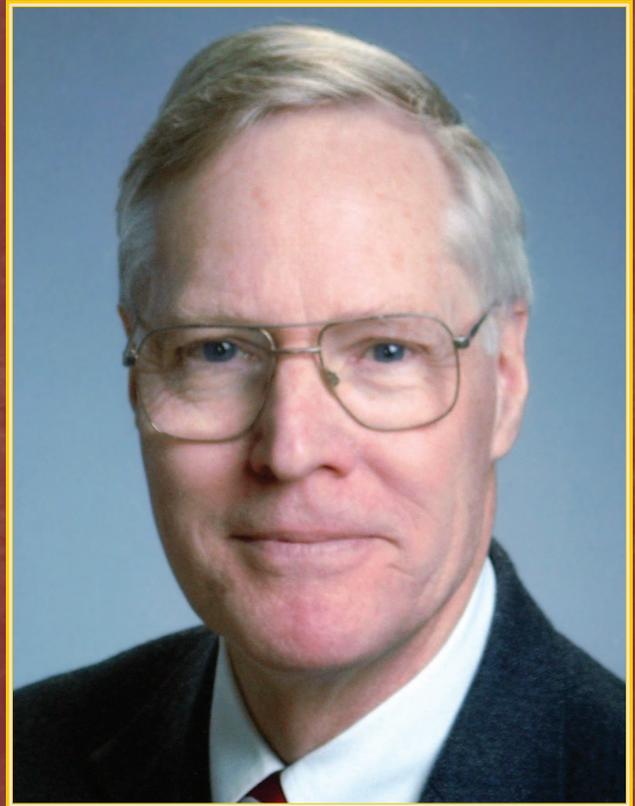


**Fifth Annual
John McCahan
Medical Campus
Education Day**



**Showcasing Educational Innovation
and Scholarship at the
Boston University Medical Campus**

June 11, 2010

**BOSTON
UNIVERSITY**



It is both with great sadness and with a sense of renewed determination that we pause to mark the passing of one of our own earlier this year, MD-PhD student Babur Z. Khalique. A gifted scientist, a brilliant thinker, and a truly big soul, Babur was passionate about medical education, and like everything he was passionate about, he was determined to make it better. As a member of the Pre-Clerkship Curriculum Subcommittee, as a student-teacher in the advocacy training program, and in a multitude of other roles, Babur worked consistently to improve medical education at BUSM, wielding his formidable combination of drive, intelligence, ingenuity, and Hawaiian shirts. Babur is and will be missed. In his absence, we find we must redouble our efforts to improve our institution and our world.

His memory lives on at BU through the Babur Z. Khalique Memorial Fund created in his honor. To learn more, go to: www.bu.edu/baburmemorial



Boston University School of Medicine

Welcome to

The Fifth Annual John McCahan Medical Campus Education Day

Dear Colleagues,

Welcome to the fifth annual John McCahan Medical Campus Education Day. Dr. McCahan, M.D. served as distinguished associate dean for academic affairs at Boston University School of Medicine for 30 years. We are pleased to offer Boston University medical campus educators a day of stimulating speakers, workshops, and innovative ideas to inform and inspire.

Our keynote speaker this year, Jeanette Norden, Ph.D., Professor of Cell and Developmental Biology, Vanderbilt University School of Medicine, will speak on the intellectual and personal development of learners; her workshop will emphasize critical findings in Neuroscience and how these findings can improve student learning.

Presented abstracts and oral presentations will cover a variety of salient topics that are essential to improving and re-evaluating how we teach students: evaluation, testing and assessment techniques, educational models and methods.

This day is an opportunity to consider your teaching ideologies, connect with colleagues, and dialogue with your colleagues.

Sincerely,

A handwritten signature in black ink that reads 'Karen Antman'.

Karen H. Antman, M.D.
Dean, Boston University School of Medicine
Provost, Boston University Medical Campus

Fifth Annual
John McCahan Medical Campus Education Day
Showcasing Educational Innovation and Scholarship
at the Boston University Medical Campus

June 11, 2010
Hiebert Lounge

SCHEDULE OF EVENTS

- 8:30-8:40 a.m. **Welcome and Introduction to Panel of BUMC Academic Deans**
Karen Antman, M.D.
Provost, Boston University Medical Campus
- 8:40-9:30 a.m. **Panel of BUMC Academic Deans**
John Guarente, D.M.D., Assistant Dean for Pre-doctoral Clinical Education, BUGSDM
Linda Hyman, Ph.D., Associate Provost for the Division of Graduate Medical Sciences, BUSM
Sharon Levine, M.D., Associate Dean for Academic Affairs, BUSM
Lisa Sullivan, Ph.D., Associate Dean for Education, BUSPH
- 9:30-10:30 a.m. **Poster Presentations**
- 10:40-10:45 a.m. Introduction to Keynote Speaker
Rob Schadt, Ed.D.
- 10:45-11:45 a.m. **Keynote Lecture**

"Teaching for Deep Learning: Promoting Intellectual and Personal Development"
Jeanette Norden, Ph.D.
Professor of Cell and Developmental Biology,
Vanderbilt University School of Medicine.

12-12:45 p.m. **Lunch**

*None of the faculty or presenters has anything to disclose with regard to commercial interests.
They do not plan to discuss unlabeled/investigational uses of a commercial product.*

12:45-1:30 p.m.

Award Presentations

Ann Zumwalt, Ph.D.

BUSM Voluntary Faculty Teaching Award: Dr. Daniel Becker, M.D.

BUGSDM Faculty Recognition Award for Educational Innovation: William J. Lehman, Ph.D.

BUSPH Educational Innovation Award: Michael Siegel, M.D., M.P.H.

Abstract Awards - Oral Presentations

Best Faculty/Staff Abstract

Miriam Hoffman, M.D., "The Effect of Faculty Presence versus Absence on Small-group Learning and Group Dynamics in the Family Medicine Clerkship"
abstract # 22

Best Student/Resident Abstract, Ongoing project

Ashley Decker, B.S., M.S., "Student Nutrition Awareness and Action Council (SNAAC)"
abstract # 21

Best Student/Resident Abstract, Completed project

Amanda Vest, M.B.B.S., "A Multifaceted Educational Approach to Improving Competency and Reducing Infectious Complications of Housestaff Placed Central Venous Catheters at BUMC"
abstract # 23

1:45-3:15 p.m.

Workshop Sessions

See workshop listing p. 6-8 for locations

None of the faculty or presenters has anything to disclose with regard to commercial interests. They do not plan to discuss unlabeled/investigational uses of a commercial product.

John F. McCahan, M.D.

Dr. John McCahan served as the Associate Dean for Academic Affairs at Boston University School of Medicine from 1976 until June 1, 2006. From November 2003 through May 2005 he also led the School of Medicine as the Acting Dean.

Dr. McCahan received his B.A and M.D. degrees from the University of Pennsylvania. He subsequently trained in internal medicine at the Upstate Medical Center, Pennsylvania Hospital and Guy's Hospital, London. Following two years of service in the United States Public Health Service at the National Communicable Disease Center in Atlanta, he joined the staff at Lincoln Hospital in the Bronx and the faculty at Albert Einstein College of Medicine. He was appointed Director of the Department of Medicine at Lincoln Hospital in 1972. During this period Dr. McCahan was centrally involved in student and post-graduate training programs and became particularly invested in the care of the poor and the provision of health care services to underserved populations.

Following his recruitment to Boston University in 1975 as Associate Professor of Medicine, Dr. McCahan continued clinical practice with underserved populations through the Home Medical Service (now the Geriatrics Home Service). He regularly preceptored fourth-year students on home visits to frail elders. He developed a teaching program in family medicine and became a Professor of Family Medicine following the establishment of that department in 1997.

After his appointment as Associate Dean for Academic Affairs in 1976, Dr. McCahan oversaw numerous revisions and reforms of the M.D. curriculum. Most recently, he guided a major change in curriculum governance and chaired the Medical Education Committee, created in this reorganization. Throughout his career he has had a particular interest in the patient-doctor interaction and the teaching methodologies that result in effective clinical skills. He has actively taught, studied, and administered a variety of educational formats from large group lectures to one-on-one teaching, feedback, and evaluation. In recognition of his excellence as an educator, Dr. McCahan received the Frederick Jackson Teaching Award and faculty membership in AOA.

In addition to serving as chairman of numerous administrative and educational committees, Dr. McCahan was the principal investigator of several grants and contracts, including a PHS-BHP Grant to Establish a Department of Family Medicine; a PHS-BHP Predoctoral Training Grant in Family Medicine; and a Community Partnerships with Health Professions Education Initiative, W.K. Kellogg Foundation. He served as BUSM liaison and author of the Boston section of a plan for a statewide Area Health Education Center program. Throughout the years he earned the admiration of his colleagues for his ability to articulate and implement a clear vision of modern medical education.

Jeanette Norden, Ph. D. – Keynote Speaker

Dr. Jeanette Norden is a Neuroscientist and Professor of Cell and Developmental Biology in the Vanderbilt University School of Medicine. For over 20 years, she conducted research on nerve regeneration, focusing on GAP-43, a protein involved in nervous system development, regeneration, and plasticity. Since 1998, she has devoted her time to medical, graduate, and undergraduate education. She is currently the Director of Medical Education in the Department of Cell and Developmental Biology. She has been a maverick in Medical Education, stressing not only intellectual, but also personal and interpersonal development in students. Her emphasis on personal development and her innovative approach in integrating 'humanity' into a basic science course has been recognized at Vanderbilt, nationally and internationally. She has won every award given by medical students, including the Shovel (twice; given by the graduating class to the faculty member who has had the most positive influence on them in their four years of medicine), the Jack Davies Award (six times; for teaching excellence in the basic sciences), and the Outstanding Teacher of the Year Award (four times). She was also awarded the first Chair of Teaching Excellence at Vanderbilt University, and was the first recipient of both the Gender Equity Award of the American Medical Women's Association, and the Teaching Excellence Award given by the Vanderbilt Medical School. In 2000, Dr. Norden was the recipient of the Robert J. Glaser Award, a national teaching award from the Alpha Omega Alpha Honor Society of the American Medical Association. In recognition of her devotion to helping medical students develop into caring, compassionate physicians, Dr. Norden was awarded the 2008 Professional Award from The Compassionate Friends, an international support group for bereaved parents. Most recently (2010), she was awarded the John Chapman Award for Transformative Innovations in Medical Education.

Dr. Norden participates in numerous outreach programs in Nashville and the surrounding communities by going to schools or by giving public talks on psychoactive drugs, the aging brain, and other topics related to the Neurosciences. For a number of years, she has taught extremely popular courses in Neuroscience as part of Retirement Learning at Vanderbilt. She has traveled extensively to foreign countries to give scientific presentations, talks and workshops on teaching, or to teach Medical School (Nepal); in 2004, she was a delegate to AIDS clinics in rural South Africa as part of a cross cultural humanitarian and educational program in palliative care. Dr. Norden served as the external reviewer for a Keck Foundation grant to revise undergraduate science education in 16 colleges in the South. She was highlighted as one of the most effective teachers in America in *What the Best College Teachers Do* (K. Bain, Harvard University Press, 2004), and was the focus of a documentary made by the Korean Public Broadcasting network on Teaching Excellence in America. In 2007, she completed a 36 lecture DVD *Understanding the Brain* as part of the Great Courses series for The Teaching Company in an effort to help inform the public about the brain and common neurological disorders.

WORKSHOP TOPICS AND LOCATIONS

1:45 PM – 3: 15 PM

Publishing in MedEdPortal

Gail March, Ph.D.

Now is the time to publish your educational innovations and gain maximum exposure of your work in an online, peer-reviewed publication provided freely by the Association of American Medical Colleges (AAMC) in partnership with the American Dental Education Association called MedEdPortal. After publishing, you will retain the copyright of your original work with a Creative Commons license and will receive data on how it is used globally. This workshop offers an interactive opportunity at a computer for you to bring in your educational ideas and develop them into an online resource to submit for publication.

Location: L 1112 (Computer Lab)

Using Experiential Learning to Teach Doctors about Intellectual and Developmental Disabilities

Wendy Gray, M.D., Paul Remy, B.A., Deborah Dreyfus, M.D., Linda Pelletier, M.Ed.

To take a quote from Lewis Carroll, "The best way to explain it is to do it." Communicating with a person with Down Syndrome can be challenging and rewarding. Teaching that communication? Even more so. Two Boston University Fellows specializing in intellectual and developmental disabilities (IDD) and two people who have developmental disabilities themselves will demonstrate how people with IDD can be incorporated in medical education, in roles ranging from large group lecturer to simulated patient. The vital role of "experiential learning" in educating physicians how to communicate with the growing population of adults with special needs will also be discussed.

Location: R 123

Use of E-portfolios as a Comprehensive Assessment System

Celeste Kong, D.M.D., Evangeline Harris-Stefanakis Ed.D., Rob Schadt, Ed.D.

E- portfolios create a comprehensive assessment system in higher education institutions to document the products and process of learning over time. Boston University has implemented an e-portfolio assessment for learning model using Digication so that students on Charles River Campus can post a collection of course, internship and project work, along with reflections on learning. This workshop introduces the BU Medical Campus to the concepts, design and development of E-portfolios and describes their advantages as an assessment tool for the greater health services community.

Location: R 107 (Computer Lab)

From Role-Playing to Real-Playing

Winnie Suen, M.D., Henri Lee, M.D., Jennifer Hughes, M.D., Matthew Russell, M.D., Sandhya Rao, M.D., Anne Carr, N.P.

Role-playing is a fun, effective, and underutilized educational teaching strategy. It requires the learner to understand the materials and be able to translate this knowledge into real practice. The goals of this workshop are to identify role-playing strategies and barriers, reflect on how to create effective role-playing teaching opportunities in your particular teaching environment, and practice using these strategies as an educational tool.

Location: R 110

Using Camtasia® Recording Software to Create a Rich Asynchronous Learning Environment

Wayne LaMorte, M.D., James Wolff, M.D., Cristin Marona, Vanessa Edouard, M.P.H.

Camtasia Studio enables one to easily produce high quality videos that have many uses in teaching. Camtasia allows one to record your desktop monitor while you narrate the action. One can produce an array of potentially valuable learning objects including narrated PowerPoint modules, demonstrations of how to use software applications such as Excel, or any number of teaching/training videos. This workshop will demonstrate recording, editing, and production of Flash videos and Quicktime movies using Camtasia, and we will demonstrate what we have produced for teaching, review, and training.

Location: R 108

Exploration of NCBI databases and BLAST

Kate Bronstad, M.S.I.S., David Flynn, M.S. (LIS)

Most researchers know of the National Center for Biotechnology Information (NCBI) as the provider of PubMed and the sequence alignment tool Blast. However, many aren't aware of the other resources available through NCBI, which connects 20 databases covering nucleotide and protein sequences, gene-centered and genomic-mapping information, and research literature. In addition, many Blast users don't take advantage the alignment tool's range of options. This class offers a quick tour through NCBI resources, focusing on the useful GENE portal, and a more in-depth look at the powerful Blast tool, with tips on how to get more useful results.

Location: L 1105 (Computer Lab)

How the Brain Learns: How Neuroscience Informs Our Teaching

Jeanette Norden, Ph.D.

This workshop is intended to inform participants about findings in Neuroscience that relate to how we learn and remember, and to stimulate participants to think creatively about how this information can be used to create an optimal learning experience for students. General principles of Neuroscience relevant to teaching will be taught in a straightforward way without assumptions being made as to background in science. Participants will be encouraged to think of ways these principles might be applied in their own lecture or small group courses. The overall goal of the workshop is to stimulate awareness that we must actively engage the brains and minds of our students in order for learning and retention to take place most effectively.

Location: L 301

ABSTRACT THEMES FOR POSTER PRESENTATIONS

Education Innovation and Research

The submissions are meant to showcase scholarship or ongoing research in education at BUMC. Projects can be presented prior to the completion of full evaluation. Examples of educational innovations include: development, implementation, or evaluation of educational tools, course curricula, simulations or innovative educational collaborations. For research, both quantitative and qualitative research may be submitted as well as research in progress.

Abstracts 1-19, 22-23

Educational Technology

The submissions are meant to demonstrate creative use of interactive technology to augment learning. Appropriate types of submissions include course or clerkship websites, electronic clinical case simulations, online didactics, computer – based faculty development resources and electronic evaluation instruments. Submitted projects should be non-commercial although industry funding is permitted if the content and control of the project resides solely with the faculty authors.

Abstracts 20, 21

Education Innovation and Research

*Abstracts are ordered alphabetically by the last name of the primary author

THE OSCE EXAMINATION: A PICTURE IS WORTH A THOUSAND WORDS!

1

M. FERRIERO

Department of General Dentistry, Goldman School of Dental Medicine

Purely objective-based exams have been a constant, a staple in education for decades. In clinically-oriented educational environments (e.g. medical & dental schools), additional/adjunct testing styles are quite beneficial, even necessary for success.

OSCE (Objective Structured Clinical Examination) testing, in one form or another, has been used in medical school education worldwide for over 100 years. In dental education, this style of exam has been used predominantly in the study of Gross Anatomy. For example, students are asked questions based on visual cues or markers on human cadavers ("Identify this nerve." or "What is the insertion point of this muscle?"). In recent years, dental education has benefited greatly from the OSCE.

By way of explanation, example, and Q&A, I propose to enlighten/inspire other educators in this testing medium. There is much to be learned through correctly processing and responding to simple visual, multi-media, and media-like information (e.g. an X-ray, a song, a phlebotomy video, a painting, National Licensure Testing questions, etc.).

I have been using the OSCE for over 5 years in my Pre-Clinical Occlusion course in the dental school with much positive feedback and success. Students' resultant clinical comprehension in this discipline has improved. The National Dental Examining Board of Canada (NDEB) utilizes the OSCE as a major segment of its examination.

USE OF LOGIC MODELS FOR EVALUATION OF THE CLINICAL AND TRANSLATIONAL SCIENCE INSTITUTE (CTSI)

2

K. FRANKE

Clinical and Translational Science Institute, Boston University School of Medicine

Program evaluation entails the systematic collection, analysis, and reporting of evaluation findings that inform decision-making about needed improvements to the program during its implementation (formative evaluation) and that demonstrate accountability for what has been achieved by the program (summative evaluation). Logic models are one type of evaluation tool used to assess both formative and summative evaluation by visually mapping the relationships among elements necessary to operate a program or initiate change in a program. There are two types of logic models: operational and program theory. Operational logic models guide decision-making by looking at the relationships between program goals and activities with expected outputs and outcomes. The program theory logic model reflects a program's assumptions of how it is going to produce a change with the specific elements of the program and how that change fits together to produce the desired outcomes. The poster will present how the Boston University Clinical and Translational Science Institute (CTSI) has developed comprehensive logic models to guide the planning and implementation of its evaluation. As a set, these logic models support the continuous process of program improvement that enhances the capacity of the institute for change and renewal

IMPROVING URINE MICROSCOPY TEACHING THROUGH AN INTERACTIVE, VISUAL ONLINE TUTORIAL

C. GORDON¹, M. FAYFMAN², L. BECK¹

¹Renal Section Department of Medicine, Boston University School of Medicine, Boston Medical Center, ² Boston University School of Medicine Class of 2010

The evaluation of urine sediment is one of the oldest clinical tools used in the diagnosis of renal pathology. The identification and interpretation of renal casts, cells and crystals can noninvasively provide clues to guide patient management. Educating physicians-in-training about urine microscopy could therefore provide a useful lifelong diagnostic tool.

The goal of this project was to create an online module to teach the principles of urine microscopy. We developed a Microsoft PowerPoint-based tutorial. Users may access a general overview of urine microscopy or a more in-depth discussion of individual topics by clicking on various links included throughout the module. For each topic, we have used multiple images, obtained from online and text sources, to illustrate the variability in appearance of casts, cells and crystals and more accurately reflect what is seen in clinical practice.

To evaluate the efficacy of the tutorial, we created a short online examination with multiple choice questions focusing on image identification using clinical case scenarios. To eliminate the effect of image recognition, images used in the examination are different from those of the tutorial. The examination, taken before and after completion of the tutorial, will be administered to a cohort of second year medical students in and internal medicine residents. We hypothesize that results of the post-test will be significantly higher than pre-test outcomes.

The module is composed of a database that is easy to update and expand as more images are obtained. We plan to add to the image library with urinary sediment images obtained by renal section physicians at Boston Medical Center to expand our database of images. A similar approach may also be applied in the future to other topics for which image recognition is critical to diagnosis, such as in the evaluation of peripheral blood smear, and microbiologic specimens.

INTEGRATION OF THE NEUROLOGICAL EXAM INTO MEDICAL GROSS ANATOMY FACILITATES LEARNING OF THE CRANIAL NERVES

S. GREENE, A. LANOUE, T. HOAGLAND

Department of Anatomy and Neurobiology, Boston University School of Medicine

Learning cranial nerve (CN) anatomy and function is a challenging component of the head and neck region. To facilitate this learning, optional small group sessions providing an introduction to the CN portion of the neurological exam were incorporated into the 2009 Gross Anatomy course at BUSM. During each session, students (n=64) received: a pre-assessment quiz, overview of the CN exam, a brief review and specific testing of each CN with opportunities to practice these tests, examples of CN lesions via images and interactive websites, a post-assessment quiz, and a survey. Students significantly improved from pre-to-post assessment ($p < 0.01$), suggesting these sessions facilitated learning of the cranial nerves. Surveys indicated 97% of students felt sessions helped solidify CN knowledge; especially identification of lesions based on clinical findings, 91% of students felt these sessions were helpful in studying for the head and neck exam, and 73% of students reported these sessions also helped facilitate learning subsequently in the Medical Neuroscience course. Results suggest that these sessions were useful in helping students to understand clinical and functional anatomy of the cranial nerves.

THE EFFECT OF FACULTY PRESENCE VERSUS ABSENCE ON SMALL-GROUP LEARNING AND GROUP DYNAMICS IN THE FAMILY MEDICINE CLERKSHIP

22

M.HOFFMAN¹, J.WILKINSON¹, J.WIECHA¹, J.XU²

¹Department of Family Medicine, Boston University School of Medicine, Boston Medical Center, ² Boston University School of Medicine, Class of 2012

(ORAL*)

Question: Medical education increasingly relies on small-group learning. The literature suggests that this provides more active learning, better retention, higher satisfaction, and development of problem-solving and team-working abilities. However, assessment of the efficacy of different small group learning models needs more attention.

Objectives: In the Family Medicine Clerkship, small-group learning is central to the curriculum. Faculty noticed that if they left the room, discussion/participation increased. We designed a study to evaluate group dynamics and group learning process with the faculty member present versus absent.

Intervention/Methods: Students completed surveys after cases when the faculty was present or absent for the bulk of the discussion. 114 surveys were available for paired t-test analysis, assessing group dynamics, group learning process, student preference, and participation.

Findings: Indicators of group dynamics and group learning process were significantly better with the faculty absent (p range <0.001 to 0.015). Students participated more when the faculty was absent (p=0.03). Students felt fairly neutral about preference for faculty presence/absence after both “in” and “out” cases, but felt more strongly that they prefer having faculty present after “in” cases (p<0.001). There was no difference in reported case success after both “in” and “out” cases (p=0.67).

Key Lessons Learned: Student groups have better group dynamics, group learning process, and participation with faculty absent. Students feel somewhat dependant on faculty, more so when the faculty is present. But they do report similar case success after both “in” and “out” cases.

Questions/Future directions:

To facilitate development of team learning/working skills, we may need to push students away from their reliance on faculty. Next steps include assessment of learning outcomes and depth of discussion in student-run groups. This has potential implications on teaching modalities and distribution of faculty resources. It also raises the question of how we teach and assess team-working abilities and skills.

***AWARD WINNING ABSTRACT – Will be presented by primary author after lunch**

STUDENT-INITIATED ORGANIZATION INCREASES EXPOSURE AND ENCOURAGES ACTIVE PARTICIPATION IN MEDICAL EDUCATION

4

S.HSU¹, R.RAWAL², T.HASHMI¹

¹Boston University School of Medicine, Class of 2013, ² Boston University School of Medicine, Class of 2012

While medical schools prioritize instruction very highly, there can be instances of limited opportunities for significant student involvement and training in medical education. This problem is compounded by student unfamiliarity with the many facets of medical education and limited teaching time. Thus, creating significant student participation would ideally involve: a student-led initiative; informing students about medical education opportunities; and engaging students in innovative educational models.

To address this need, the Student Interest Group in Medical Education (SIGME) was founded in Fall 2009 at Boston University School of Medicine on the premise that all physicians are educators, and that it is critical to cultivate interest and competence in medical education early in training. SIGME aims to allow students to experience the “other side of the lecture hall” by learning and practicing effective pedagogy. As a student organization, SIGME works to accomplish these goals by hosting a Lecture Series on career opportunities in academic medicine, creating a Teaching Workshop Series to demonstrate relevant teaching skills at all levels, and presenting a Leaders in Innovation Series to discuss cutting-edge instructional models.

With over six events and attendance exceeding 220 people, SIGME has increased participants’ interest in medical education by 30%. Additionally, participants have unanimously recommended future event attendance to their peers. Veteran faculty of BUSM, including deans, medical education researchers, and course managers, have also attended events and supported SIGME’s mission

SIGME plans to expand each of its event series, increasing opportunities for medical education immersion and interactive acquisition of applicable skills. SIGME also plans to assist other schools that have expressed interest in founding new chapters. Our ultimate vision includes a national network that will enable medical students to fully explore medical education and receive hands-on teaching experience as they begin their journeys as future physicians and educators.

CADAVER BIOPSIES IN BUSM 1 AND BUSM 2 CURRICULUM

L.JOSEPH¹, A.ZUMWALT², D.VAUGHAN², T.HOAGLAND²

¹Department of Pathology and Lab Medicine, Boston University School of Medicine, ²Department of Anatomy and Neurobiology, Boston University School of Medicine

The course management team members of Gross Anatomy, Histology and DRx (Disease and Therapy, Pathology) incorporated a new model of integrated curriculum in the academic year 2009-2010 at BUSM (Boston University School of Medicine).

The BUSM 1 (first year) students would identify specific organ diseases during the cadaver dissection in gross anatomy lab sessions in fall semester of 2009. A team of faculty and residents from the pathology department who participate in Disease and Therapy (DRx), BUSM 2 (second year) course would perform cadaver rounds. During these rounds, the team would provide clinical perspectives, gross pathology discussions, and differential diagnosis as well as perform cadaver biopsies. The specimens obtained at these sessions were processed by the pathology department and representative images were obtained.

In spring semester (2010) of BUSM 1, the students had a review session of the cadaver biopsies in a discussion format. The students had mastered normal histology in this semester. Hence the significance of identifying abnormal microscopic pathology was presented to the students in the context of their own cadaver dissections. The students who dissected specific cadavers during the gross anatomy class discussed their findings in the histology class before the pathologist presented the specific pathology and a final diagnosis.

When these students take their DRx organ specific pathophysiology classes in BUSM 2 (fall 2010 and spring 2011), the cadaver discussions as well as biopsies will be presented as self study cases. This will reinforce the gross anatomy, and histology content to the students in a spiral curricular pattern of content reinforcement.

Specific questions in the student course evaluations have been developed to evaluate the effectiveness of this teaching method. We hope to incorporate student and faculty feedback in further developing this integrated curriculum at BUSM.

FACULTY ASSESSMENT BY MEDICAL STUDENTS: FACTORS CONTRIBUTING TO DIFFERENCES IN ASSESSMENT OF A FEMALE PROFESSOR

R. LEVIN-EPSTEIN, A. HIRSCH

Department of Radiology Oncology, Boston University School of Medicine, Boston Medical Center

Background: We aim to identify medical student differences in assessment of teaching faculty, with specific attention paid to academic level and student gender.

Summary of work: A didactic session in Radiation Oncology was taught by a female professor.

Thereafter, students completed a Likert scale survey assessing the professor on various scholastic attributes. The 139 students included 55 third year and 84 fourth year medical students, with males and females equally represented.

Summary of results: With regard to academic year, fourth year students perceived the professor as significantly more “knowledgeable about the subject” (p=0.017), “organized and clear” (p=0.026), “assertive” (p=0.028), and “overall very good” (p=0.011). Fourth years also reported that they were motivated to learn more about the subject (p=0.031). Males and females equally reported that the professor seemed “knowledgeable about the subject” (p=0.89), “organized and clear” (p=0.70), “assertive” (p=0.79), and “approachable and warm” (p=0.58). There were no gender differences in rating of the professor as “overall very good” (p=0.24).

Conclusions: Students at higher academic levels had more favorable views of the professor in all assessment categories. In contrast, there were no gender differences in any assessment categories.

Take-home messages: In this analysis, faculty assessment differed by academic level but not by student gender.

**RADIATION ONCOLOGY AS A COMPONENT OF THE CORE MEDICAL SCHOOL
CURRICULUM: A THREE-YEAR ANALYSIS OF THE ONCOLOGY EDUCATION INITIATIVE**

R. LEVIN-EPSTEIN, A. HIRSCH

Department of Radiology Oncology, Boston University School of Medicine, Boston Medical Center

Introduction: Although almost two-thirds of cancer patients receive radiation therapy as part of their management, exposure to radiation oncology is limited in the undergraduate medical curriculum. The Oncology Education Initiative was created to advance oncology and radiation oncology education by integrating structured didactics by an attending radiation oncologist into the existing core radiology clerkship. We report on students' overall attitudes toward radiation oncology education and this Initiative for the academic years 2007, 2008, and 2009.

Methods: Beginning with the class of 2007, a 1.5 hour interactive, didactic radiation oncology session was given to all medical students during the core radiology clerkship. We conducted an Institutional-based IRB-approved cohort study of third and fourth-year medical students rotating through the required radiology clerkship measuring perceived quality of radiation oncology education prior to and following exposure to the structured didactic program.

Results: Of the 533 students, 406 (76%) participated in both the didactic session and completed the questionnaire. 404 (99.5%) students felt that oncology was an important component of undergraduate medical education, and 366/406 (90%) felt that radiation oncology was also an important component of undergraduate medical education. 277/406 (68%) reported limited knowledge about radiation oncology prior to the Initiative. An alarming 226/406 (56%) and 269/406 (66%) did not feel there was adequate exposure to cancer-related topics and cancer care in the pre-clinical and clinical years, respectively. Subsequent to the didactics, 309/406 (76%) were motivated to learn more about radiation oncology or chose to rotate through the radiation oncology department and 368/406 (91%) reported a better understanding of the multidisciplinary nature of cancer care. 387/406 (95%) students felt that the material was not too difficult to understand at their level of education. Despite the brief nature of the session, 164/406 (40%) stated they already felt more comfortable with the prospect of managing patients with cancer.

Discussion: Systematic exposure to multidisciplinary oncology education as part of a radiology core clerkship provides an excellent opportunity for integrated teaching of oncologic principles and patient management. This type of experience addresses an important yet underrepresented component of undergraduate medical education.

The Oncology Education Initiative successfully incorporates radiation oncology didactics into the core medical curriculum. To the best of our knowledge, our medical school is the first to create a formal didactic program of radiation oncology taught alongside radiographic interpretation and immediately reinforced in a clinical setting.

DEVELOPMENT OF CRITICAL THINKING SKILLS IN DENTAL STUDENTS AND METHODOLOGY OF EVALUATION

11

M.LOADHOLT

Department of General Dentistry, Department of Extramural Programs, Boston University Goldman School of Dental Medicine

Introduction: A successful and competent dentist must possess excellent critical thinking skills as well as a high degree of manual dexterity. Although dental school curricula have long focused on developing excellent clinical skills in their students, the other component—the ability to understand and reason that their decisions are justified and endorse these decisions—has recently taken on an equally important focus.

Methods and Materials: In academic year 2004 – 2005, the Office of Extramural Programs incorporated a case presentation for all 4th year dental students as part of their 10 week Externship rotation, a required course in the curriculum. This assignment involved identifying a patient that required comprehensive treatment, gathering data on that patient, and developing 2 treatment plans: a recommended and an alternative plan. The data gathered included the following: current medical and dental histories, documented intra/extraoral examinations, a full set of radiographs, intraoral photographs, and mounted study casts. The data was organized and displayed on a Power Point template that was designed specifically for this assignment. All students presented their cases in a small group format consisting of both faculty and their peers. They were expected to justify their recommended and alternative treatment plans based on the most current evidence. When students returned from their 10 week rotation, they completed a post externship survey answering questions about their experiences. In academic year 2009 – 2010, 2 questions were added to this survey to determine the impact of this assignment on their critical thinking skills.

Findings: In academic year 2009 – 2010, 62 out of 115 (54%) students completed the post externship survey. The results showed that the development of the case presentation improved: critical thinking skills (62.9%), treatment planning skills (61.3%) and diagnostic skills (53.2%). Presenting and defending the case to faculty and peers had a similar impact: improved critical thinking skills (69.6 %), treatment planning skills (60.9%) and diagnostic skills (52.2%).

Conclusion: It is apparent that this group of students found the assignment to enhance their dental education. Both creating and presenting their cases improved their critical thinking, treatment planning, and diagnostic skills, however, presenting their case had a greater impact on critical thinking than developing the presentations. Although normally limited to post graduate dental education, incorporating case presentations into undergraduate dental education should be considered by other dental schools.

VIRTUAL NUTRITION COURSE AT BOSTON UNIVERSITY SCHOOL OF MEDICINE

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Statement of the problem: The Healthy People 2010 and the US Preventive Services Task Force recommend that physicians provide nutritional assessment and counseling to their patients. At BUSM, less than 10% of 4th year students feel prepared to address nutritional concerns with patients.

Objectives of the Intervention: 1) Update the BUSM objectives and competencies in clinical nutrition; 2) Provide medical students with a comprehensive online resource in nutrition applicable to both pre-clinical and clinical years.

Description of the Intervention: Creation of a nutrition course using a Blackboard 8 site that will include objectives, competencies, reading materials, online modules, video exercises, tests, and important links.

Relevant materials on the site can be reviewed by course directors and assigned to students as they apply to each course.

Methods: The Nutrition Vertical Integration Group (VIG) -- composed of faculty, dietitians, and students -- has conducted an assessment and plan for integration of nutrition in the curriculum with the support of a Physician Specialist Award from the American Society of Nutrition (CL) and material development. The Student Nutrition Awareness and Action Council (SNAAC) --a new student organization created to enhance clinical nutrition education-- is working with a Physician Nutrition Specialist (CL) under the guidance of the Nutrition VIG to create a sustainable and integrated virtual course in nutrition.

Evaluation: Progress in medical student knowledge and confidence in clinical nutrition will be assessed through surveys and evaluations after launching virtual course.

Key Lessons Learned: Student leadership, mentoring from faculty, and support from a dean champion have been instrumental in addressing the need for enhanced clinical nutrition in the curriculum.

Future Directions: 1) Sustain the virtual nutrition course with support from a Physician Nutrition Specialist and guidance from the Nutrition VIG; 2) Evaluate medical students' nutritional assessment and counseling skills.

HEALTH LITERACY: AN EDUCATIONAL INTERVENTION FOR PRIMARY CARE RESIDENTS

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Background: Limited health literacy is an increasingly recognized barrier to adequate healthcare and leads to poor health outcomes. The Institute of Medicine's report on health literacy recommended that professional schools incorporate training in health literacy into their curriculum.

Methods: All primary care internal medicine residents participate in three one month primary care seminar blocks. During their intern year, they participate in a 3 hour multimedia seminar to introduce key concepts in health literacy. As junior residents they participate in a conference lead by a clinical pharmacist that reviews barriers to patient understanding and adherence to medications. As part of this, patients are recruited from resident's continuity panels to attend a session where the clinical pharmacist models medication reviews, an effective way to begin to assess health literacy and improve patient understanding. The clinical pharmacist then works with the residents during their continuity/primary care clinical sessions, directly observing them at least twice during the following 4 months. During these sessions the clinical pharmacist provides structured feedback on residents' skill in performing medication reviews with their own patients.

Results: This project is in the pilot phase, with initial full rollout during the 2009-10 academic year. Residents complete a pre and post intervention questionnaire that assesses the residents' skills and attitudes regarding health literacy and the role of a clinical pharmacist in primary care clinics. Residents are also given direct, structured feedback regarding their skills in conducting medication reviews.

Conclusions: Limited health literacy is a pervasive problem amongst patients, negatively affecting health outcomes. Despite this there is very little published literature on educational initiatives to equip trainees with skills needed to help patients overcome this barrier. We report on the structure of once such initiative for medical residents involving a multidisciplinary team.

AN INTERACTIVE HEALTH LITERACY WORKSHOP FOR FOURTH YEAR MEDICAL STUDENTS

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Background: Limited health literacy is an increasingly recognized barrier to adequate healthcare and health outcomes. The Institute of Medicine's report on health literacy recommended that professional schools incorporate training in health literacy into their curriculum. Despite this, there remains little published literature on the effectiveness of educational strategies to improve trainees' education in this area.

Methods: All Boston University medical students participate in a required geriatrics clerkship during their fourth year. We designed a workshop, based upon the American Medical Association (AMA) Foundation train-the-trainer program in health literacy, which contains 1 hour of didactic education on key areas in health literacy, followed by a faculty facilitated, case based discussion. Content areas covered include: Prevalence, data linking limited health literacy with poor health outcomes, the AMA Foundation patient testimonial video, and universal precautions for patient safety.

To evaluate the success of this workshop we developed a web-based test which includes six knowledge questions and identification of the jargon in a video-taped, simulated patient interaction; students are asked to identify the instances of medical jargon and assess patient and provider understanding of each other. This evaluation tool is administered at the beginning of the four week rotation to get baseline measures and again at the end with a different video.

Results: We implemented the structured evaluation tool at the beginning of the 2009 academic year and will report pilot results.

Discussion: Research regarding effective educational strategies to teach healthcare providers about health literacy is scarce. We report on the ability of an educational workshop to teach fourth year medical students key concepts and skills in this area. We also report on the web based assessment tool we developed.

MULTISITE GERIATRICS CLERKSHIP FOR FOURTH YEAR MEDICAL STUDENTS: A SUCCESSFUL MODEL FOR TEACHING THE AAMC CORE COMPETENCIES

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Medical students are inundated with material but most curricula do not provide outlets for stress-relief. A 2005 study demonstrated that stress has a significant effect on medical students' mental health and ability to treat patients. Institutions report high rates of medical student depression attributed to ineffective coping strategies, a disregard for personal health, social isolation, a lack of pertinent resources, poor academic performance, and avoidance of display of vulnerability. The practice of yoga has been shown to effectively decrease stress. At Boston University School of Medicine (BUSM), a pilot study was conducted to introduce medical students to yoga. Two one-hour Vinyasa yoga sessions were offered. The sessions focused on improving flexibility and relaxing the body. Fifteen students attended the first session. Eight returned for a second session. The 14 respondents to a follow-up survey reported an improvement in mood and a greater sense of relaxation. 86% reported a decrease in stress and 50% reported an increase in energy. All 14 respondents said that they would participate again, that BUSM should provide other forms of stress-reduction to students, and that the importance of student mental health should be emphasized to a greater extent in the BUSM curricula. 64% would enroll in a course that taught techniques to reduce stress and increase concentration. Many benchmarks in medical school ensure intellectual competency, yet for many students, a decline in mental health may be an unanticipated cost in reaching these endpoints. Students should be provided with tools to manage stress so they can reach their maximum potential as physicians. For students at BUSM, yoga may be an effective way to relax, improve mood, decrease stress, and increase energy. There is a high demand for innovative programs which teach medical students how to manage stress and better monitor their health.

DEVELOPING SELF-AWARENESS AS A MANAGERIAL SKILL FOR PUBLIC HEALTH STUDENTS

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Aspiring managers of health professionals are often unaware of the cognitive and emotional biases that they may bring to difficult interpersonal situations in the workplace. SPH PM 776 is a course which enables students to explore their own perceptions and behaviors in such situations, and aims to develop the following skills: identifying organizational incentives or routines that can cause problems, developing conversational techniques to resolve the presenting problem, inquiring skillfully into other's assumptions, and reflecting on their own assumptions, emotional reactions, and ways of acting in relation to interpersonal problems at work. The course design aims to accomplish this through a number of methods, including the formation of small consultation teams in which students share and seek feedback on their situations and their attempts to improve them, learning and practicing structured techniques for exploring the identification, framing, and discussion of workplace problems, and self-reflective writing assignments. At the beginning of the semester, students were asked to complete a self-awareness self-assessment exercise (de Janasz, Dowd & Schneider, 2002) on which they were identified only by a code number. The 30-item Likert scaled instrument asks students to respond to a number of statements related to self-awareness, and yields a score ranging from 30 (high self-awareness) to 150 (low). From the class of 26 students, 25 completed both pre- and post- instruments for analysis. The average self-awareness rating changed from 62.12 (range=41-77) to 52.48 (range 36-67) over the course of the semester, reflecting an overall improvement in self-assessed self-awareness of almost 10 points. Qualitative comments collected anonymously show similar results, such as "This course totally reframed my thinking about managerial skills and my own self" and "the classroom environment promoted growth." While self-assessment of self-awareness is inevitably subject to bias, the consistency of these results suggests that the course is achieving its objectives.

INTERNATIONAL COLLABORATION TO DEVELOP MEDICAL ENGLISH PROFICIENCY AND INTRODUCE PROBLEM BASED LEARNING INTO A YEMENI MEDICAL SCHOOL: A CASE STUDY

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Medical education provides an opportunity to address the global health burden by equipping indigenous future physicians to care for the needs of their own people. Students of the Faculty of Medicine and Science Medical School in Taiz, Yemen are taught all medical courses in English and are provided textbooks in English. For many students this poses great difficulty in absorbing essential material. This case study describes an international collaborative project that implemented two elective summer courses in a Yemeni medical school designed to help address this issue, as well as enrich the existing curriculum with a public health oriented English conversation course, and a problem based learning course. The educational goals were to improve medical English language proficiency, encourage scholarly discussion on Yemeni public health issues among preclinical students, enable clinical students to develop their clinical reasoning skills through problem based learning and basic literature review skills on the internet, and foster international collaboration and cultural exchange. The authors discuss the possible impact of this project on both Yemeni and American participants and the future development and research being planned.

BUSPH INNOVATION IN TEACHING PROGRAM

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Problem: Course design and development is a challenging task. Faculty frequently work in isolation with little guidance or support. There are few incentives to explore new possibilities or to reconsider the assumption and beliefs we bring to our jobs as teachers. While one time faculty workshops on teaching may be helpful, since these sessions are not sustained they are usually little more than introductions to new ideas about teaching.

This faculty development program, conducted in the 2009-2010 academic year, provided 7 BUSPH faculty members an opportunity to meet monthly as a group as well as to meet individually with the Director of the Office of Teaching, Learning and Technology to design/re-design a course using learner centered, inquiry based methods and approaches as well as to improve and to sharpen teaching skills.

Objectives: Course redesign focuses on re-visioning the way we construct our courses—an approach that begins with identifying the course's learning goals, then proceeding on to assessment mechanisms (both formative and summative) that measure whether or not those goals have been met, and finally to designing the activities that will help our students achieve the learning outcomes we set forth.

Our Approach: Faculty need to feel a sense of community with each other and through this community to develop a common language to help better understand what we believe good teaching is and how we may be accomplish it. The group used the text, *Developing Learner Centered Teaching*, (Blumberg, 2008) to guide their work.

Participants:

- Determined the level of student-centeredness of the course along the dimensions of content, the role of the instructor, the responsibility for learning, the purposes of assessment and the balance of power in the classroom.
- Chose one primary dimension on which to focus
- Using rubrics for each dimension, faculty established their initial baseline for that dimension
- Used the course goals to create new assessments and activities
- Developed a more integrated view of how the course components relate to each other and learned to communicate this integration to students

Evaluation:

Evidence of the effect of the intervention will be gathered from:

- Original and new syllabus resulting from the redesign process
- Assignment/activity related to each course goal
- Assessment mechanism related to that assignment/activity
- Mid-term course evaluations and a revised end-of-course evaluation which measure student perceptions of whether the learning outcomes for the course have been achieved
- Pre and post rubrics that describe levels of student-centered course design along the 5 dimensions
- Reflective writing that narrates the personal effects of the course-redesign process.
- Qualitative data from student focus groups

**THE SOUTH BOSTON ENVIRONMENTAL EMPOWERMENT PROJECT:
USING GOOGLE EARTH AS A MODEL FOR INTERACTIVE COMMUNITY BASED
PARTICIPATORY RESEARCH**

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Environmental health research describes disparities in levels of air and water pollution, availability of fresh, healthy food, housing stability, smoking advertisements, and safe spaces to play and exercise across different neighborhoods. Community based participatory research is a model that allows full partnership and equal involvement of researchers and community members to better understand factors that impact community health and environmental injustices.

The South Boston Environmental Empowerment Project (SoBEEP) was a collaboration between the South Boston Community Health Center and the South Boston Action Center to engage youth to learn and do research about environmental health in their neighborhood. SoBEEP focused on empowerment and leadership, equipping youth with the tools to advocate for change and developed the teens' skills as educators and investigators, using a Google Earth interface to create a visual representation of their results.

After participating in an environmental justice course, the youth chose to describe the distribution of cigarette butts on South Boston's streets and sidewalks as a proxy for the amount of smoking and lack of proper cigarette disposal canisters. Following data collection/entry, the youth used Google Earth, a user-friendly program for mapping research. The software allowed youth to be involved in every stage of the research process, from research design and data collection to final analysis and presentation.

Several lessons were learned during the SoBEEP project. South Boston currently faces new environmental health challenges. Youth in South Boston are interested and excited to learn more about and advocate for environmental justice in their community. Finally, SoBEEP participants learned to form research questions, perform data collection/analysis, and represent data visually using Google Earth. Mapping data with Google Earth allows those most involved in research collection to play a role in presentation and advocacy following data collection with an immediacy that is often lacking in other formal academic research.

BUILDING THE BODY: RADIOLOGY-ANATOMY INTERACTIVE LABS

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Problem: Because students typically study Anatomy early in medical training, they lack a clinical framework to integrate this knowledge, and would benefit from reinforcement.

Objectives: To re-emphasize crucial Anatomic principles in a clinical setting.

Description: An interactive lab exercise was developed in collaboration between Anatomy and Radiology faculty for use in the 2nd week of the four-week Radiology course. The 20 students are divided into four groups, and rotate during a single 2-hour lab period among 4 lab stations.

Methods: Models were designed using inexpensive materials such as foam, tubing, and wire. For the first lab, models were constructed of the femoral triangle and subclavian region, emphasizing vascular and neural structures important for safe vascular access. Another station involved matching structures labeled on a large poster of radiologic images to structures on a plastic skeleton. The fourth station uses ultrasound to emphasize vascular anatomy of the antecubital fossa and neck. Students were asked to fill out an online anonymous survey after the lab. A second lab was designed focusing on the liver and its blood supply, including a construction station (liver, IVC, associated organs and vessels), a model of the liver vasculature for demonstrating vascular access, a computer station with images of portal hypertension, and an ultrasound station emphasizing jugular venous access.

Findings: Student surveys have expressed strong approval of this teaching method. Suggestions have led to improvements in the construction techniques for models.

Key Lessons: Students appreciate the opportunity to work on their own to explore anatomic principles. Building a 3D model teaches anatomy in a different way from dissection.

Future Directions: A grant has been submitted to purchase an ultrasound unit to enhance the surface

anatomic stations. New labs are in development for the rotator cuff, knee and its ligaments, cerebral circulation, and pelvic organs.

ORAL DISEASE - EDUCATIONAL STRATEGIES TO ADDRESS A SIGNIFICANT HEALTH ISSUE IN CHILDREN

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Dental caries is the most common, chronic disease in children. In fact, in Massachusetts 1 in 10, third graders experience pain due to oral disease. It is well recognized that oral disease can significantly impact a child's general health, result in pain and suffering, impair daily function such as school performance and reduce quality of life. This in turn has a considerable impact on parents and communities at large. The goal of this poster is to describe educational strategies that could enhance students' educational experience while addressing this significant public health problem.

EDUCATIONAL STRATEGIES:

- Service Learning: This educational methodology combines a structured, community based learning experience with service and learning objectives and reflection activities. Outcomes include community enhancement, powerful didactic learning outcomes for the students, and more civically engaged students. Currently in its third year of implementation at the Goldman School of Dental Medicine, 115 first year dental students provided classroom education, oral health assessments, fluoride varnish application and sealant placement for elementary school children in 9 Boston Public Schools. Students reported better understanding of the community and diverse populations as well as the course material. They also reported a deeper appreciation of what it means to be a health professional and a desire to continue community service after graduation.
- Inter Professional Educational Opportunities: The vast majority of children under age 3 see a pediatrician annually, but do not see a dentist. This has led to an increased focus on the importance of medical-dental collaborations in addressing the oral health needs of very young children. In fact, Medicaid Programs in 35 states, including Massachusetts, now reimburse physicians for fluoride varnish applications. Developing joint community-based experiences, seminars and workshops for medical, dental and public health students would undoubtedly enhance the students' educational experience and reinforce the collaborative role they will experience throughout their professional careers.

CONCLUSION: It is well recognized that an interdisciplinary approach to the children's oral health problems is necessary and students across the Medical Campus would benefit from educational strategies that mirror this approach. Service learning activities focused on prevention of children's oral health problems would be an ideal strategy for such collaboration

A MULTIFACETED EDUCATIONAL APPROACH TO IMPROVING COMPETENCY AND REDUCING INFECTIOUS COMPLICATIONS OF HOUSESTAFF PLACED CENTRAL VENOUS CATHETERS AT BUMC

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(ORAL*)

Introduction: Central venous catheter (CVC) insertion is associated with significant potential complications. Individual studies have described improved resident CVC insertion outcomes with didactic and simulation training, and increasing experience. Our Internal Medicine (IM) residency program did not have a curriculum for CVC insertion training prior to this year. We hypothesize that a multifaceted educational program will increase residents' level of skill in the procedure and decrease infectious complications.

Methods: In August 2009 we designed and piloted a 3-hour training session for all PGY-2 IM residents. A 1-hour didactic on correct insertion technique was followed by 2 hours of small group deliberate skills practice on mannequins. The hospital's CVC insertion protocol was revised and served as a skills checklist for simulation of the procedure. Additional didactic refresher sessions were given throughout the year during MICU and CCU rotations, including an objective assessment of competency via a 20 question BMC sanctioned credentialing test. A smaller subset of residents rotated on a procedure service for more intensive CVC training.

Results: Forty-three PGY-2 residents completed the initial 3-hour training, and of these 17 have attended at least one critical care rotation refresher session. Residents' written feedback from the pilot session was positive. The median score on the initial credentialing exam was 90% and remained high on re-examination, indicating good retention. While central line infection rates can be influenced by various factors, the median quarterly central line-associated bloodstream infection (CLABSI) rate in the MICU and CCU over the past year was zero.

Conclusion and Future Directions: We have demonstrated the feasibility of implementing a CVC insertion curriculum incorporating didactic and simulation training with direct instruction. Additional workshops for the 2010-2011 academic year are planned with a more formal pre- and post- skill set assessment along with close tracking of associated infectious and mechanical complications.

***AWARD WINNING ABSTRACT – Will be presented by primary author after lunch.**

Educational Technology

* Abstracts are ordered alphabetically by the last name of the primary author

STUDENT NUTRITION AWARENESS AND ACTION COUNCIL (SNAAC)

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Statement of the Problem: In the face of today's obesity epidemic, medical students do not graduate medical school with adequate knowledge of nutrition or obesity medicine. Both medical students and physicians are often not comfortable counseling their patients on nutrition/weight related issues because the experience is not available to them.

Objective of the Intervention: SNAAC will provide medical students with the opportunity to increase their knowledge of nutrition and nutrition counseling through opportunities in education, community outreach, clinical practice and advocacy.

Description of the Intervention: SNAAC has four components for students interested in nutrition to become involved in: (1) education: provide students with information on nutrition and practical approaches to the treatment of obesity (2) community outreach: provide medical students with the opportunities to apply their knowledge in clinical nutrition at community health centers around Boston; (3) clinical practice: offers the chance for a select group of medical students to work at the Nutrition and Fitness for Life Clinic at BMC, where they can shadow the physicians/dietitians and conducting nutrition-centered interviews; and (4) advocacy: create an avenue for students to get involved in projects, such as those working to create healthier food option to be offered in the cafeteria at BMC.

Method: Second years will lead the different aspects of the group and recruit interested first year students in the fall to become co-leaders so they can then assume leadership roles in their second year.

Future Directions: The group plans to: (1) continue expanding and creating more opportunities within education, clinical practice, community outreach and advocacy; (2) work on the vertical integration of nutrition in the medical school curriculum through the development of a virtual course; and (3) continue to recruit interested students and increase their knowledge of nutrition and obesity medicine.

* **AWARD WINNING ABSTRACT – Will be presented by primary author after lunch**

LEARNING IN A VIRTUAL WORLD: EXPERIENCE WITH USING SECOND LIFE FOR MEDICAL EDUCATION

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Problem: Virtual worlds are rapidly becoming part of the educational technology landscape. Second Life (SL) is one of the best known of these environments. The evaluation of the use of virtual worlds for medical education appears to be largely unreported.

Objectives: (1) explore the potential of a virtual world for delivering continuing medical education (CME) designed for physicians; (2) understand the barriers, solutions, and costs associated with using SL, including required training.

Methods: We trained and enrolled 14 physicians in an hour-long, highly interactive event in SL on the topic of type 2 diabetes. Participants completed surveys to measure change in confidence and performance on test cases to assess learning.

Results: On a seven-point Likert scale (1, strongly disagree to 7, strongly agree), participants' mean reported confidence increased from pre to post SL event with respect to: selecting insulin for patients with type 2 diabetes (pre = 4.9 to post = 6.5, P= .002); initiating insulin (pre = 5.0 to post = 6.2, P= .02); and adjusting insulin dosing (pre = 5.2 to post = 6.2, P= .02). On test cases, the percent of participants providing a correct insulin initiation plan increased from 60% (6 of 10) pre to 90% (9 of 10) post (P= .2), and the percent of participants providing correct initiation of mealtime insulin increased from 40% (4 of 10) pre to 80% (8 of 10) post (P= .09). All participants (12 of 12) rated the experience very highly. Only 17% (2 of 12) disagreed with the statement that this potential Second Life method of CME is superior to face-to-face CME.

Key Lessons Learned: The results of this pilot suggest that virtual worlds offer the potential of a new medical education pedagogy to enhance learning outcomes beyond that provided by more traditional online or face-to-face activities.

TEACHING AWARD RECIPIENTS 2009-2010

Daniel C. R. Chen, M.D., Boston University School of Medicine, Department of Medicine
Committee on Faculty Affairs Educator of the Year Award for Clinical Sciences, Boston University School of Medicine

Wendy Heiger-Bernays, Ph.D., Boston University School of Public Health, Department of Environmental Health
Norman A. Scotch Award for Excellence in Teaching, Boston University School of Public Health

Shiro Kamachi, D.M.D., Boston University School of Dental Medicine, Department of General Dentistry
Procter & Gamble Award for Excellence in Teaching Clinical Sciences, Boston University School of Dental Medicine

Mary Loadholt, M.A., Boston University Goldman School of Dental Medicine, Department of General Dentistry
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Stanley L. Robbins Award for Excellence in Teaching, Boston University School of Medicine

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Committee on Faculty Affairs Educator of the Year Award for Graduate Sciences, Boston University School of Medicine

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Barbara Schreiber, Ph.D., Boston University School of Medicine, Department of Biochemistry
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Committee on Faculty Affairs Educator of the Year Award for Preclinical Sciences, Boston University School of Medicine

CONTINUING MEDICAL EDUCATION

Accreditation:

Boston University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Boston University School of Medicine designates this educational activity for a maximum of 3 *AMA PRA Category 1 Credit(s)*™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Participants will receive 1.5 CME credits for attending a workshop, 0.5 credits for attending the oral presentations and 1 credit for attending the keynote speaker session.

Target Audience:

BUMC faculty, residents, fellows, students and staff (BUSM, SDM and SPH) interested in educational innovation and scholarship.

Objectives:

At the conclusion of this educational activity, participants will be able to:

- incorporate specific instructional techniques into their teaching
- identify key research questions in educational innovation and scholarship
- identify new approaches to educational innovation and scholarship

Needs Assessment:

Participants will learn new teaching skills and knowledge of educational innovation, leadership and scholarship by attending workshops, viewing posters in education scholarship and hearing presentations on educational research and scholarship.

Disclosure Policy:

Boston University School of Medicine asks all individuals involved in the development and presentation of Continuing Medical Education (CME) activities to disclose all relationships with commercial interests. This information is disclosed to CME activity participants. Boston University School of Medicine has procedures to resolve any apparent conflicts of interest. In addition, faculty members are asked to disclose when any discussion of unapproved use of pharmaceuticals and devices is being discussed.

The Planning Committee Members and workshop presenters have nothing to disclose with regard to commercial support. Planning Committee members and workshop presenters do not plan on discussing unlabeled/investigational uses of a commercial product.

Disclaimer:

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DENTAL CONTINUING EDUCATION

Boston University School of Dental Medicine Division of Continuing Education will provide 4 hours of continuing education credits for verification of participation in the full event. Two hours worth of credits will be provided for half day participation

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No other member of the planning committee has anything to disclose with regard to commercial interest.

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Exam Master

