (including Medicine, Surgery, Anesthesia, OB/GYN and Emergency Medicine residents) medical students, pharmacists, nurses, respiratory therapists and nutritionists all collaborate in managing the critically ill. Working in this environment is complex, intimidating, requires quick decision making, effective teamwork and a confidence applying various technologies and mechanical devices as treatment modalities. Often, knowledge and skills are gained only after repeated exposures to this patient population under guidance of more experienced personnel. Human Patient Simulation (HPS) provides an opportunity to gain knowledge, skill and experience in management of the critically ill. HPS, an innovative medical education tool, provides valuable exposure to less experienced caregivers and also allows mature learners to expand and apply knowledge regarding basic and advanced aspects of Critical Care Medicine (CCM).

Methods: The HPS environment provides exposure to CCM issues within a collegial, instructional environment. We incorporate simulation-based training into the curricula of residents, students, nurses and other providers across many disciplines and specialties. We developed several HPS scenarios, generating experience in management of septic shock, pulmonary embolism, myocardial infarction, ARDS, tension pneumothorax, post-operative complications and end-of-life issues, to name a few. The simulation environment created in our center is realistic and multidisciplinary; each session includes an ICU nurse, respiratory therapist, team of caregivers and contents of a typical ICU room. All involved must work in unison, communicate effectively and provide evidence-based patient care modalities to be successful. Following a brief introduction, an active HPS learning encounter occurs with an immediate post-scenario debriefing designed to reinforce the learning objectives. Having learners from different disciplines in the simulated critical care setting contribute to the realism of the experience. The team's ability to achieve specifically outlined goals dictates the patient outcome. During sessions addressing septic shock, for example, the team must adequately fluid resuscitate, initiate prompt antibiotic therapy, identify source and/or obtain source control, appropriately use vasopressors, ask for suitable laboratory tests, recognize the need for mechanical ventilation and determine the appropriate disposition.

Analysis: The participants complete surveys after each session at the beginning and end of their ICU rotation, and we use the data collected to make necessary changes. In fact, several abstracts and poster presentations at national meetings support our initiative of using feedback to gauge the impact we have on those learning the fundamentals of critical care. Simulation is clearly an important part of medical education and expected to play a larger role in the future. Our center is expanding and we strive to develop a more innovative curriculum. One mode we plan to employ is the use of a written test at the beginning and end of the ICU rotation with topics in the exam covered during our simulation sessions. The performance on the exams is an easily collected metric to determine the impact our efforts have on the learner. Also, we utilize a newly created online survey to tabulate the learners' satisfaction with their experience and thereby adjust our efforts accordingly.

P14 Exploring the Benefits and Barriers to Community Exercise: Enhancing Attendance of the Greater Burlington YMCA

Rebecca Martin, Nicholas Antell, Michelle Cangiano, Jessica Deane, Chris Lin, Sarah Schlein, Richard Zinke, Pam Farnham RN, Kevin Hatin, Jan Carney MD, MPH

As part of the Vermont Integrated Curriculum at the UVM College of Medicine, second year medical students complete public health projects, based on community health needs. Our project focused on the YMCA of Burlington, Vermont's free Diabetes Fitness Program. Despite ample evidence supporting the program's effectiveness, enrollment and retention rates remained low. By surveying current and past program participants, as well as non-participating diabetic patients, we explored factors of interest



and barriers. Physician surveys were conducted to investigate program awareness and barriers. Participant benefits include reduced HbA1c levels, improved fitness, social support, weight loss, and confidence. Past participants cited parking, weight loss, and an increased fitness level as rejoining incentives. While 25% of non-participants knew of the program, 75% stated interest. Important factors in joining any fitness program included time of day, location, support groups, and a personalized program. 57% of physicians knew of the class; however, 100% stated that they will refer patients now that they are aware of the class. Over 80% of physicians specified lack of motivation as a barrier to exercise. Interestingly, less than 20% of non-participants agreed. Our results emphasize the importance of adequate communication between the fitness, patient, and medical communities. The discrepancy between physicians and non-participants on lack of motivation suggests that directed inquiry is a critical step in effective communication, specifically on patients' perceived barriers. Recommendations to the program, based on survey results, included increasing awareness within the medical and general communities, increasing accessibility through parking, transportation and scheduling; and supporting participants.

P15 Validity of Students' Evaluations of Clinical Faculty

Katherine S McOwen, MS Ed., Jennifer R Kogan, MD; Judy A. Shea, PhD

Purpose: Research in higher education routinely presents student achievement data as a marker of the validity of students' ratings of course instructional quality. Our purpose is to explore if similar relationships exist in medical school between students' evaluations of courses and their exam scores. **Methods:** Medical students in preclinical basic science and organ system courses and clinical clerkships from January 2006 to December 2006 took exams and completed course evaluations at the end of each course. The course evaluation form consisted of 10 items plus a global item, rated on a 5-point scale. Preclinical exams were written by course directors; clerkships used NBME shelf exams. Students completed evaluations after taking examinations but before receiving their grades.

Results: Within preclinical courses, student exam scores were significantly correlated with course evaluations in only 4 out of 19 courses. (Anatomy $r = .20$, $p = .01$; Dermatology $r = .19$, $p = .02$; Embryology $r = .19$, $p = .02$; Renal $r = .24$, $p < .001$). Shelf exam scores and evaluations were significantly correlated in three of five clerkships. (Medicine $r = .12$, $p = .02$; Neurology, $r = .30$ $p < .001$; Pediatrics $r = .25$ $p < .001$). Interestingly, almost all significant relationships were observed in the most highly rated courses. **Conclusion:** These findings partially support the observation in higher education that learners give high marks to courses where they learn the most. Further study is necessary to understand why correlations exist where they do and how teaching is related to learning.

P16 Variation in Faculty Evaluation of Residents With and Without Photographs

Katherine S McOwen, MS Ed., Lisa M. Bellini, MD; Judy A. Shea, PhD

Purpose: Faculty evaluations of residents are common at the end of rotations. Collecting evaluations on paper is unwieldy with low response rates. Web-based evaluation systems enable reaching faculty in a timely manner, with personalized evaluations. We explore the impact of adding resident photos to the evaluation. We hypothesized that enhancing familiarity and triggering memories with photos would result in more nuanced evaluations with lower ratings and higher variability, limiting the 'generosity error.' **Methods:** End of rotation, web-based evaluations of residents were assigned to Department of Medicine faculty. Residents were randomly assigned to have or not have photographs accompany all evaluations. T-tests compared means and variances for evaluations with and without photos overall, at the level of the resident, and within faculty.

Results: Between July and December 2007 3,190 evaluations were completed by 415 faculty for 118 residents (62 without photos, 56 with photos). Overall there were no significant differences between group means ($p = .10$) but variability decreased with pictures ($p = .007$). When the data were aggregated to the levels of resident and faculty there were no differences in means ($p = .70$ and $p = .19$ respectively) or standard deviations ($p = .37$ and $.19$ respectively). **Conclusion:** Variability of ratings decreased for residents with photos overall, but aggregating the data to the level of resident and faculty showed that assigning photographs did not substantially impact the ratings faculty gave residents. Future research should focus on the effect of photographs on timeliness of evaluation, response rates and richness of comments.

P17 Evaluation Response Times in the Electronic Age

Katherine S McOwen, MS Ed., Jennifer R Kogan, MD; Judy A. Shea, PhD

Purpose: Web-based electronic evaluation systems offer many features. One advantage is timeliness: evaluators can be notified as soon as a teaching event occurs. However, making evaluations immediately accessible does not mean evaluators will do them immediately. We asked if the timing of when an evaluation was completed impacts responses. We hypothesized that over time means would remain constant but variances would decrease. **Methods:** Evaluations for Fall 2006 preclinical events in 15 courses (lectures, small groups) were available on the day an event occurred and remained open until early Spring 2007. Students rated each event's "Quality of Session". Timing of evaluations was divided into 4 categories: 7 days or less, 7 to 14 days, 14 to 21 days, and 21 days or more. Means and variances were compared among groups.

Results: For all evaluation records ($N=71,427$) there were significant differences in means ($p < .03$) but effect sizes were small ($ES < .16$). Event level data ($N=531$) showed significant differences between the latest responders means and all other respon-



ders ($p < .001$) while variability decreased ($p < .001$). Trends were similar when events were stratified by quality. Classifying students as early or late responders ($N=304$) showed no differences in means among timing categories ($p > .05$); rating variability decreased over time ($p < .001$). Conclusion: Event evaluations differ between evaluation responses closest to the time of the event and farthest away but the effects are small. Future study can examine if event response timing is related to content and amount of text commentary or to final course evaluations.

P18 The Next Generation of Peer Tutoring Programs: Using Senior Peer Tutors to Address Global Learning Deficiencies

Yasmin S. Meah, MD, Eli Miloslavsky, BA, Alice Jahn, BA, Caroline Defilippo, BA, Michelle Wilson, BA

Statement of Problem: Many students struggle academically throughout medical school. Academic support programs using subject-specific peer tutors do not adequately address students' global learning deficiencies. Senior-level student tutors who are appropriately trained to address global learning deficits can be an effective resource in academic support programs. **Objectives:** 1. Train senior-level students to diagnose learning deficits and enhance self-directed learning in struggling students. 2. Promote teamwork in teaching among faculty and tutors. **Description:** Since 2000, MSSM has run a student-directed peer tutoring program overseen by a faculty member with expertise in learning deficits and remediation. Through interactive seminars, the faculty director trains selected students to diagnose and resolve learning deficits experienced by junior medical students. Tutors are trained in learning theory and active learning techniques. The director evaluates academically struggling students and pairs them with a senior tutor. Tutors continuously collaborate with the director to modify diagnoses and refine teaching strategies.

Findings: From 2006-2007 six students were trained as senior tutors; fourteen junior students were referred for help. Tutors and tutees met approximately 1.5 to 4 hours weekly for one month to one year. Tutors most often employed concept mapping, "teach the teacher" and case discussions. Tutors most commonly reported benefits as refinement of teaching skills and enhancement of their own study strategies and clinical knowledge. The most commonly reported downside was the inability to devote more time to tutees. **Conclusion:** Specially trained senior peer tutors can be an invaluable resource to academic support programs targeting students with pervasive learning deficits.

P19 Meeting the Expectations of Our Clinical Teachers: The Fellowship in Medical Education Programs

Elza Mylona, PhD, Catherine R. Messina, PhD

The Fellowship in Medical Education (FME) program was established in 2006, at the Stony Brook University School of Medicine. Overall objectives of this 16-month program include providing clinician-participants with knowledge and skills in the areas of Adult Learning and Teaching, Curriculum and Assessment, Educational Research, Leadership and Development. **Purpose:** (1) To describe the development and implementation of the FME; (2) to report on an evaluation of program success in achieving intended goals, by the first cohort completing the program **Methods:** Evaluation data were obtained from fellows' reports of initial program-related goals, mid-course focus group formative evaluations of the program by fellows and their mentors and a final de-briefing questionnaire completed by fellows and mentors at program completion.

Results: At completion, overall rankings of the FME were very good to excellent. Although preliminary, positive program effects in terms of fellows' teaching, professional development and leadership were noted at midcourse and at completion. The process evaluation noted program strengths at midcourse and completion: e.g., relevance of program objectives and topics to fellows' teaching activities, opportunities for networking, mentor relationships, etc. Noted challenges related to scheduling mentor time, the educational research project, and managing other time commitments by fellows. **Conclusions:** Evaluation results indicate that the FME is highly valued by the initial cohort and that intended goals for the initial program were largely achieved. Strengths and challenges revealed by this evaluation are important for tailoring program revisions for the second cohort. FME experiences and evaluation results are useful for other institutions considering implementing similar programs.

P20 Characteristics Of Student-Run Clinics At U.S. Allopathic Medical Schools

Nisha Nathan, MS II, Lisa Alexander, ED-H, MPH, PA-C, W.Scott Schroth, MD, MPH

Nisha Nathan, MS II *, Lisa Alexander, ED-H, MPH, PA-C**, W.Scott Schroth, MD, MPH*** *School of Medicine and Health Sciences **Department of Health Care Sciences ***Department of Medicine **Objective:** To describe operational and educational practices of current student-run clinics.

Methods: An IRB-approved online survey was sent to 36 student-run clinics at U.S. allopathic medical schools that were identified via internet research. Data were obtained on funding, target population, services, student preparation and required curricula of clinics.

Results: Twenty-five student-run clinics responded and provided comprehensive data on their educational and operational practices. The typical clinic was funded mainly via student fundraising (22/25, 88%) and grants (20/25, 80%). While a few clinics did not specialize in serving a specific patient population (4/25, 16%), the majority (21/25, 84%) targeted a particular group; patients were predominately of the underinsured or uninsured population (16/25, 64%). Clinics reported offering a wide-variety of services to their patients ranging from prescription drugs (24/25, 96%) and complete medical evaluations (23/25, 92%) to health education (20/25, 80%) and social work services (14/25, 56%) with some clinics even offering x-rays (8/25, 32%) and cancer screening



(8/25, 32%). All clinics (25/25, 100%) were staffed by 1st and 2nd year medical students. Some clinics included nursing students (9/25, 36%), physician assistant students (8/25, 32%), or pharmacy students (8/25, 32%). Most students are required to be competent in taking vital signs (19/24, 79%) and a medical history (19/24, 79%). While it is common for students to receive academic credit for participation in their school's medical clinic (12/25, 48%); only three schools have a formal curriculum of study for students rotating through their clinic. Conclusions: Student-run clinics at allopathic medical schools provide a wide array of medical services, predominantly to underinsured or uninsured patients. Although most clinics require student proficiency in basic clinical skills, few clinics have formal educational programs for participating students.

P21 From Critical Incident to Curricular Innovation In the Vermont Integrated Curriculum (VIC)

Cate Nicholas, EdD, MS, PA, David Longstroth, Greta Spottswood, Paula Duncan, MD

From Critical Incident to Curricular Innovation In the Vermont Integrated Curriculum (VIC) University of Vermont College of Medicine David Longstroth, MS 2 Greta Spottswood, MS 2 Faculty, staff, and community responders Barb Frankowski MD. Jerry Larrabee MD. Dot Brauer, Director of LGBTQ Services, Katherine Betzer, Outright VT Lluvia Mulvaney-Stanak, Outright VT Kara DeLeonardis, Executive Director, RU12? Jean Szilva MD Paula Duncan MD Michael Upton MD Tanya Bertsch MD Lewis First MD William Raszka MD Lynn Luginbuhl MD. Morris Earle Jr, MD. Evan Eyer MD. Ruth Uphold MD. Kym Boyman MD. Jon Porter MD. Cate Nicholas, Ed.D Director: Standardized Patient Program, UVM COM Jennifer Nachbur, Media Relations, Jae Vick & Bob Bolyard, Standardized Patients Yamara Coutinho-Sledge, Class of 2009 Yana Wirengard, Carolyn McIlree, Class of 2010 Karen Richardson-Nassif, PhD Dean of Diversity, A critical incident occurred in 2006 when the UVM Lesbian, Gay, Bisexual, Transgender and Questioning (LGBTQ) medical student body was the focus of an act of discrimination by several members from another UVM medical school class. This incident became a defining moment by making visible the barriers to LGTBQ acceptance within the COM community and the challenges to developing LGTBQ clinical competence at our school. The administration, faculty, staff, students and the community came together to address these barriers. Second year medical students, participating in an Albert Schweitzer Fellowship project, focused on ways to bridge dialogue between the medical community and the LGBTQ population, and to develop and implement core competencies that will help train medical students to provide the best care for LGTBQ patients regardless of underlying attitudes. Working with faculty across all four years of the Vermont Integrated Curriculum (VIC), the curriculum was strengthened and developed to improve the knowledge, attitudes, and professionalism toward all LGBTQ peoples. Curricular innovations were designed using panels, standardized patients, small group and large group discussion. As a result, there has been a major cultural and curricular shift and awakening at our school. By opening up a dialogue and enhancing and providing educational venues across our curriculum to address this issue, not only will there be enhanced patient-centered care for LGBTQ patients of all ages but acceptance for all LGBTQ people within our academic community.

P22 Benefits of Integrating the Library Reserve Function With Blackboard

Donna O'Malley, Tina Kussey

PURPOSE: To examine the role of the library in providing course-related readings when materials are online in Blackboard and students don't need to go to the library to physically obtain a paper copy.

METHODS Office of Medical Education staff members help faculty put course materials online. They turned to the library for advice in navigating copyright laws. Library staff developed six major objectives for course-related readings in Blackboard: Decrease copyright costs. Simplify faculty compliance with federal copyright law. Remove barriers to students in accessing required readings. Make it easy for faculty to use the University's electronic journals and books. Base collection development decisions on the needs of the curriculum. Model the citation of references.

RESULTS Copyright costs were less than expected and have not increased dramatically over time. Staff bring links into copyright compliance when they are added at the last minute by faculty. Integration does not require students to use a separate Reserve Module. Deep links are preferred. Collection development decisions are based on faculty requests for reserve readings. Students are no longer directed to 'mystery links' that don't provide a full citation.

CONCLUSIONS The Library Reserve function has been successfully integrated with Blackboard. Future plans include a survey of faculty satisfaction with the program, development of an easier tracking methodology, and scaling up the service to meet the needs of other colleges on campus.

P23 Improving Access to Health Care for all Vermonters: Assessing Knowledge about Catamount Health

Trevor R Pour, Morgan J Carlson, Lisa G Chui, Walter F DeNino, Neel K Kapasi, Amy L McGettrick, Adrienne S Pahl, Heidi Schumacher, Serena Chaudhry, Burton Wilcke, Jan Carney

As part of the Vermont Integrated Curriculum at the UVM College of Medicine, second year medical students complete public health projects, based on community health needs. This project involved the assessment of knowledge on the part of health care providers (HCPs) and community-based organizations (CBOs) about Catamount Health (CH), Vermont's recently created program to assist the uninsured. A survey was designed and distributed in 7 of Vermont's 14 counties. Using a Likert scale, respondents' familiarity with CH was graded. Demographic and practice data were collected. Respondents were asked how



they first became aware of CH and how they could be further educated. 99 surveys were returned. The results indicated a poor understanding on the part of both HCPs and CBOs, with an average familiarity of 1.95 (scale of 1-4). There were no statistically significant differences between HCPs and CBOs among any of the nine indicators of understanding. While most respondents had at least some prior knowledge of CH, about one in six (16.4%) HCPs indicated no knowledge of the plan. Despite a low level of knowledge about CH program specifics about half of the participants (52.7%) felt confident in their ability to access information on CH. The knowledge level about CH among HCPs and CBOs will likely change significantly as more patients become enrolled, and education is targeted to HCPs and CBOs. Future surveys using this baseline data can be conducted to assess the impact of education targeting these groups.

P24 Applying leadership Strategies in Curriculum Redesign: A Model for Institutional Change

Michele Pugnaire, MD, Robert Baldor, MD, Julie Jonassen PhD, Tricia Droney, MPH

As in medical schools nationwide, our curriculum is undergoing comprehensive redesign. In 2004, institutional approval of six major educational competencies launched our "Competency Implementation Project (CIP), with 3 distinct phases and a model for institutional change ensuring broad, inclusive and representative engagement of our educational community. This poster outlines the methods; models and progress of our curriculum redesign process to date, emphasizing Kotter's leadership strategies and the application of these principles in the curriculum change process as described by Loeser et al. (Acad Med 2007). The 3 CIP phases and related leadership principles are: CIP I: Establishing six competency based work groups that identified 36 areas of need, "creating a sense of urgency" for change. CIP II: Creating a leadership team ("guiding coalition") and curriculum blueprinting process for engaging faculty at large in the change process ("empowering broad based action", developing and communicating a "vision for change"). CIP 2 outcomes included 32 blueprint proposals, the development of a new interdisciplinary model of curriculum management and the institutional approval of a redesigned curricular framework in the spring of 2008. CIP III: Beginning the process of detailed curriculum design, with the goal of emphasizing "gains made" in CIP I & II to advance curriculum change and establish new approaches in our educational program. This poster will highlight our model for leading curriculum redesign, with sample materials, organizational tables, data summarizing blueprint outcomes, and faculty/student perceptions and satisfaction ratings from retreats and workshops.

P25 Use of Specialty-Based Resident Passport to Enhance learning in the Clinical Environment

Joy E. Schabel, MD, Ellen Steinberg MD, Rishimani Adsumelli MBBS, FFARCS

Background: A survey was sent to all current residents and faculty to critically evaluate all aspects of our educational program. 100% of the residents and 22% of the faculty felt that the intraoperative teaching was inadequate. Sixty-four percent of residents had not completed their specialty-specific goals by the end of their specialty rotations. The survey revealed that inadequate intraoperative teaching was the major deficit in an otherwise strong didactic educational program. In addition, many of the residents had not completed their specialty-specific goals by the end of the specialty rotation, resulting in suboptimal resident learning and deficient documentation for residency credentialing purposes. Since the vast majority of the resident's learning experience occurs in a clinical environment, it was felt that creating a practical, standardized, specialty-based guide would enhance intraoperative learning and facilitate necessary documentation. Hypothesis: The use of compact and readily accessible, specialty-based guides will enhance faculty-resident didactic interaction in the clinical setting and improve the necessary documentation of completed goals.

Curriculum Design: A passport was created, in paper format, to include the ACGME competency definitions, specialty-based goals and objectives, specialty-based skills and knowledge checklists, sample topics and cases for discussion and reading assignments. Additionally, final exam performance and summative rotation feedback were incorporated. This passport is presently being piloted on two clinical rotations. Outcome: We will solicit feedback from the residents participating in the pilot passport project and make necessary modifications. With the start of the next academic year, we will provide all of our residents hand held electronic devices which will contain all of the specialty passports.

P26 Teaching Multiple Subjects Together: Are We Reaching Our Objectives?

Mikhail Torosoff, MD, Edward F. Philbin, Steven A. Fein, Frank A. Blumenstock, Jonathan W. Rosen

Background: An extensive medical school curriculum combined with a limited number of instruction hours frequently requires simultaneous teaching of multiple subjects. An effect of such "parallel" instruction on the measurable learning outcomes has not been formally evaluated. Material and methods: A medical school second year cardiovascular medicine course consisting of detailed study objectives, lectures, assigned reading, self-assessments, and guided tutorials was developed and implemented. Evidence based medicine and pharmacology were taught throughout the cardiovascular course. Measured learning outcomes included self-assessment participation and scores and the final exam scores. Chi-square and analysis of variance were used.

Results: Participation in structured learning was associated with improved scores on the final exam. Students completing more than 21 of 28 self-assessments had better final exam scores (80+/-7, 68+/-29, 68+/-24 for 21 or more, 11-20, and less than 11 self-assessments, respectively, p=0.022). Participation in self-assessments was, however, extremely uneven throughout the course (32 to 60%, p<0.0001). The lowest participation (p<0.0001) and inferior scores on cardiovascular topics were consistently



noted when multiple assignments were due or non-core classes were added (69+/-21 vs. 78+/-19, $p < 0.0001$).

Conclusions: Decreased participation in the core subject studying and learning is expected when students are faced with multiple assignments and classes. We conclude that fragmented courses, taught in parallel throughout the year, may have deleterious effects on the learning process.

P27 Medical Students Making Impacts: A Model for Short-Term Global Health Exposure during Medical School

Cindy J. Wang, Caroline DeFilippo, Jeffrey S. Freed, MD

INTRODUCTION: A growing number of medical students are becoming involved in international health experiences during their medical education. In this paper, the authors will provide an overview of a week-long global health program at the Mount Sinai School of Medicine coordinated by a student-led group, Medical Students Making Impacts (MSMI).

STRUCTURE: MSMI offers many medical students at Mount Sinai their first exposure to global health. The goals of MSMI include exposure to issues affecting medically underserved populations and education of the community. Since 2004, medical students have worked alongside physicians on trips to Central America providing either surgical or medical care to underserved populations. The focus of the medical trips is now primarily global health education of students.

IMPACT: MSMI has conducted a number of evaluations to gain an understanding of its impact. Students state that the exposure to global health is a valuable part of their medical education. Basic data from trips demonstrates the range of medical and surgical problems treated, patient demographics, and supply inventories. Future research hopes to assess the impacts on career choices following MSMI experiences.

CONCLUSION: This model represents a comprehensive approach to a one-week global health experience. As the structure of the MSMI program continues to be refined, longer term impacts will become more defined and help MSMI grow in a manner that is in line with the principles of medical education and global health service. It is the authors hope that this one-week model will continue to provide medical students with an introductory experience to global health.

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P29 Development of a Multimedia Cardiac Auscultation Tutorial

Thamrah Wright (Medical Student), Lynn Kosowicz, MD

Rationale: To improve deficiencies in cardiac auscultation skills amongst medical students a self-directed multimedia tutorial was developed. Objectives were for students to learn to accurately describe the characteristics of a cardiac murmur, perform six physical exam maneuvers correctly and understand the effect of each maneuver on common murmurs.

Methods: The multimedia tutorial incorporated interactive audio exercises, video demonstrations, and quizzes with immediate feedback. Second-year medical students were required to independently complete the web-based tutorial then participate in small group discussion and examine actual patients with murmurs. Weeks later, students completed a 3-station formative assessment with standardized patients. One station assessed students' proficiency in performing a complete cardiac exam with maneuvers, followed by a web-based exercise to characterize a murmur from an audio clip. **Results:** Students and faculty were retrospectively surveyed for their impression of the tutorial's impact on student comfort and perceived proficiency with cardiac auscultation, compared to their comfort and proficiency before the tutorial. The effect on faculty perception of student prepara-



tion for small group discussion was also assessed. In addition, student performance on the standardized patient was compared to that of a cohort of students who did not complete the tutorial. Conclusions: Lessons learned include an appreciation for the power of the multimedia format of presenting information and the benefits of involving students in curriculum development. Students and faculty find the tutorial engaging and useful in achieving better preparation for in-class activities. Challenging issues include copyright, server volume and technical support.

P30 Smoking Profile of Woodside Juvenile Detention Center and Interventional Goal-Setting Workshop

Hijab Zubairi, Stephanie Bakaysa, MPH; Daniel Goold; Meghan Gunn; Courtney Haynes; Jeffrey Kaye; Ryan Vealey; Yana Wirengard; Judith Christensen, PhD; Jan Karney, MD MPH; Tom Delaney, PhD

An important component of the Vermont Integrated Curriculum at the UVM College of Medicine is the completion of public health projects by second medical year students in response to community needs. This year, we studied the characteristics and prevalence of smoking at the Woodside Juvenile Rehabilitation Center (WJRC) in Colchester, Vermont. The WJRC has two groups: the short-term (S) program houses males and females ages 10-18 for a maximum of 60 days; the long-term (L) program, houses males between the ages of 13-18 who require secure treatment. Unlike, the S group which is constantly changing, the L group allows individuals to form relationships with each other and the staff at WJRC. The study's objectives were to evaluate major factors that lead the WJRC youth to begin and to continue to smoke tobacco, and to learn whether youth at WJRC are at higher risk for smoking and would benefit from a smoking cessation/prevention program. Through use of questions from the CDC Youth Tobacco Survey and focus groups, we gained an insight into smoking's role in these individuals' lives. Youth in the S group were significantly more likely to be smokers than those youth in the L group ($p = 0.02$). All residents reported stress had an important impact on their lives. Based on our findings, we implemented a goal setting workshop to address smoking habits while providing broader skills. We expect that sharing goal-setting techniques and stress relief ideas with teens will empower them to make healthy decisions in the future.

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Award Winner Abstracts

Preclinical Innovation Award: Interactive Brain Atlases: Supporting Integrative and Individualized Student Learning
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Overview: To support multiple ways of learning and to encourage students to develop an understanding of brain structure and function that they can apply clinically, Sue Billings-Gagliardi and her faculty/student team at the University of Massachusetts Medical School have developed Interactive Brain Atlases. Description 12 PDF-based Atlases of the human brain and spinal cord incorporating more than 200 images (sections, slices, MRI) have been labeled with interactive drawings and questions that direct students to key information, explain why it is important, and guide students to continually integrate neuroanatomic with clinical information. Ways students can use the Atlases for individualized learning • View teacher-generated comments and mark-ups, and mouse-over them to get additional information. • Select individual categories of comments (IDENTIFY, CONNECTIONS/FUNCTIONS, CLINICAL) to view depending on their own immediate learning needs. • Quiz themselves on questions posed by the teacher and get immediate feedback • Temporarily 'erase' an atlas by hiding all comments and drawings. • Add their own comments and drawings directly on atlas images • Exchange comments with peers for collaborative learning. • Search all Atlas comments. Innovative Features The Atlases guide students toward an integration of multiple types of information essential for clinical practice, enabling them to set the pace of learning and to customize the materials to meet their own needs. In contrast, traditional atlases tend to focus students' attention on names, and not on the anatomic and functional relationships that are important for clinical medicine. Other available online or CD brain atlases provide limited support for individualized learning and quizzing features focus primarily on structure naming. Evidence of Effectiveness Evaluation: in the last two years, 96% of our first-year students gave the Atlases the highest possible rating as helpful learning tools (5-point scale; n=199; 98% response rate). Additionally: exceptional student performance on tests of clinical problem-solving; continued use of Atlases in later years of curriculum; 2 RIME abstracts; MedEdPORTAL publication. Use of Atlas Features (5-point scale 'a lot' to 'not at all' 2006 and 2007 combined, n=199) 89% studied the instructor-generated comments and used the quizzing feature 'a lot.' 86% used the integrative basic - clinical information 'a lot.' 53% utilized the Atlases for initial learning 'a lot' 96% studied and reviewed with them 'a lot' 50% added a number of their own comments or drawings to their Atlases 39% shared comments with other students, using the Atlases collaboratively Sample Student Comments • I liked that the answers were available but not immediately there, so one had to think first. Or if you didn't want to think and wanted the answers right away, you could do that too. • The best thing was they provided a framework. Great for [developing an] understanding of functions, connections and clinical importance of different structures. • I liked being able to draw and annotate myself – very hands-on and interactive • Great teaching of basic concepts in a clinical fashion. • I liked that answers often had another level of explanation or information linking to another concept. View an Atlas <http://www.umassmed.edu/cellbio/atlas.aspx>

Award Winner Abstracts

Clinical Innovation Award: Pandemic Influenza Preparedness: A Patient Care and Team Training Simulation for Medical Students

University of Pittsburgh School of Medicine

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Goals: Improving public health preparedness and preparing to cope with a pandemic depends on functioning in symbiosis with all elements of the healthcare team. This unique simulation exercise provides teams of medical students with an opportunity to treat overwhelming numbers of influenza patients in a mock hospital setting. When students assume the working roles of nurse, nursing assistant, and physician, they immediately gain insight into two subjects that are difficult to teach: 1) the potentially overwhelming nature of an infectious pandemic; and 2) the vital importance of teamwork, cooperation, interdisciplinary respect, and leadership in healthcare endeavors. Description: Beginning 3rd year students were divided into 40-student groups. Students managed a 140 "bed" hospital, created in a large lecture hall using a new, adaptable method for simulating a hospital environment. Each seat was a bed, and each 15-seat row was a hospital unit, staffed by 4 students in roles of physician, nurse and nursing assistant. The cardboard patients came to life as staff members continuously placed paper "action flags" on each patient, to indicate what treatment or evaluation was required (e.g. oxygen, IV fluids). Students "treated" patients by bringing a matching action flag to the bedside. Students also became infected, and were "treated" by colleagues, further burdening the hospital and degrading capabilities. The simulation fidelity and intensity were enhanced by wearing isolation gowns and masks, supply shortages, and the presence of real news media personnel. Students were closely supervised by medical leaders that serve in key roles during actual emergencies. Impact on learners: Students quickly embraced the scenario and participated with energy and enthusiasm. They valued the hands-on nature of the simulations.

The overall simulation was very well received, and highly rated on student evaluations and comments, 96 % excellent or good, across two class years of students. Students indicated they had: 1) improved knowledge about pandemic influenza; 2) developed greater understanding of broader concepts that are vastly more difficult to teach – Value of communication, 77%; Teamwork and collaboration, 69%; Interdisciplinary respect, 60%; Cooperation, 56%; Leadership, 33%; 3) gained appreciation for the essential roles of every member of the healthcare team in a manner that cannot easily be replicated in everyday experiences. Similarly high evaluations were offered by exercise participants at the 2006 AMSA Regional Conference (students), 2007 AAMC Annual Meeting (faculty), and a 2007 conference of medical school deans at Pittsburgh. This all-new simulation provides a unique venue for student learning about pandemic preparedness and the threat of avian influenza. It also introduces aspects of systems-based care and the importance of functioning in integrated healthcare teams. This exercise achieved an awakening in these domains in less than 2 hours, even before the students entered the wards. Generalizability: This exercise can readily be generalized to other circumstances, health disciplines, and levels of ability, and exported to other institutions. Several US schools are currently at various stages of implementing this exercise. This exercise does not require highly specialized facilities or faculty, and can be conducted for 150 students for under \$500.

Reference: <http://www.omed.pitt.edu/faculty/PandemicPreparednessSimulationExercise.php>

Resident Innovation Award: First-Time Use of a Standardized Student OSTE in a Controlled Evaluation of an Obstetrics & Gynecology Resident

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Goals: To design and implement a residents as teachers (RATS) program for obstetrics and gynecology (Ob-Gyn) residents and evaluate it in a controlled fashion using a standardized student objective structured teaching examination (OSTE). Background: Nine controlled evaluations of RATS programs are reported in the literature. Only two of these used an OSTE to evaluate outcomes and neither of these was an Ob-Gyn program. Reported here is the first controlled evaluation of an Ob-Gyn residents-as-teachers program using a standardized student OSTE.

Description: From November, 2004 to January, 2005, at George Washington University, 24 Ob-Gyn residents completed a controlled trial of a RATS program. Thirteen residents were assigned to the intervention group, 11, to the control group, based on convenience. The intervention group took part in six 1.5 hour interactive workshops during their protected education time: Mini-lecturing, Giving Feedback, Teaching in the Setting of a Case Presentation, Teaching a Skill, Bedside Teaching, and Orienting a Learner. Practice with standardized students or role play was emphasized in each workshop. After the intervention, both groups completed a six station OSTE. The OSTE stations were manned by senior students from our TALKS senior students as teachers program, trained to be standardized students. They were blinded as to whether a resident was in the intervention or control group. Both groups also completed self-assessment questionnaires of their teaching. Results: The overall mean of the intervention group for the six stations was seventeen percent higher than the control group ($p = .001$), and they scored statistically higher on 4/6 stations ($p = .01-.03$). On the other two stations the intervention group also scored higher than the control group, but not at a statistically significant level. On a baseline self-assessment of teaching abilities, the two groups were similar (intervention 3.5; control, 3.4); post intervention, the intervention group rated their abilities 4.0.

Impact: In medical schools across the nation Ob-Gyn clerkships are not rated as highly as others (per the AAMC Medical School Graduation Questionnaire). Our institution is no exception. The impact of our program on students' evaluation of the clerkship is in the process of being measured. We have high expectations, however, considering the impact the program has already had on departmental culture. As a result of the success of the residents-as-teachers program, faculty report that participating residents developed new enthusiasm about their teaching roles and new confidence in their teaching skills. Furthermore, the faculty themselves have renewed their enthusiasm for education. They chose the most important gathering of the year, the annual departmental formal banquet, to present the participating residents with framed teaching certificates. They also decided to make the RATS program a required part of the residency. Faculty enthusiasm was further fanned when they perceived the program to be a powerful recruitment tool for residency applicants. Finally, the RATS program concept has begun to have impact on other departments, and at the faculty as well as the resident training level: we have just instituted a similar program (referred to as FATS—faculty as teachers) for general internal medicine faculty.

Award Winner Abstracts

Continuing Medical Education Innovation Award: The Informed Consent Dialogues Montefiore Medical Center

Robert Morrow, MD, Michael Mulvihill, DPH, Nancy Moynihan, RN, Chester Edelman, MD

Research subjects must make knowledgeable, informed, voluntary decisions about their participation in research protocols. Researchers must recruit subjects in a cooperative, non-coercive manner that reflects an accurate portrayal of personal risks and benefits of participation, and ensuring that enrollment is voluntary and that expectations of therapeutic outcomes are realistic. These standards are not always met. Individuals responsible for obtaining informed consent are rarely trained to conduct such interviews with participants. The written consent form of the research protocol is reviewed by an IRB, but this process does not address the actual conversation that takes place between investigators and participants. We have developed a computerized, skills-based educational program [The Informed Consent Dialogues-http://cmorrow.com/education/informed_consent/] for health professionals who obtain informed consent from subjects enrolling in clinical research. We plan to assess whether research subjects enrolled by trained professionals will understand better the key aspects of the clinical research protocol; we will employ a validated instrument, the QuIC [quality of informed consent] of Joffe. We intend to validate this educational product—the multimedia training module—for widespread use. This module seeks to elevate the discussion of ethics by emphasizing the communication skills that help resolve important problems in the consent process. It also provides the basis for discussions around ethics for groups of professionals other than clinical researchers. We began the project in 1998 with the development of interview tools for measuring the informed consent process. These tools were formalized by a working group of the Committee on Clinical Investigation of the Albert Einstein College of Medicine. The group met regularly to develop the structure and methodology of a research based educational intervention to improve the informed consent process by training the enrollers. The group decided to use interactive multimedia training techniques that could be standardized and disseminated in a broad way, if proven successful in improving the informed consent process. The group convened a focus group of expert investigators in clinical research to explore the key outcomes needed to improve the consent dialogues. These key points include the issues of beneficence, therapeutic misconceptions, the difference between research and usual clinical care, and perceived special advantages for enrolling. The group included senior clinical researchers and a well known ethicist, as well as members of institutional review committees. The group received a grant in July, 2005, in cooperation with the Society Of Academic Continuing Medical Education [SACME], from the Association of American Medical Colleges, as part of a cooperative agreement with the Office of Research Integrity. The working group has conducted structured interviews, and has interviewed experienced enrollers as to their issues with the informed consent process, in order to develop appropriate measures of success in overcoming perceived obstacles of enrollers. Using our findings from experts, enrollers, and enrollees, we developed simulations for training enrollers that can provide a measure of intended actions by these enrollers as a process measure of the impact of the multimedia training. We present the finished educational product, the Informed Consent Dialogues, as an innovation in CME.

Unassigned Innovation Award: Simulation as an Educational Modality for Multidisciplinary Training Experience in the ICU Baystate Medical Center Simulation Center

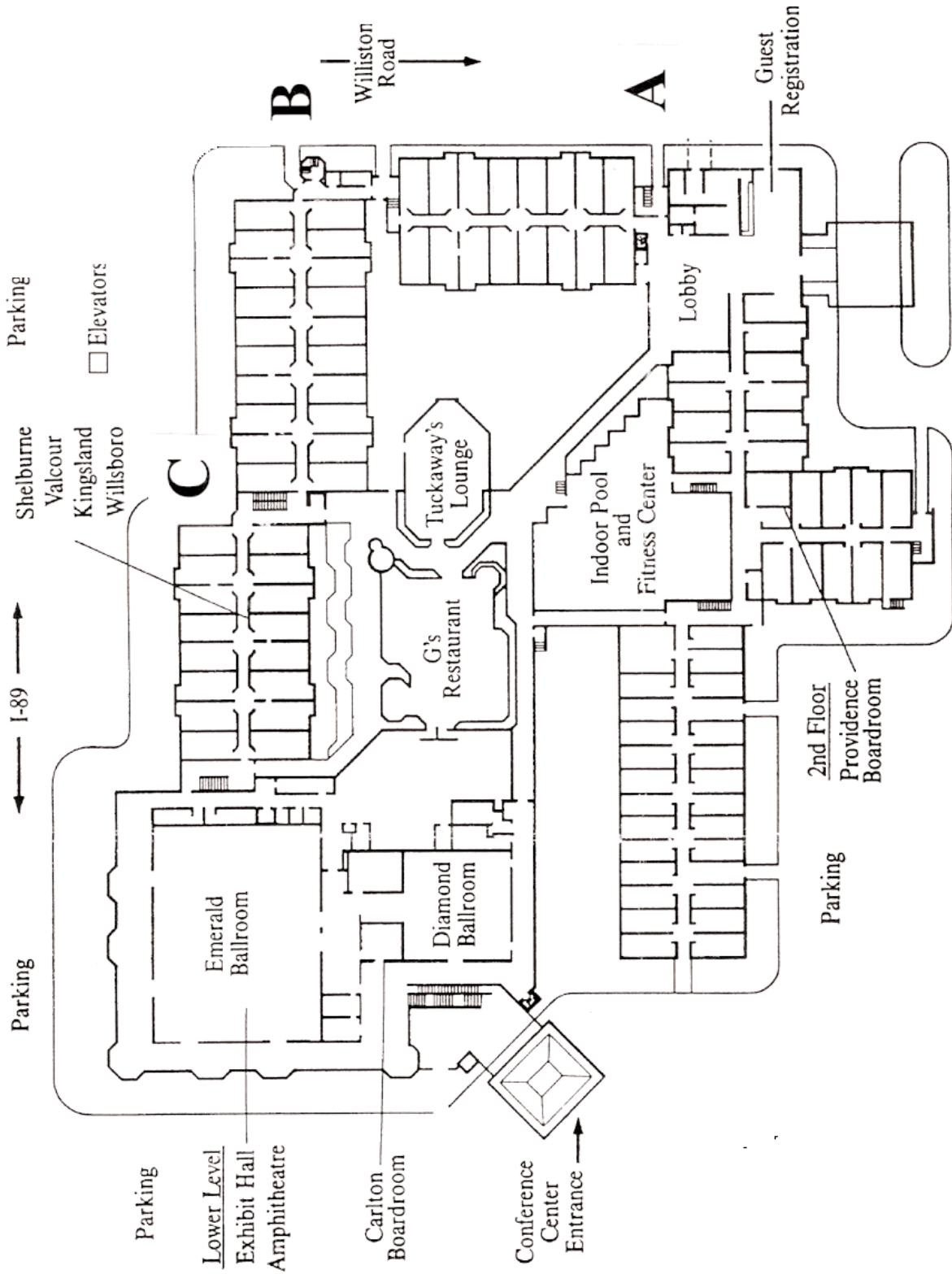
Patrick T. Mailloux, DO

Introduction: Intensive Care Units (ICU) manage the sickest and most complicated patients in a multidisciplinary fashion. Critical Care physicians, house staff (including Medicine, Surgery, Anesthesia, OB/GYN and Emergency Medicine residents) medical students, pharmacists, nurses, respiratory therapists and nutritionists all collaborate in managing the critically ill. Working in this environment is complex, intimidating, requires quick decision making, effective teamwork and a confidence applying various technologies and mechanical devices as treatment modalities. Often, knowledge and skills are gained only after repeated exposures to this patient population under guidance of more experienced personnel. Human Patient Simulation (HPS) provides an opportunity to gain knowledge, skill and experience in management of the critically ill. HPS, an innovative medical education tool, provides valuable exposure to less experienced caregivers and also allows mature learners to expand and apply knowledge regarding basic and advanced aspects of Critical Care Medicine (CCM).

Methods: The HPS environment provides exposure to CCM issues within a collegial, instructional environment. We incorporate simulation-based training into the curricula of residents, students, nurses and other providers across many disciplines and specialties. We developed several HPS scenarios, generating experience in management of septic shock, pulmonary embolism, myocardial infarction, ARDS, tension pneumothorax, post-operative complications and end-of-life issues, to name a few. The simulation environment created in our center is realistic and multidisciplinary; each session includes an ICU nurse, respiratory therapist, team of caregivers and contents of a typical ICU room. All involved must work in unison, communicate effectively and provide evidence-based patient care modalities to be successful. Following a brief introduction, an active HPS learning encounter occurs with an immediate post-scenario debriefing designed to reinforce the learning objectives. Having learners from different disciplines in the simulated critical care setting contribute to the realism of the experience. The team's ability to achieve specifically outlined goals dictates the patient outcome. During sessions addressing septic shock, for example, the team must adequately fluid resuscitate, initiate prompt antibiotic therapy, identify source and/or obtain source control, appropriately use vasopressors, ask for suitable laboratory tests, recognize the need for mechanical ventilation and determine the appropriate disposition.

Analysis: The participants complete surveys after each session at the beginning and end of their ICU rotation, and we use the data collected to make necessary changes. In fact, several abstracts and poster presentations at national meetings support our initiative of using feedback to gauge the impact we have on those learning the fundamentals of critical care. Simulation is clearly an important part of medical education and expected to play a larger role in the future. Our center is expanding and we strive to develop a more innovative curriculum. One mode we plan to employ is the use of a written test at the beginning and end of the ICU rotation with topics in the exam covered during our simulation sessions. The performance on the exams is an easily collected metric to determine the impact our efforts have on the learner. Also, we utilize a newly created online survey to tabulate the learners' satisfaction with their experience and thereby adjust our efforts accordingly.

SHERATON MAP



To Williston Road