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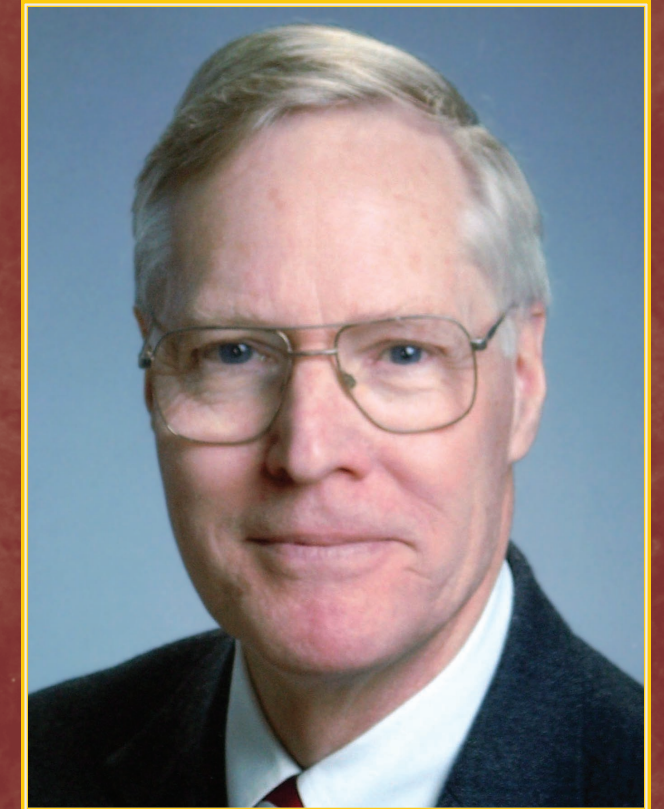
Showcasing Educational Innovation and Scholarship at the Boston University Medical Campus

June 22, 2009

BOSTON UNIVERSITY

BU

Boston University School of Medicine

Welcome to
THE FOURTH ANNUAL JOHN McCAHAN
MEDICAL CAMPUS EDUCATION DAY

Dear Colleagues,

In 2006, in honor of the retirement of Dr. John McCahan, BUSM's Associate Dean for Academic affairs for three decades, we celebrated our first Medical Campus Education Day, a time for health professions educators from the Schools of Medicine, Dentistry and Public Health to find inspiration, by networking with other health science educators to enrich our curricula, focusing on educational innovations, scholarship and research.

Health sciences educators must develop students' critical thinking skills to support evidence-based decision-making. Dr. N. Carl Haden's keynote lecture will addresses how we, as teachers, can improve our own critical thinking skills and those of our students.

Once again, workshops will address a range of topics from creating an effective learning environment to modes of leadership. Abstracts will showcase campus wide scholarship and research in education and demonstrate the creative use of interactive technologies designed to augment learning.

Please attend and enjoy the collegiality of the day.

Sincerely

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

ACKNOWLEDGMENTS

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The John McCahan Medical Campus Education Day Planning Committee acknowledge with appreciation the support and participation of the following educational vendors and their representatives:

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John McCahan Medical Campus Education Day
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June 22, 2009
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
8:40-9:15 a.m.	**Panel of BUMC Academic Deans: Curricular Innovations in 2009-10** Lisa Sullivan, Ph.D., Associate Dean for Education, BUSPH Michelle Henshaw, D.D.S., Assistant Dean for Community Partnerships and Extramural Affairs, BUGSDM Sharon Levine, M.D., Associate Dean for Academic Affairs, BUSM
9:15-9:20 a.m.	Introduction to Keynote Speaker Rob Schadt, Ed.D.
9:20-10:00 a.m.	**Keynote Lecture** "*Critical Thinking: Where is the Evidence?*" N. Karl Haden, Ph.D. President, Academy for Academic Leadership
10:30-12:00 p.m.	**Workshop Session I** See workshop listing p. 8-10 for location
12:00 p.m.-1:00 p.m.	**Poster Presentations** Lunch

1:00-1:45 p.m.	**Award Presentations** Ann Zumwalt, Ph.D. Best Faculty Abstract: Jeffrey Markuns, M.D. Best Student Abstracts: Sahil Jain, M.S. and Vinodh Bhoopathi B.D.S. BUGSDM and BUSM Voluntary Faculty Award BUSPH Educational Innovation Award **Oral Presentations** Vinodh Bhoopathi, B.D.S., "Knowledge, Attitudes, and Opinions on Bioterrorism Preparedness in Dental Professionals: A Comparative Study" abstract # 2 Sahil Jain, M.S., "An Innovative Medical Student Organization as a Platform to Integrate Business Awareness into Medical Education" abstract # 15 Jeff Markuns, M.D., "International Videoconference Program for Faculty Development in Family Medicine" abstract # 23
2:00-3:30 p.m.	**Workshop Session II** See workshop listing p. 8-10 for location
9:00-3:30 p.m.	**Educational Vendors** Vendor representatives will be available throughout the day in L1403.

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.

N. Karl Haden, Ph. D.

Dr. Haden is the founder and President of the Academy for Academic Leadership. Since its founding in 2006, the Academy for Academic Leadership has worked with nearly 100 higher education institutions and associations through faculty development programs and consulting services. Dr. Haden's consultation and faculty development activities have included clients from dentistry, pharmacy, veterinary medicine, allied health, and medicine. Dr. Haden's areas of expertise include leadership development, organizational change, team building, strategic planning, curriculum development and the scholarship of teaching and learning. He served as Associate Executive Director and Director of the Center for Educational Policy and Research at the American Dental Education Association (ADEA). He continues to direct the ADEA Leadership Institute, a premier leadership development program in health professions education. Dr. Haden regularly presents to organizations on issues and trends in higher education, health professions education, and policy-related matters in higher education. In the past 10 years, he has made over 250 presentations to groups in higher education. Dr. Haden has authored or coauthored over 70 articles and monographs in educational policy. In 2006, Dr. Haden received an ADEA Presidential Citation for his contributions to dental education and the profession of dentistry.

WORKSHOP TOPICS AND LOCATIONS

SESSION I   10:30 A.M. – 12:00 P.M.

Location L 213
Practice Based Teaching Innovations for Significant Learning, James Wolff M.D., Wayne La Morte M.D., Rob Schadt ED.M, Monita Burtch M.S., Katie Poirier, M.P.H.
In this workshop participants will apply Dee Fink's ground breaking taxonomy for significant learning to their own teaching. The workshop faculty will present the six dimensions of significant learning: foundational knowledge, application, integration, the human dimension, caring and learning how to learn, and will illustrate how they can be put into practice. The participants, working in small groups, will examine their own teaching objectives through the lens of significant learning to create a student centered practiced based learning curriculum. Students who have participated in a significant learning classroom will share their thoughts on this type of learning environment.

Location L 211
Reframing Leadership, N. Karl Haden Ph.D.
Based on the work of Lee G. Bolman and Terrence E. Deal (*Reframing Organizations*, 4th ed., Jossey-Bass, 2008), participants will explore the application of "multiple frames" or modes of leadership: structural, political, human resource, and symbolic. The session will include a self-assessment of one's leadership style and a case study to apply the reframing model. Participants will learn to combine multiple frames into a comprehensive approach to organizational leadership. Specific learning objectives are as follows:
- Describe the model for multi-frame thinking
- Self-assess personal preferences for interpreting organizational issues and problems
- Discuss how reframing theory applies to leading change
- Apply the reframing model to a case study

Location L 1105 (Library Computer Lab)
* How To Make Formatting Citations Quick and Easy Using RefWorks, Megan Bresnahan, M.S.I., Konstantin Starikov, M.L.I.S.
When preparing to submit an article for publication, researchers frequently spend large amounts of time formatting citations. This effort is often frustrating, especially since many journals require very specific and idiosyncratic citation styles. This workshop is designed to teach participants how to use RefWorks, a bibliographic management program that is now available to all BU students, faculty and staff, to collect and manage their citations. Upon completion of the session, participants will be able to create and search citations within RefWorks, import citations from databases such as Ovid MEDLINE and PubMed, and automatically format citations in Microsoft Word.

Location R 108
Constructing Evaluation Rubrics When Assessing Student Learning and Conducting Faculty Searches, Deborah M. Fournier, Ph.D.

Faculty construct assessments to determine the extent to which students have learned or mastered some skill set. Faculty also construct assessments to determine the achievements of faculty when conducting, for example, searches for a department chair. Whether designing assessments for use with students or faculty, the aim is to make sure that they are fair and equitable. In assessing student learning, faculty use a variety of testing formats. Low-inference testing formats rely on correct answers that are the same for all students, thus easy for faculty to ensure fair and equitable grading— like the all familiar multiple choice question (MCQ) and multiple rating question (MRQ) tests. In contrast, high-inference testing formats have answers that may have important individual student differences and perspectives on what is deemed correct, thus varies for each student and presents faculty with a variety of challenges in ensuring fair and equitable assessment—like essays, papers, case reviews, literature critiques, oral presentations, lab reports, group work, portfolios, and even projects where assessing the different steps in the process are at least as important as assessing the final product. Similarly, faculty committee members who assess faculty candidates for a department chair position, for instance, are faced with the same issues when designing assessment protocols that might solely rely on a few open-ended questions regarding general strengths and limitations that are then synthesized into a high-inference assessment about the merit and worth of a faculty candidate—a pitfall that can be avoided.

One option available to faculty in dealing with the inherent variation in high-inference assessments is the design and use of Evaluation Rubrics. Evaluation Rubrics clearly map evidence of performance using criteria and standards that describe and distinguish exemplary from satisfactory and less satisfactory levels of performance and contributions. Working in small groups, individual participants will choose to construct one of two rubrics that focus on assessing either: 1) student learning or 2) faculty achievements in preparation for conducting a search for a department chair. At the end of the workshop, participants will be able to design a three-to-five level Evaluation Rubric. Participants will receive the 2005 book, Introduction to Rubrics: An Assessment Tool to Save Grading Time, Convey Effective Feedback, and Promote Student Learning [Stevens, DD & Levi, AJ], as well as a Resource Reader that can be used after the workshop so as to support additional self-directed learning with the concepts and techniques learned.

SESSION II   2:00-3:30 P.M.

Location L 213
Practice Based Teaching Innovations for Significant Learning, James Wolff M.D., Wayne La Morte M.D., Rob Schadt ED.M, Monita Burtch M.S., Katie Poirier, M.P.H.
See listing in SESSION I

Location L 211
Setting Goals, Setting the Stage, and Creating an Effective Teaching Environment, Miriam Hoffman, M.D., John Wiecha, M.D., Joanne Wilkinson, M.D.
Setting the stage (orientation meeting, discussion of expectations and goals etc.) is critical to having a successful learning experience, especially in clinical teaching. Effective learning environments are both challenging to and supportive of learners. In order to create an effective teaching environment, clinician educators need to understand at what developmental level their learner is ("diagnose your student").

In this workshop, participants will discuss and critique what makes a learning environment effective for both learner and teacher, will understand how to create a learning contract, and will understand how to "diagnose" their learners. Videos of physician/learner interactions will be viewed and critiqued to facilitate group discussion.

Location L 1110 (Library Computer Lab)
* Using Copyrighted Materials in Medical Education, David Flynn, M.S., Joseph Harzbecker, M.S.L.S, Kate Bronstad, M.S.I.S
Instructors have been using copyrighted materials in teaching for generations, yet questions still abound: How much of a textbook can be used in class? How should articles be cited? The Computer Age has introduced a new set of challenges, both technical and legal: Can I use this image in a presentation? Can I email this article to a colleague?   How can I share a video with my students? This workshop, presented by staff from the Alumni Medical Library, will provide a clearer understanding of copyright along with hands-on instruction on how to properly use these materials in Medical Education.

Location R 108
Beyond Slides: Digital Interactive Methods for Learner-Directed Teaching Kitt Shaffer, M.D.
Didactic delivery of information via digital slide presentations has many limitations, including linear access to images, inability to magnify/modify images on the fly, and time consumed in putting images into slide format. There must be a better way. There is, and in this workshop one such method will be demonstrated using a digital drawing and non-mirrored projection to allow the instructor to interact with images, and demonstrate the value of random access to cases/images based on learner needs. Participants will have the opportunity for hands-on experience with a variety of tools including a cordless tablet and cordless mouse.

* Indicates workshops that are not CME accredited

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

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, 21-22

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, 23-25

MEDICAL STUDENT SURVEY REGARDING OB/GYN CLERKSHIP EXPERIENCE 1

D.ARONS[1] J.ABBOTT[2], D.FADEN[3], O. VRAGOVIC[2]
[1]Department of Family Medicine, Boston University School of Medicine, Boston Medical Center,
[2]Department of Obstetrics and Gynecology, Boston University School of Medicine, Boston Medical Center
[3] Boston University School of Medicine, Class of 2010

Abortion is one of the most commonly performed procedures in the US. Yet fewer physicians are choosing to train to perform abortions.

Exposure to medical procedures during third year medical school required clerkships helps shape students' attitudes towards the importance of learning those procedures. If more medical students were exposed to abortion training during their clerkships, more would seek out residencies where such training was available.

The purpose of this study is to see what the effect of the existing abortion exposure during the third year ob/gyn clerkship has on their attitudes towards abortion.

We asked third year medical students to complete a survey about their attitudes towards abortion training before and after the ob/gyn clerkship. We evaluated the survey results to assess how much of an impact the exposure to abortion training had on their attitudes towards abortion training.

Statistical analysis was performed using SAS. Fisher exact test and Student t-test were utilized for analysis.

Findings: 76% of third year medical students strongly agree with the statement: "Abortion is an appropriate topic for education in medical school." The experience did not affect how many students identify as pro-choice. 90% of students felt that abortion care should be a part of women's health services, this did not change after the experience.   1/3rd of students would consider offering abortion in a future practice, this was not affected by the experience. 1/3rd of students would opt for residencies that incorporate abortion training in the curriculum.

The data point to students being more likely to consider offering abortion services in their future practices after the experience.

The goal is to continue surveying this population of medical students during their third year as well as consider surveying other medical student populations to see how the responses differ.

KNOWLEDGE, ATTITUDES, AND OPINIONS ON BIOTERRORISM PREPAREDNESS IN DENTAL   **2**
PROFESSIONALS: A COMPARATIVE STUDY   **(ORAL*)**

V. BHOOPATHI, S.MASHABI, T. SCOTT, A. MASCARENHAS
Division of Dental Public Health, Department of Health Services Policy and Research, Boston University
Goldman School of Dental Medicine

AIM: The aim of our study is to compare knowledge, attitudes, and opinions regarding bioterrorism
preparedness between dental professionals from a region that has been exposed to a bioterrorism event
(Oregon) with those from a region that has not been exposed (New England).
METHODS: An 18 item pre-tested, self-administered questionnaire was used to collect data during the
2005 Oregon Dental Conference (n=156) and 2005 Yankee Dental Conference (n=370). Means and
frequencies were calculated. Chi square and t-tests were performed.
RESULTS Over 90% of both the New England and Oregon Dental Professionals were willing to provide
care during bioterrorist events. The mean positive opinions regarding bioterrorism preparedness and
management were higher among New England professionals (11.5 ± 2.2) compared to Oregon
professionals (10.5 ± 2.8) (p<0.0001). Again, New England professionals had higher overall mean self –
perceived knowledge (14.7 ± 4.9) compared to Oregon professionals (12.0 ± 5.1) (p<0.0001). No
significant difference between the groups in the mean number of roles they thought the dental
professionals should play during an event was observed. Both groups had a very low mean actual
knowledge.
CONCLUSIONS: Both the New England and Oregon dental professionals were interested in providing
assistance during a bioterrorism event, but lacked knowledge regarding bioterrorism preparedness and
management, suggesting a need for more education and training on bioterrorism preparedness. New
England professionals, who had never been exposed to a bioterrorism event, had better opinions and
higher self–perceived knowledge than the Oregon professionals, who possibly had been exposed.
LEARNING OBJECTIVES
1) Identify the knowledge, attitudes and opinions regarding bioterrorism preparedness and
   management among a convenient sample of dental professionals
2) Compare the differences in knowledge, attitudes and opinions regarding bioterrorism preparedness
   and management between New England and Oregon dental professionals
*AWARD WINNING ABSTRACT – Will be presented by primary author after lunch

EVALUATING PROGRAM WHITE COAT A DENTAL PIPELINE PROGRAM FOR CHILDREN   **3**

C. BRADY[1], K. HELD[2], A.K. MASCARENHAS[3]
[1]Boston University Goldman School of Dental Medicine, Class of 2011, [2]Department of Extramural
Programs, Boston University Goldman School of Dental Medicine, [3]Director, Division of Dental Public
Health, Boston University Goldman School of Dental Medicine

Objectives: The number of minority dentists and students in dental schools is dramatically lower than the
percentage of minority citizens in the U.S. population. Since data shows that minority populations are
more likely to access care if the provider is from a minority group, attempts need to be made to
encourage more young people from these groups to consider dentistry and other health careers.   To
address this issue, several programs have been introduced that expose disadvantaged and under-
represented minority (URM) students to health careers; one such program at Boston University Goldman
School of Dental Medicine that targets middle-school children is Program White Coat (PWC). This week-
long program focuses on stimulating children's interest in health careers, particularly dentistry, at an early
age. The purpose of this study was to assess PWC's effectiveness in raising interest and knowledge in
the health professions. Methods: Children and their parents' awareness and knowledge in the
healthcare professions was assessed. Children that participated in the program in July 2008 were
evaluated using pre and post program surveys, journal entries, quizzes, and verbal interviews. To
evaluate the parents, they were surveyed at the end of the program. Results: Children that participated
were in grades 4-6. Analysis show that the children's general dental knowledge improved after the
program. In the pre-test, only 30% thought that bacteria caused cavities, but, 80% in the post-test said
that bacteria caused cavities. Similarly, 80% did not think acid caused cavities in the pre-test which
changed to 40% in the post-test. Seventy-one percent of parents were not aware of additional programs
for their children. Conclusion: Program White Coat has been successful in stimulating young minds
toward a career in the healthcare professions. It is recommended that more schools implement similar
programs to expose disadvantaged and URM students to health professions.

TEACHING TRANSITIONS OF CARE TO MEDICINE RESIDENTS: A POST- HOSPITALIZATION PATIENT VISIT

S. CHAO, A. MEDINA-WALPOLE, S.A. LEVINE
Geriatrics Section, Department of Medicine, Boston University School of Medicine and Boston Medical Center

Purpose: Medicine residents often design discharge plans for older hospitalized patients without full knowledge of the community agencies and services available to optimize post-acute hospitalization care plans. We describe a new teaching exercise at Boston University, adapted from University of Rochester's "Hospital to Home" program that engages internal medicine residents to reflect on key components of a successful patient transition from the hospital to the next site of care.

Description of Intervention: The central teaching moment is a home visit to a patient who was recently discharged from the hospital. BU internal medicine residents on the geriatrics ambulatory rotation choose a patient they cared for during their weekend coverage of the inpatient geriatrics teaching service. In addition to performing medication reconciliation, they conduct a structured interview of the patient and his/her family to assess their perspective of the discharge, using a tool adapted from the Care Transitions Measures. Residents also complete a questionnaire where they must describe ways in which they would have altered the original discharge plan to account for the patient's medical, psychosocial and functional needs.

Progress to Date: During this academic year, we anticipate that 16 internal medicine residents (2 per month from October 2008-June 2009) will complete the exercise. To assess whether the objectives of the exercise have been met, we will collect evaluation surveys from residents with questions related to self-efficacy in designing future discharge plans that target the medical, functional, and psychosocial factors impacting older patients' health outcomes.

Conclusions: A post-hospitalization patient visit is one method for teaching internal medicine residents the principles of systems-based practice crucial to successful transitions of care. By personally interviewing the patient about his/her post-hospitalization experience, medicine residents learn firsthand how community agencies and services can be utilized to achieve successful health outcomes following an acute hospitalization.

USE OF YOGA AS A STRESS-REDUCTION PROGRAM FOR MEDICAL STUDENTS AT BUSM

R.J. FEELEY[1], N. ROSELLI[1], M. A. GRODIN,[2] R. SAPER[3],
[1]Boston University School of Medicine class of 2012, [2] Boston University School of Public Health, [3]Department of Family Medicine, Boston University School of Medicine and Boston Medical Center

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.

THE USE OF PLASTINATED BRAIN CROSS-SECTIONS IMPROVES UNDERSTANDING OF THREE-DIMENSIONAL NEUROANATOMY.

S. J. GREENE, F. J. DALY, T. M. HOAGLAND, M. E. ESTEVEZ,
Department of Anatomy and Neurobiology, Boston University School of Medicine

The understanding of three-dimensional (3D) neuroanatomy can be challenging for medical students in their first year neuroscience course. This knowledge is crucial in order for students to make correlations between whole brain and cross-sectional neuroanatomy in this course, and to interpret radiological images in the future. The plastination of human tissue has been increasingly applied to provide high quality educational specimens for anatomical instruction. In this study, a plastinated coronally cross-sectioned brain was used to provide supplementary 3D instruction during optional small group sessions in the 2009 neuroscience course at Boston University School of Medicine. Each session included a pre-assessment quiz, discussion of relevant neuroanatomical structures visible in each plastinated section with reference to whole brain models, a post-assessment quiz, and a survey. The assessment quiz challenged students to transition between cross-sectional and whole brain images and to identify structures in unique dissections. Pre- and post-assessment quizzes were compared, and scores of students who attended (n=13) significantly improved from pre-to-post assessment (p<0.01). There were no group differences in final course grades or practical exam scores between students who did and did not attend these sessions. Survey responses indicate all students found these sessions to improve their 3D understanding of neuroanatomy and recommended their use in future years. Results suggest the use of these plastinated sections has great potential in facilitating 3D learning of neuroanatomy. Thus, these sessions will be repeated at the University of New England and in the upcoming year at Boston University School of Medicine with a larger sample size to evaluate the effectiveness of this pedagogical supplement.

AN INNOVATIVE MEDICAL STUDENT ORGANIZATION AS A PLATFORM TO INTEGRATE BUSINESS AWARENESS INTO MEDICAL EDUCATION

S. JAIN[1], B. SADIGHI[1], J.POLK [2], S. OBER[3]
[1] Boston University School of Medicine, Class of 2011, [2]Assistant Dean, Office of Student Affairs, [3] Director MD/MBA program Boston University School of Medicine

In the increasingly complex world of health care, medical education should incorporate business knowledge and skills to foster the physician leadership needed to overcome the non-clinical challenges facing medicine. We introduce an innovative program recently implemented at the BUSM, which employs the didactic model of a student run organization, advised and mentored directly by the MD/MBA program faculty, to dynamically engage medical students in understanding the business of health care. Through first-tier leadership roles in the steering committee of the joint-degree program, second-tier leadership positions on the various activity boards of the student organization, and educational and leadership development activities, the organization builds awareness in business matters at all levels of the medical student community. The organization serves to educate medical students on the crucial roles played by physician leaders and managers in health care delivery and financing, as well as the health system reform. The organization's first year of operations were directed by a survey of 220 medical students, which showed high levels of interest in leadership and management training. This varied by year within the medical school, with first year students demonstrating the highest levels of interest in most categories. In addition, 40% of all respondents said they had previously considered, or were actively evaluating, getting a MBA degree, in addition to the MD degree. Based on the survey results, the high attendance at events hosted by the student organization, and general positive feedback about this initiative, we conclude that exposure to business and management principles during medical school will be well received by medical students. We expect our organization to be a model for other medical schools looking to bring business awareness to their campuses, or other organizations looking for new ways to engage students and foster their interest in aspects of physician practice or health care.

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

LINKING FACULTY EXEMPLARS TO RESEARCH ON EFFECTIVE COLLEGE TEACHING BEHAVIORS

7

S. S. JOHNSON, M. F. GEORGE, K. M. FRANKE, L. SUDLESKY
Office of Educational Research and Evaluation, Boston University Goldman School of Dental Medicine

Curriculum management in medical education involves a course review and improvement process that relies, in part, on course evaluations. Meaningful course evaluations are purposefully designed to be data-driven at the Goldman School of Dental Medicine. This means that course evaluations are collaboratively designed with course directors to be linked to four sources of data: 1) Research on what is known to date about the characteristics of effective college teaching that are related to higher, positive student evaluations; 2) Curricular goals and objectives being pursued by the academic dean and curriculum committee; 3) Previous years' data from course evaluation reports; and 4) Specific needs and interests of individual course directors regarding modifications to existing instructional delivery such as the pilot testing of new teaching methods, application of new strategies, and/or experimenting with technology. This results in course evaluation surveys that include both standardized and tailored survey items/questions that are integrated with the needs and pursuits of both administrators and faculty, as well as educational research.

The poster will present an analysis of effective teaching behaviors based on dental student responses to predoctoral course evaluations. The analysis will compare and contrast dental school faculty behaviors with the various research frameworks in higher education using: 1) dental student ratings on standardized survey items that are linked to the research on effective college teaching (closed response sets) and 2) dental student comments related to courses with higher, positive evaluations (open response sets). Using Success Case Method, exemplars are used as models that illustrate effective teaching behaviors that can be used for enhancing efforts with faculty advising and mentoring, peer evaluation, new faculty orientation, faculty development and enrichment, academic portfolios, and curricular management (outputs and outcomes). These implications will be discussed.

INTEGRATION OF RADIOLOGY AND PATHOLOGY IN THE BUSM CURRICULUM

17

L. JOSEPH[1], E. RIVERA[2], C.O'HARA[1], K. SHAFFER[3]
[1]Department of Pathology and Laboratory Medicine, Boston University School of Medicine and Boston Medical Center, [2] Office of Medical Education, Boston University School of Medicine, [3]Department of Radiology, Boston University School of Medicine, Boston Medical Center

Statement of Problem or Question: Integration of Radiology and Pathology in BUSM curriculum
Objectives of Program/Intervention: In the clinical workup of a patient radiologists and pathologists are integral parts of the clinical team. In order to generate a sense of actual bedside scenario, the pathologists and radiologist developed study material that correlated radiologic and pathologic material.
Description of Program/Intervention: During the oncology block of the disease and therapy course, a gross pathology demonstration session was presented to the medical students in small group format. As the students rotated through stations that demonstrated specific gross pathology, appropriate radiologic images were presented to the students.
Methods: Organs discarded after surgical pathology study, or autopsy were collected by the pathology team over a one year period. Appropriate IRB approval and safety guidelines were followed and documented. Five gross stations that demonstrated malignant and benign were set up. Representative radiologic studies were provided for the students as they studied the gross pathology. Material from the radiology study were also posted for additional self study on course info site. The content for radiology study during this exercise will be used again during the third year radiology rotation.
Findings to date/Evaluation: Student evaluations are positive and supportive of such efforts. One student stated "This week's path lab on ovarian, testicular, and various other cancers was excellent"
Key Lessons Learned: This is a viable integration strategy as we try to develop the relevance of curricular content for the medical students in their preclinical years.
Questions / Future directions: Additional integration process with gross anatomy and small case study vignette development are underway. We are developing tools to evaluate the effectiveness of such strategies.

VERTICAL INTEGRATION OF PATHOLOGY, GROSS ANATOMY AND HISTOLOGY 18

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Introduction:The BUSM 2 curriculum underwent a major revision this year. This included integration of several preexisting courses into a single course called "Disease and Therapy" based on organ system blocks. The innovation described here is an early outcome of collaboration among course managers to bring context and relevance of an integrated approach of curriculum planning.
Specific strategies:
For BUSM 1 students
The Gross Anatomy course includes extensive cadaver dissection in their fall semester. During this course, the pathology team from the Disease and Therapy course demonstrated relevant abnormal gross pathology depending on the organ system that the BUSM 1 students are studying.
Continuing with this intervention, during the histology course in the spring, the pathology team will demonstrate abnormal microscopic pathology. The Pathology team thereby demonstrates the relevance of the normal histological features as well as introduces students to concepts they will reencounter in their second year.
For BUSM 2 students
As the students study organ system in the Disease and Therapy course, the pathology team demonstrated the same gross and histologic material that the students had seen in their first year while studying the normal structure in Gross Anatomy and Histology. In Pathology lab exercises, when the students are studying abnormal structure, the students are provided a link to the virtual microscopy slide that they studied in detail in histology. In addition, powerpoint slides used by faculty in BUSM 1 are deliberately included in the BUSM 2 lecture so that the students can recall both the facts and the context.
Outcomes:This is the first year of implementation. Feedback from the students and faculty has been very positive. The team is trying to evaluate measurable tools that will evaluate outcomes. Ongoing efforts to generate case based vignettes and organ demonstrations are being planned.

INCORPORATING RADIOLOGICAL IMAGES INTO MEDICAL GROSS ANATOMY AND ITS 8
EFFICACY IN LEARNING SPATIAL RELATIONSHIPS.

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Radiological imaging depicts anatomical structures and the spatial relationships among them. Visual-spatial ability (VSA), the ability to mentally manipulate objects in 3D, is an important skill for medical students to acquire in order to apply their anatomical knowledge in a clinical setting. To date, no studies have investigated the effect of incorporating cadaver-specific CT scans in the gross anatomy lab and its impact on student learning and the development of VSA. We hypothesized that the use of CT scans would be positively associated with higher practical exam scores and increases in VSA. We also hypothesize that students' VSA would be associated with performance on practical exams. 183 first year medical students were provided with cadaver CT scans, and students were given the opportunity to choose how much time to spend using the images. VSA was assessed by the Mental Rotations Test (MRT) administered during orientation and at the end of the course. Average MRT scores increased significantly from 27.2 to 32.8 ($p<0.0001$). Use of the CT scans was associated with performance on visual practical exam questions, specifically cross sections and CT scans. Students who used the CT scans were 2.4 times (95% CI 1.0, 5.5) more likely than those who did not to answer >90% of all visual questions correctly, and 2.8 times (95% CI 1.0, 7.3) more likely to receive a grade >90% in gross anatomy. Students scoring in the highest MRT quartile were 2.7 times (95% CI 1.3, 5.3) more likely than those in the lowest quartile to score >90% on all practical exams. Data show that initial MRT scores are predictive of overall student performance in gross anatomy. The data also suggest that an early intervention to encourage the use of the radiographic images may be important for students with low VSA upon matriculation.

WHAT DO EARLY CAREER FACULTY NEED IN A DEVELOPMENT PROGRAM IN MEDICAL EDUCATION?   9

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<u>Statement of Problem</u>: Early career faculty usually have excellent training in research or clinical practice, but they often have very little training in teaching and rely on their personal experience from their medical education as a guide to fulfill their teaching roles.

<u>Objective of the study</u>: To implement a faculty development program in medical education for early career medical school faculty.

Description of Study and Methods: Phase one asked early career faculty in our institution to identify themselves and their faculty development needs in an anonymous, online IRB-approved survey of ten multiple-choice and four short-answer items. In Phase two, the top survey-selected topics became live and online workshops. Workshop data collected the number of participants, their departments, and evaluations.

<u>Findings to Date</u>: Volunteer Survey participants (N=80) represent 86% of the medical school departments, teach 49% at the undergraduate level and 70% at the graduate level, and 50% participate in clinical patient care and 21% in clinical research. Major barriers preventing faculty from achieving their educational goals are clinical responsibilities, lack of specific guidelines for academic advancement, and lack of formal training in education and educating adult learners.

The implemented two-hour workshops were mentoring, teaching evidence based medicine, and interactive lecturing. Workshop attendance was 38 participants from 12/20 medical school departments. Evaluations showed workshops met the learning objectives and had clear presentations, but topics needed more time. The 24/7 online workshop on small group teaching awards a completion certificate, yet few faculty accessed it.

<u>Key Lessons Learned</u>: The results indicate that while early career faculty express an interest in teaching, they need dedicated time and incentive to attend faculty development programs in medical education.

<u>Future Directions</u>: Phase three will investigate different ways that early career faculty can be awarded time and promotional points for attending faculty development programs in medical education.

EVALUATING A CULTURAL COMPETENCY CURRICULUM IN DENTISTRY   10

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The demographics of the US population are changing rapidly. Therefore it is important to train dentists that can treat this diverse population. One way is to prepare culturally competent clinicians by including a curriculum in cultural competency in their dental curriculum which several schools have done. Boston University Goldman School of Dental Medicine is one such school. Aim: To evaluate the cultural competency didactic curriculum taken by dental students. Methods: The study design was a pre and post study design. The survey instrument previously used with pharmacy students was adapted for use with dental students. The questionnaire has 11 items designed to evaluate increase in awareness (2), knowledge (3), and skills (6) on a Likert scale. The survey was administered at freshman orientation or before the first lecture presentation on cultural competency and then after the entire didactic curriculum was delivered. Data was collected for 2 classes – DMD Class of 2009 and 2010. Data was entered using Epi Info, and analyzed using SAS taking into account the paired study design. Results: The pre curriculum mean±sd overall cultural competency and mean±sd sub-scores for awareness, knowledge, and skills was 25.8±6.5, 5.4±1.5, 6.7±1.9, and 13.4±4.3, respectively. The post curriculum mean±sd overall, awareness, knowledge, and skills was 30.0±7.2, 5.6±1.5, 8.2±2.1, and 16.3±4.4 respectively. The overall, knowledge, and skills post scores were statistically significantly higher ($p<0.0001$) than the pre scores except for awareness. There were no differences seen between the two DMD classes. Conclusion: The cultural competency curriculum at Boston University School of Dental Medicine exposes students to overall cultural competency, and increases cultural competency knowledge and skills of dental students.

SIMULATING SERVICE INTEGRATION IN PUBLIC HEALTH: A CLASSROOM ROLE-PLAY 16

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This simulation demonstrates the complex nature of integrated approaches to public health service delivery, particularly low-resource settings. The Immunization and Bed Net Distribution Exercise was performed in a 2.5-hour, graduate-level class, during a public health training session on malaria and immunization interventions for developing countries. The exercise was a simple test of three types of program integration:
-       Direct Distribution of Insecticide-Treated Bed Nets (ITNs) at the time of immunization
-       Distribution of a voucher at the time of immunization to procure a free ITN at another location
-       Health education and promotion of ITN benefits (without direct distribution or vouchers for ITNs) at the time of immunization.
This exercise innovatively illustrates that, even in a small, highly controlled environment (such as a public health training session) of health-minded individuals with graduate-level education, integrated programming can be challenging. After the simulation was over, students were debriefed and given the full details of the simulation.
Simulation forces students to think beyond 'perfect-world' situations when designing and promoting health programs. By providing a hands-on, real-time demonstration of how different types of programming may be successful or unsuccessful, this exercise reinforces basic classroom learning and training session materials. Students are placed in the position of their clients and learn firsthand how different types of approaches to public health may or may not meet their needs and the needs of their fellow citizens. Although this simulation was geared toward public health students (undergraduates and graduate/doctoral students), the exercise is appropriate for non-student public health professionals, training groups, and health-affiliated personnel who participate in service programming and delivery. This exercise can be adapted to meet the needs of other courses, larger training sessions, other methods of integration and other types of health services; the key lessons are in the students' roles and interactions as the community.

THE INFLUENCE OF THE GROSS ANATOMY EXPERIENCE ON PROFESSIONALISM ATTITUDES OF FIRST YEAR MEDICAL STUDENTS 19

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Purpose: This study investigated what professionalism attitudes, if any, changed over the duration of a gross anatomy course that emphasized cadaveric dissection. Additionally factors such as identity and preparation for medical school were correlated with change in professionalism attitudes to determine their influence.
Methods: The authors conducted a cross-sectional time-one (T1; beginning of the course), time-two (T2; end of the course) study using a verified psychometric instrument to survey students. A Mann Whitney U test was used to compare the two samples and among subsamples defined by four different parameters relevant to student identity and preparation.
Results: We found a reordering of professionalism attitudes in favor of altruism (p=0.04 with a Cohen's d=0.26) at T2. Female students and students from a science background were the most influenced. Interestingly, while several factors correlated with dissimilarities in professionalism values at T1, gender was the only factor to show a significant difference in professionalism attitudes at T2.
Conclusions: This cohort reassigned greater value to altruism as a professionalism attitude at the conclusion of the gross anatomy course. The demographic groups that seemed to benefit the most were females and students with a science background. In this study, gender appears to influence dissimilarities in professionalism attitudes more than any other parameter.

BRIDGE BRIDGES AND DEMOLISHING SILOS: A TRANSDISCIPLINARY SERVICE-LEARNING OPPORTUNITY BETWEEN BOSTON UNIVERSITY AND THE CODMAN SQUARE COMMUNITY

11

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Fragmentation of services is a root cause of disparities in the U.S. This transdisciplinary service-learning opportunity for graduate students at Boston University enhances bridges across disciplines and between academia and communities served by affiliated programs. As a service-learning program, didactic sessions are coupled with service actions. As a transdisciplinary program, inclusion of the community minimizes service gaps and duplication. By harnessing underutilized social and professional networks, we enhance graduate education and improve the quality of services for community residents, yielding a larger return on investment. In January 2009, a Transdisciplinary Social Impact Team of six graduate students (law, education, medicine, and public health), faculty, residents of the Franklin Field Apartments, and employees of DotWell, was assembled. Weekly meetings included service and curricula focused on improving the fiscal health of Franklin Field residents. Service "successes" ranged from facilitating medical appointments, creating plans to improve eating habits, advising a resident on college applications, and liaising with the Department of Mental Retardation. Students described increased understanding of allied sectors and demonstrated increased teamwork. We have determined that a transdisciplinary approach reduces service fragmentation and contextualizes education to improve the quality of training; leadership training for students and community residents enhances human and social capital. The program addresses key gaps in training future professionals to improve the fragmented nature of healthcare by coupling practical leadership training with field service and developing the capital useful for systemic reform. Whereas the current model views students as "clients" for BU's educational services and residents as "clients" for community organizations' services, this program formally links these traditionally distinct groups with students becoming advocacy service providers and residents become student educators; the capacity of students and residents to be leaders in their communities is also enhanced. We are currently exploring integration of this program into formal curricula.

NEIGHBORHOOD TOURS AND CULTURAL COMPETENCE EDUCATION: A PHYSICAL INTRODUCTION TO BOSTON UNIVERSITY MEDICAL CENTER'S PATIENT POPULATION

12

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At academic medical centers, members of racial and ethnic minority groups are over-represented as patients, but under-represented as students and faculty. Interactions between trainees and these individuals are largely confined to clinical visits. In 2000, 87% of U.S. medical schools addressed preclinical cultural competence in three or fewer passive lectures. Many assume that proximity to diversity is sufficient education in cross-cultural medicine. Student responses to the 2004 Graduation Questionnaire cited the diversity of Boston University School of Medicine's patient population and clinical exposure as major strengths. Still, many fourth-year students report no previous contact with the neighborhoods in which their patients live, study, work, play, and worship; some express discomfort when visiting these areas. In 2007 we provided first-year students with a physical introduction to communities served by Boston University Medical Center. Buses have two faculty leaders, one student guide, and 25% of the first-year class, touring prominent landmarks and a Boston HealthNet community health center (CHC). Narratives are carefully scripted to entertain, educate, reassure, and invite further exploration. Student feedback has been positive: "tours are a wonderful opportunity to see places I would otherwise never visit;" "learning about CHCs is fantastic." Other feedback suggests the need for expansion: "more time at CHCs;" "experience should be longer;" "we should have more interaction and more walking." Future Neighborhood Tours should be full-day experiences, perhaps including team-building exercises to foster introspection and dialogue, presentation of community-based student projects, lunch in a neighborhood restaurant with community members, and a debriefing session. Educational goals include increased comfort with and access to communities served, willingness to revisit these neighborhoods, and appreciation of the historic role of Boston's CHC system. We will also conduct a retrospective survey of the class of 2012, examining the impact of the tour after one year of clinical experience.

THE STUDENT WORKING GROUP ON CULTURALLY COMPETENT MEDICAL EDUCATION: 13
AN INTRODUCTION TO BIAS, POWER, AND ISSUES OF CULTURAL COMPETENCE IN MEDICINE

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The goal of Boston University School of Medicine (BUSM) is to train physicians able to provide optimal care "to every patient from all communities in our diverse society." With an exceptional patient population and commitment to underserved communities, BUSM has a unique opportunity to become a leader in cultural competence education. Student initiatives focus on examining bias and stereotyping, disseminating a life-long commitment to cultural competence, and creating safe spaces for discussing these topics.Our efforts include an annual workshop to demonstrate that cross-cultural interactions are not limited to race or differing approaches to healthcare, that all aspects of culture contribute to the efficacy of the patient-provider relationship, and that self-assessment and critical analysis comprise the first steps in providing culturally competent care. Coordinated workshop activities and small-group discussions promote self-awareness and group understanding, as well as exposure to individuals performing various roles in healthcare. Advertising is deliberately interactive, with the creation and publication of case discussions of successful and poor cross-cultural interactions. Viral education is enhanced by recruiting and training 'facilitators' from co-sponsoring student organizations; each facilitator develops the skills necessary to perpetuate discussion of cultural competence. This workshop is followed by our ToolKit series - focused discussions on specific topics providing an otherwise unattainable depth of exposure and understanding. These efforts have been well-received by students, faculty, and staff: "This should be MANDATORY for professors and students...More focus should be on other populations, not just African Americans. Many of the discussions at BUSM focus on African Americans and Whites [but we] treat all populations." Students attending one ToolKit event self-reported being very likely to attend others (4.6/5; n=32). In the future, we will work to empower other student organizations to develop and host ToolKit events, further increasing the cohort of individuals discussing these topics at BUSM.

A PROSPECTIVE DIABETES KNOWLEDGE ASSESSMENT OF INTERNAL MEDICINE RESIDENTS

14

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Objective: To assess the diabetes knowledge of Internal Medicine Residents (IMR) and evaluate the effectiveness of diabetes education at Boston Medical Center (BMC).

Methods: A previously published diabetes knowledge questionnaire was given to BMC IMR at the beginning and end of the 2007-2008 academic year. As a control, the questionnaire was given to medicine ward attendings once. Of the 20 items, 18 relate to inpatient diabetes. Because IMR training is predominately inpatient and 26% of inpatients at BMC have diabetes, education focused on inpatient topics. The education intervention included pocket cards, insulin order sets, teaching ward rounds, and lectures. Education was provided to all IMR, however, teaching was targeted to the Post-Graduate Year(PGY)1 IMR.

Results: Of the 91 IMR who participated, 85 returned ≥ 1 completed survey (response rate 95%). The responding 40 PGY1, 22 PGY2, and 23 PGY3 IMR were similar in all characteristics recorded, including sex, age, clinical training track, and rotations with Endocrinology. PGY3 IMR scored 72%±10 and PGY2 IMR scored 72%±8, both of which were significantly greater than the PGY1 score of 62%±12 ($p=0.004$ and $p=0.006$). IMR post-test scores were not significantly higher than pre-test scores. Of the 25 attendings who participated, 22 (88%) returned completed surveys. The mean attending score of 67%±13 was not significantly different from the IMR scores.

Conclusions: Diabetes education targeted at PGY1 IMR improves diabetes knowledge, however knowledge appears to plateau at the PGY2 level. This plateau, which persists at the attending level, suggests diabetes knowledge does not improve beyond residency despite the high prevalence of this disease. Furthermore, our traditional, multi-faceted educational intervention failed to produce adequate knowledge, indicating a need for more creative instructional solutions. Continued diabetes education is needed at all levels to provide optimal care.

SPACED EDUCATION: REINFORCEMENT OF TEACHING THROUGH REPETITION USING A WEB-BASED DELIVERY SYSTEM AND ADAPTIVE LEARNING TECHNOLOGY

21

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Problem: Delivery of information in short-term intensive didactic instruction may be of limited value due to limited retention. If information is not used repeatedly, it is not remembered.

Objective: To deliver information in a repetitive way that may lead to better retention over the long term. In order to make this delivery palatable, information will be given in small packets via email using infrastructure that is adaptive to learners performance.

Methods: Study population will include residents in the Radiology program at BMC. A curriculum in chest imaging will be developed using the Spaced Education website. This infrastructure allows emailing of questions and explanations over defined intervals, tracking each participant's performance and retiring questions only after a learner has answered them correctly twice in succession. Pre-test and post-test will be performed to assess initial learning. Followup testing will also be performed to assess long-term retention.

Findings: Residents enjoy receiving information via email, and find this method preferable to other didactic delivery methods. Image quality, including single image and movie clips, is excellent, and illustrates the findings for teaching well. Residents state that they would be willing to enroll in other Spaced Education programs in the future. Residents state that receiving information using this method has enhanced their learning during didactic sessions in this topic area (thoracic imaging) due to their familiarity with terms and concepts.

Key Lessons Learned: Delivery of information in a repeated format and in small packets using email is practical and effective and is enjoyed by learners.

Future Directions: Additional long-term validation of retained knowledge is needed. This methodology could also be applied to Continuing Medical Education and maintenance of certification.

PRACTICE BASED TEACHING INNOVATIONS FOR SIGNIFICANT LEARNING IN INTERNATIONAL PUBLIC HEALTH

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STATEMENT OF PROBLEM/QUESTION: Practice based instruction uses teaching methods that enable the learner to apply and integrate basic knowledge and skills ultimately promoting and encouraging student engagement. This paper examines our efforts to create a significant learning environment where our public health students take charge of the learning process and tap into their own internal desire to learn and master the materials.

OBJECTIVES: To evaluate classroom innovations in IH 887 Planning and Managing MCH Programs in Developing Countries that create a student driven, practice based significant learning environment for Public Health students to learn necessary skills for their International Health careers.

DESCRIPTION: To engage students in practice based learning, we designed three teaching innovations:

   Electronic Textbook: Created by students for the class and updated annually.

   Technical Workshops: In groups of 2 or 3, students design, prepare, and conduct two and a half hour interactive training session that simulate professional settings common to international public health such as village health worker training, consultant workshop, or international conference.

   Grants Committee Proposal: Students work in teams to develop, submit, and present a program grant proposal in response to an RFP issued by an external grants committee based at Management Sciences for Health in Cambridge.

METHODS: A qualitative analysis of student course evaluations, reflective writings, and 10 semi-structured interviews conducted with randomly selected students from the Fall 2009 class was performed using NVIVO. Themes were analyzed using Dee Fink's Taxonomy of Significant Learning.

FINDINGS: Applicability of materials to the real-world of International Public Health, focus on encouragement and feedback rather than grades, engagement of professors with subject and student learning process, the experience of teamwork and peer to peer learning, and learning new things about themselves and others were the most important factors in creating significant learning.

Educational Technology

INTERNATIONAL VIDEOCONFERENCE PROGRAM FOR FACULTY DEVELOPMENT IN FAMILY MEDICINE

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23
(ORAL*)

Problem Family Medicine (FM) is a relatively new medical specialty in Vietnam and the centerpiece of a nationwide plan for building infrastructure in primary care. To support academic training programs in FM, new academic faculty need further training in this discipline. Videoconferencing may be a valuable method for providing such training internationally.

Objectives We implemented an international videoconferencing program for academic development in FM, designed to prepare physicians to teach FM in their home academic institutions in Vietnam. Upon completion, participants should be able to understand the principles and practice of FM in academic settings and prepare curricular content for FM postgraduate educational programs in Vietnam.

Description and Methods Our videoconference course is being held between BU and two academic institutions in Vietnam. Our program includes didactic lectures, follow up discussions, and a curriculum development project. The course is being offered through June 2009, with face-to-face sessions in Vietnam at the beginning, mid-point, and conclusion.

Evaluation We will share preliminary results of pre- and post-tests as well as evaluations of each module for both content and videoconferencing technology. We will outline our curriculum and highlight barriers and successes in the development of our videoconferencing program. Preliminary results from an early module suggest students have some positive experience with videoconferencing, averaging 4.3 on a 5 point Likert scale in agreement with the statement "I would enroll in another course using videoconferencing technology."

Key Lessons While videoconferencing has allowed us to successfully implement a longitudinal curriculum with international sites, we have encountered several barriers. Videoconferencing using IP seems to suffer significant video and audio delays, apparently related to local internet congestion.

Questions Videoconferencing may be an important method for providing international academic faculty development programs, however, further strategies should be devised to optimize use of current technology.

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

INTERACTIVE CASE-BASED TEACHING MODULES FOR THE MEDICAL STUDENT CURRICULUM IN DERMATOLOGY 24

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Background: Approximately 7% of adult outpatients present with a primary skin complaint, and 60% of outpatient visits for skin disease are made to non-dermatologists. However, exposure to dermatology during medical school is limited. Computer-assisted instruction has been found to be as effective as traditional lecture in teaching dermatologic morphology. Therefore, our goal was to develop a case-based, online instructional tool for the medical student curriculum in dermatology. The purpose of this module is to help students develop a clinical approach to the evaluation and initial management of patients presenting with suspicious growths, particularly basal cell carcinoma.

By completing this module, medical students should achieve the following objectives:
1. Develop a practical clinical approach to patients presenting with a suspicious growth.
2. Describe morphologic features of suspicious growths.
3. Formulate a differential diagnosis based on history and physical findings.
4. Examine the histopathology of skin biopsy specimens.
5. Initiate appropriate workup and initial treatment for suspicious growths.

Description: In this case, a 62-year-old gentleman presents with a facial growth. As students navigate through the module, they are presented with various decision branch points in the care of this patient. Based on these decisions, students may follow a variety of sequences. In this way, the module more closely mimics a true clinical experience as students are able to see the consequences of their clinical decision making. A brief summary of key points on the clinical topic can be reviewed at the end of the module. Cases will serve as a supplement to traditional lecture and clinical teaching.

Methods: Case modules were created with Microsoft PowerPoint 2007.

Findings to date / Key lessons learned: Creating interactive clinical case modules for medical student education in dermatology is feasible.

Future directions: We plan to use online pre- and post-assessments to evaluate the effectiveness of this module.

PROMOTING STUDENT SCHOLARSHIP: A WEB-BASED PEER-REVIEWED EDUCATIONAL RESOURCE 20

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PurposeTo create a peer review open source website for clinical anatomy education developed by students for students.

Background:Fourth year medical students enrolled in the Teaching in Anatomy elective serve as prosectors in the BUSM gross anatomy course. Their clinical experience combined with the opportunity to revisit anatomy creates fresh insight into the clinical relevance of anatomy. Writing a case study for educational purposes allows them to:
1. Engage in the scholarly process
2. Synthesize their clinical experience and anatomical knowledge
3. Share this knowledge with first year medical students

Methods:During the elective students developed a case study in an area of interest.They presented cases to one another and submitted text and images to be reviewed and published as a web-based clinical anatomy educational module. A domain and web site have been established as an open educational resource.

Lessons Learned:Students have remarkable resources for developing educational materials. Doing scholarly work is more enjoyable than students often perceive. Students need some facilitation to be successful in the scholarly process.

Questions: How can we evaluate the effectiveness of these case modules? How do we recruit clinical faculty to help review cases? Would this open resource be of value in resource limited educational settings? How will we connect students with this resource? How do we balance quality information with the desire to be an open source?

MAKE IT FUN: USE OF AUDIENCE RESPONSE TO CREATE AN INTERACTIVE COURSE REVIEW

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At BUSM the Ob/Gyn required clinical clerkship is a 6 week course. Although the curriculum addresses major subject topics; it does not cover all aspects of the subject matter equally. We have created an interactive course review allowing students to participate in a self assessment in a fun and supportive environment.

Educational objectives: At the end of the board review session the BUSM III student is able to:

- Assess their knowledge base on the subject matter covered during the course.
- Discover areas of information that need targeted studying.
- Review areas of the curriculum where our students typically perform at less than the national average on the shelf exam.
- Participate in an interactive self evaluation in a game format

The material to be covered during the board review comes from an annual key word analysis report by the clerkship coordinator. Through this analysis all questions where our students scored below the 65th national percentile are identified. After all key word analyses have been reviewed; the coordinator goes to test prep materials and creates the PowerPoint or TurningPoint presentation that will be used for that academic year. The clerkship director then reviews the questions to be sure that they are appropriate for the level of training of a third year medical student at BUSM.

This innovative method of teaching can be used in any class. Using Turning Point enables monitoring students' performance on an individual level and in groups. The course directors, in addition to tracking students' mastery of the materials, can identify areas with full class comprehension of each subject allowing appropriate use of time during the review to focus teaching to those areas that need it most. This method is also fairly easy to create, use and implement into any course.

TEACHING AWARD RECIPIENTS 2008-2009

Elizabeth Whitney, Ph.D., Boston University School of Medicine, Department of Anatomy and Neurobiology
Proctor & Gamble Award for Excellence in Teaching Basic Sciences, Boston University School of Medicine

Johanne E. Dillon, M.D., Boston University School of Medicine, Department of Radiology
Committee on Faculty Affairs Educator of the Year Award for Clinical Sciences, Boston University School of Medicine

Judith Bernstein, Ph.D., Boston University School of Public Health, Department of Community Health Sciences
Norman A. Scotch Award for Excellence in Teaching, Boston University School of Public Health

Robert C. Lowe, M.D., Boston University School of Medicine, Department of Medicine
Committee on Faculty Affairs Educator of the Year Award for Preclinical Sciences, Boston University School of Medicine

Karen Symes, Ph.D., Boston University School of Medicine, Department of Biochemistry
Stanley L. Robbins Award for Excellence in Teaching, Boston University School of Medicine

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

Steven Roberts, D.M.D., Boston University School of Dental Medicine, Department of General Dentistry
Spencer N. Frankl Award for Excellence in Teaching, Boston University School of Dental Medicine

Jori A. Berger-Greenstein, Ph.D., Boston University School of Medicine, Department of Mental Health and Behavioral Medicine
Committee on Faculty Affairs Educator of the Year Award for Graduate Medical 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 4.25 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

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.

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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