

In this issue...

2

Innovations in
Education Grant

3

Student Spotlight:
Michael Kwak, M'13

4

IDEAS in Medicine
MMC Rural Training
Grant

5

Faculty Focus:
Laurence Bailen, MD

6

Faculty Journal Club
Teaching Tips

Editors:

Ann Maderer &
Scott Epstein, MD

O&A is published five times a year
by the OEA. We welcome your
feedback and ideas for future
articles.

Please direct your comments to
Ann Maderer by phone
617-636-2191, or email,
ann.maderer@tufts.edu.

View from the TUSM Clinical Skills and Simulation Center

by Christopher McNeal
Medical Simulation Specialist

Medical education is increasingly focused on achieving competency in clinical skills and diagnostic reasoning, emphasizing approaches that enhance patient safety and the quality of care. The challenge of achieving these goals is greater than ever given the changes in the clinical settings. A demand for increased clinical productivity by faculty, work-hour limitations on residents, and shorter in-patient stays all challenge traditional methods of teaching medical students. As a result, some medical students encounter difficulties applying what they have learned in the classroom to the clinical care of patients. Simulation technology is helping link student training with clinical experience – and, based upon student feedback, it is having a positive impact on the way students acquire new skills.



At the Tufts University School of Medicine Clinical Skills and Simulation Center (TUSM-CSSC) students are thrust into a myriad of mock clinical situations where they treat robotic patients (mannequins). Students critique themselves and identify areas in need of improvement. These simulated cases mimic actual clinical situations, ranging from the simplest and most common to the rarest and most complex.

These learning opportunities couldn't be realized without faculty members like Matthew Trokel, MD, Director of Pediatric Mock Code Simulation and Assistant Professor of Emergency Medicine. His dedication is illustrated in the detailed mock scenarios he

writes and the enthusiasm exhibited through his active participation in them. Below, Dr. Trokel, shares his reasons for using simulation to teach, his vision, and the feedback he's received.

Have you found any benefits to teaching in the Simulation Center vs. the traditional methods?

Simulation's main strength lies in the degree of engagement by the participants. During a simulation, I often see medical students sitting on the edge of their chair, calling out changes in vital signs that other students did not notice. I can safely estimate 20% or so of any given audience in a lecture appears distracted and not apparently focused on the (CSSC, continued on page two)

CSSC continued from page one

topic at hand. With simulation, I have found each and every student is concentrating on the case. A lecture provides passive absorption of information by the listener, while simulation is an active engagement by the participant. Given the same information, students walk away from a simulation recalling much more than a typical lecture.

What is your vision for the simulation's use in future pediatric clerkship programs?

I believe simulation will most likely be incorporated into more rotations at Tufts. I am responsible for the pediatric simulations and already we are attempting to add simulation into fourth-year electives and other pediatric activities.

What type of feedback have you received from the students?

The main comment I get after a simulation course is “when can I come back?” Nearly all the third-year students told me the pediatric simulation is an excellent teaching modality and I know of at least one instance where the dean of the medical school was told by a student they need more simulation in their curriculum.

What are your recommendations to other faculty interested in using simulation?



Matthew Trokel, MD

If you have any interest at all then you should come to the simulation center and watch a simulation. Each session is unique with distinct educational goals with different levels of participants, from medical students to attending physicians. Try to match the session you observe with your own teaching goals.

Students rotating at the Floating Hospital for Children share thoughts about their third-year Pediatric Clerkship simulation experience:

“Wonderfully and effectively taught. Dr. Trokel had enthusiasm and salient teaching points.”

“Hearing breath sounds on a ‘live’ baby that were manipulated according to our learning objectives was priceless. We were in the moment, taking action, and best of all, learning actively from our real mistakes on a not-so-real patient”

“The use of direct, immediate feedback set this exercise apart from other teaching methods. This allowed us to think through a clinical problem, make some clinical judgments and learn how to manage each case appropriately.”

“It was challenging in the fact we had to come up with a definitive diagnosis on the spot and treat accordingly. Also that the patient’s status changed with time and treatment; making us have to continually change our plan.”

2011 Innovations in Education Grant – Call for Proposals

Dean Harris Berman, invites proposals for the Innovations in Education Intramural Grant Program. This program, now in its seventh year, is designed to promote and support teaching innovations developed by our faculty that will enhance the core educational programs and overall mission of Tufts University School of Medicine (TUSM), including the Sackler School of Graduate Biomedical Sciences.

For more information, please see: <http://www.tufts.edu/med/about/faculty/educationalgrants/overview/>

Important Deadlines:

Letter of Intent: **December 30, 2010**

Final application: **January 31, 2011**

Awards will be announced the first week of March for the funding period to begin July 1, 2011.

For more info please contact: Ann Maderer (ann.maderer@tufts.edu).

Student Spotlight: Michael Kwak, M'13

Students have served as MERC and Curriculum Representatives for many years at TUSM. As one such student your role has been unique as the Class of 2013 is the first to experience the new TUSM curriculum. What have some of the challenges been as you served in this role? How have students in general helped shaped the process of refining the curriculum?

As a student, one of the things I appreciate most about our educational experience here at Tufts is the strong emphasis that the school places on both soliciting and utilizing student feedback. By encouraging us to voice our concerns and play a more active role in our learning, Tufts does a great job of investing us in our education and making us happy students. In addition to serving as MERC Representatives, I've seen many of my classmates find different ways to get involved with the educational process. Whether it's editing and rewriting syllabi for first-year courses, creating online CSL modules, or providing detailed feedback through both formal and informal communication, students play many important roles in the shaping of the new curriculum.

All things considered, I think that the medical school did a great job rolling out the new systems-based curriculum. Our class definitely ran into some problems our first year, but the open lines of communication between students and the faculty not only ensured that everyone's concerns were heard, but that most were addressed quickly and effectively.

My classmates will sometimes comment on how disheartening it must be to be a curriculum rep, as my job is to be the "liaison of bad news." Granted that is in the job description, but I think what they fail to see is all the hard work that the people on MERC and the curriculum committee put in, and that all that "bad news" is just a part of the process of making things better.

You came to the class of 2013 via the Masters in Biomedical Sciences program. How do you think that has (or has it) changed your perspective on the first two years of medical school?

I actually attribute a great deal of my success (and sanity) in my first year to having been in the MBS program. Many of the courses in the program mirror those found in the first year medical school curriculum, and so last year when many of my classmates were cramming before biochemistry exams, I was able to just study comfortably using my old notes. This allowed me time to focus a lot more on the clinical correlations of the material we were learning, rather than just memorizing details of pathways.

But more than my experience from MBS, I think much of my perspective on education this past year has been influenced by the environment created by the medical school. Unlike the MBS program, in which we were competing for grades, the medical school fosters a very strong culture of collaboration and support among its students by

eliminating grades and class rankings in its preclinical courses. I think that, more than anything, has helped me find a good work-life balance and develop sustainable study habits.



Tell us how you spent your summer between first and second year.

I spent much of this past summer training incoming high school science teachers in Los Angeles. Before medical school, I taught high school life science for three years through Teach For America, and I wanted to use my experience to help new teachers become successful leaders in their classrooms. The eight teachers I worked with this summer are currently teaching in inner-city schools throughout California, (continued on page four)

(continued from page three)

impacting the lives of over 1,200 students.

I believe that if we really want to change healthcare delivery in underserved communities that

change has to come from within. That means inspiring students from those communities to become healthcare professionals and policymakers, while at the same time catching them up academically

with their peers in more affluent neighborhoods. It's a tall order, but if we can get even one of those students to become a doctor, that's a big step in the right direction.

Rural Training Grant to Bring MMC-TUSM Medical Students to Rural Maine

Maine Medical Center – Tufts University School of Medicine (MMC-TUSM) is pleased to announce that a three-year Rural Health Workforce Development Grant was awarded to Stephens Memorial Hospital in Norway, Maine with Catharine M. Cadigan MD as Project Director. The Workforce Grant, administered by the Health Resources and Service Administration (HRSA) of the U.S. Department of Health and Human Services, will provide approximately \$200,000 each year over three years to bring 3rd year MMC-TUSM students into hospitals and practices in rural Maine. Dr. Cadigan is the Director of the Maine Practice Network at MMC, with oversight of the new MMC-TUSM Longitudinal Integrated Curriculum (LIC) program.

The LIC is an innovative nine-month program that is learner-, patient-, and community centered. It moves away from the traditional block-style rotation by placing third-year medical students in a rural community, who then follow a consistent panel of patients through their healthcare experiences. Benefits to the medical students include a learning experience more reflective of primary care, authentic mentoring relationships, and the attainment of core clinical competencies across multiple disciplines simultaneously. The program will expose students to the intrinsic benefits of primary care medicine and quality of life enjoyed in rural settings with the aim of graduating excellent, compassionate medical students that will return to be rural physicians in Maine.



Cathy Cadigan, MD

The Rural LIC hospitals include: Stephens Memorial Hospital, Franklin Memorial Hospital, St. Mary's Regional Medical Center, and Mid Coast Hospital. Maine Medical Center is the accredited healthcare workforce training organization partner. The almost \$600,000 award will augment the vital resources needed by member hospitals to effectively establish their collaborative relationship and implement the LIC's curriculum at their site. For more information contact Dr. Cadigan, ccadigan8@gmail.com.

Announcing: Innovations in Diversity Education Awards

In recognition of the importance of diversity education at Tufts, Dean Joyce Sackey, MD announces the **Innovations in Diversity Education Awards (IDEAS) program**. Designed to support medical or resident education, this program aims to help support faculty members pursuing scholarly and innovative work in the areas of diversity, healthcare disparity and/or promoting cultural competency among students and trainees.

Applications for these grants will be accepted in parallel with the Innovations in Education Grants cycle, with letters of intent being due on **December 30, 2010** and full proposals due on **January 31, 2011**.

For additional information, please contact **Jeanine Chisholm** (jeanine.chisholm@tufts.edu) and visit the website:

<http://www.tufts.edu/med/about/faculty/educationalgrants/innovationsdiversityawardsoverview/index.html>.

Faculty Focus:

Laurence Bailen, MD

Assistant Professor of Medicine
Co-director of Gastroenterology Course

As co-director of the second-year Gastroenterology Course tell us your approach to integrating Physiology, Pathophysiology, Pathology and Pharmacology. How will this approach help students prepare for their board exams and for their clerkships?

This year the Gastroenterology course will be completely different than in prior years. In the past, we spent time reviewing normal gastrointestinal physiology as a brief refresher before discussing pathophysiology and pathology. Now the course will be completely integrated with physiology. Therefore, students will learn normal function and then immediately learn what can go wrong. We have organized the syllabus and lectures so that the normal physiology immediately precedes pathophysiology and pathology. With this new arrangement we have minimized redundancy in the presentation of certain topics. In addition, there will be complete integration in topics where there is a high degree of overlap between pathology and pathophysiology. With these sections the pathophysiology and pathology will be presented together in the syllabus and lecture. GI pharmacology has been an important part of the course for many years. We have positioned these lectures and syllabus material so they fit in sequence with the pathology and pathophysiology topics.

We also are integrating the Nutrition course with Gastroenterology.

The nutrition material is positioned in the course to allow optimal integration with discussions surrounding absorption and malabsorption for example.

In response to student evaluations of the course we have moved the liver topics to the beginning of the course. Students often find these topics the most challenging and, in the past, these were taught at the end of the course very close to the exam. Hopefully, with this move students will have more time to absorb the information. This sequential approach to teaching, learning normal to abnormal in close proximity, will allow students to better understand the material and, in turn, facilitate preparation for board exams. Furthermore, by integrating the clinical information highlighted in pathophysiology with the pathology students will be better prepared to approach patient care issues during their clerkships. The syllabus material, which will be organized more effectively, will provide a valuable resource for students during their clerkships and beyond.



Laurence Bailen, MD

How does being a TUSM alumnus (M'93) provide perspective on teaching current TUSM students?

I vividly remember sitting in Sackler listening to the GI course lectures 20 years ago. I still have the syllabus material from back then. I remember how valuable it was to have detailed, yet concise, lecture and syllabus material. Although the curriculum and the material has changed over the years, the commitment of Tufts students to learning hasn't. I see this when I interact with students on the wards and in my office and I see it during the second-year course. This inspires me to provide the best possible learning experience with some understanding of what students are going through.

Tell us about your training and your current clinical activities.

After finishing medical school in 1993 I went to the Beth Israel Hospital in Boston for my three years of medical residency. I then returned to Tufts in 1996 for three years of Gastroenterology fellowship (*continued on page six*)

(continued from page five) training at Tufts Medical Center. I then stayed on staff at Tufts Medical Center for five years until moving to another Tufts affiliate, Newton-Wellesley Hospital. I am now in practice and on staff at Newton-Wellesley Hospital in the Division of Gastroenterology. I have a general gastroenterology practice and do all types of endoscopy including advanced therapeutic endoscopy such as ERCP and endoscopic ultrasound. I regularly interact with students and housestaff during my consultation rounds at Newton-Wellesley. I also serve as a teaching attending on the medical wards during the year. Finally, we have a third-year medical student in our office on Thursday mornings during the school year.

Why should students become involved alumni?

I am the Vice-President of the Tufts Medical Alumni Association (TMAA). I encourage all students to join the TMAA upon graduation. The TMAA is a vibrant organization. The executive council of the TMAA meets regularly throughout the year to hear about Tufts and to meet with Deans and various faculty. We also meet with students and hear about what is going on at the school. A highlight of our year is always seeing the student presentations of what they did with funds provided from the TMAA. The TMAA is really an integral part of student life at Tufts. In addition to providing mentors for students, Tufts Medical Alumni support various student council activities, the White Coat ceremony, and the senior dinner. The TMAA also contributes substantially to student financial aid. Being able to give back to students provides a great deal of satisfaction as an alumnus. I encourage all students to become active alumni as a way to support current students, keep in touch with new developments at the school, and keep in touch and network with fellow alumni.

TUSM Faculty Journal Club

In this new edition of our Faculty Medical Education Journal Club, you will learn about:

Formative Experiences of Emerging Physicians: Gauging the Impact of Events That Occur During Medical School

Beth B. Murinson, MD, PhD, MS, Brendan Klick, MS, Jennifer A. Haythornthwaite, PhD, Robert Shochet, MD, Rachel B. Levine, MD, MPH, and Scott M. Wright, MD
Academic Medicine 2010 Aug; 85(8):1331-7.

The Role of Assessment in Competency-Based Medical Education

E. Holmboe, J. Sherbino, D. Long, S. Swing, J. Frank for the International CBME Collaborators
Medical Teacher 2010; 32: 676-682.

Please contact Ann Maderer (ann.maderer@tufts.edu, 617-636-2191) if you would like to receive a copy of either article.

More Teaching Tips !

In the last issue of *o&a*, we recognized a group of TUSM faculty members who ranked in the top 10% of faculty lecturing, based on student course evaluations. We asked those faculty to share their teaching tips:

- Convey your enthusiasm for your topic and your commitment to helping students understand the lecture material.
 - Ask yourself how your lecture enhances what might be accomplished by your slides and syllabus material only.
– Peter Brodeur
-
- To the extent permitted by time constraints, use the lecture as a means of telling a story in which key facts turn up as the story progresses and students have to integrate the facts and follow the logical trail in order to understand how the story will end. (In the new condensed curriculum, this is more difficult than it was in the past.)
 - Remind the students why they are in med school, e.g., by starting sentences with "When you are practicing medicine, you will need to be able to distinguish between X and Y or decide when the benefits of A outweigh the risks."
 - Don't lead students to believe that everything is known and clear-cut. Help them understand that medicine and biomedical science are evolving fields and that many things aren't known, that some things we think we know today will be seen differently in the future and that one of their jobs is to be prepared to modify their thinking and their actions as knowledge evolves.
– Linc Sonenshein