

**The Academy
Harvard Medical School
Annual Report
2011 - 2012**



To the HMS Community

In many ways, academic year 2012 was the “Year of Critical Thinking” for the HMS Academy. Critical thinking and analytical reasoning served as a unifying theme for many of our programs. In an era in which the quantity of medical knowledge is overwhelming our students and residents and increasingly sophisticated technology makes the task of finding facts almost trivial, we are working hard to assist our teachers with strategies that address the need to develop in our learners the ability to transfer knowledge from one domain to another and to apply concepts and principles to solve problems in our patients. Medical Education Day, led by co-chairs David Roberts and Keith Baker and the critical thinking interest group, highlighted critical thinking as a unifying topic for interactive teaching sessions that integrated theory and practice. In addition, many of our Medical Education Grand Rounds sessions allowed us to amplify specific aspects of reasoning from how neurologists think, to the science and art of diagnostic reasoning, to the role of skepticism in the diagnostic process, to the use of mechanism maps to foster conceptual understanding. The critical thinking theme concluded with a grand rounds presentation featuring Dr. Maria Mylopoulos, from the University of Toronto, who spoke on the role of knowledge in expert development and practice. When all of the Academy professional development programs are taken together, participation by faculty increased by 21% in AY '12 compared to the previous academic year.

Education research was also featured prominently this year. The Academy research interest group, under the direction of Amy Sullivan and Ed Krupat, developed and presented a course on research methodology. Faculty at both the novice and intermediate levels attended and extended their knowledge of essential practices for the conduct of medical education research. Topics included core skills such as survey development, the conduct of focus groups, IRB issues, and quantitative and qualitative data analysis. Drs. Sullivan and Peters also graduated their first fellows from our inaugural medical education research fellowship. Dr. Jeremy Richards is already making contributions as a new faculty member in a number of courses in the Fundamentals of Medicine Curriculum as well as the Principal Clinical Experience at Beth Israel Deaconess Medical Center while Dr. Luise Pernar has returned to her clinical duties as a resident in surgery at Brigham and Women's Hospital. Education research was also featured in our annual poster session during Medical Education Day. Four particularly strong abstracts were recognized with awards for their rigorous methods and the importance of their findings. Finally, the Inter-Hospital Medical Education Collaborative flourished with an increasing number of work-in-progress sessions that continue to foster collaboration among faculty from throughout the HMS community.

The Academy Medical Education Fellowship was under new leadership this year. Dr. Ed Hundert brought renewed energy to the program and greater collaboration with Amy Sullivan and our Office of Education Research. The graduates of the fellowship are increasingly well-prepared to undertake leadership roles in teaching and education research.

The spring of 2012 saw a new RFA for membership in the HMS Academy. As with our call for applications two years ago, members must have leadership roles and commit to their own personal development as educators and to their participation in Academy events to build our community of teachers and learners. We are most happy to announce that our membership for 2012-2014 will be approximately 20% larger than the prior two year term.

Professional development, educational innovation and research, and community— the core missions of the HMS Academy truly flourished this year. I am indebted to our staff and my colleagues in the Academy for their help in making this such a successful year.



Richard M. Schwartzstein, MD
Director of the Academy
Ellen and Melvin Gordon Professor
of Medicine and Medical Education
Harvard Medical School

New Initiatives

Tutorials and case-based conferences remain a key component of our pre-clerkship courses and the Principal Clinical Experience, as well as for graduate medical education. To supplement our traditional tutor training sessions, the HMS Academy held a special symposium on small group learning this year. This session focused on creating the proper learning environment, strategies for enhancing thinking and problem-solving skills, and peer observation. The success of the program will lead to a second presentation in the coming academic year.

Two of our interest groups led very creative symposia on topics that are critical to faculty. Drs. Michael Parker and Deb Weiner, co-chairs of the education technology interest group, organized a symposium that offered participants both the theory behind and practical experience with a range of educational technologies. The energy, excitement, and enthusiasm of the instructors and faculty were wonderful to see. We anticipate greater use of taped “concept-videos” in the coming year as we gain more experience with the “flipped classroom” format, which we believe will enhance student-faculty contact time in the classroom, along with more interactive sessions that utilize new technology.

The writing for scholarship interest group, co-chaired by Drs. Jonathan Borus and Susan Pories, led a symposium that featured plenary sessions that addressed writing for scholarly journals as well as the lay public along with workshops that addressed several key issues in the writing process. In addition, the interest group produced a wonderful document that offers a compendium of information on scholarly writing, which will be shared with the faculty. As we encourage our teachers who wish to choose education as their area of excellence for promotion, we are dedicated to providing them with the skills necessary for success.

At the request of Academy members, two new interest groups were formed this year: Mentoring, and Cross Cultural Care. We look forward to seeing how they progress over the next few years.

Finally, the Academy tried to ensure that HMS would be well represented in the university’s new program in education, the Harvard Initiative in Learning and Teaching (HILT). I had the privilege of serving on the committee that established criteria for and ultimately reviewed grant proposals for education projects. Ultimately, several HMS proposals were funded and we look forward to working with Academy members as we experiment with new teaching strategies in medical student and resident education.

Major Academy Events

Medical Education Day

Teaching Critical Thinking Skills: From Theory to Practice

October 25, 2011

Planned by the Critical Thinking Interest Group

Chairs: David Roberts, MD & Keith Baker, MD PhD

The goals for this session were to: 1) Increase awareness about how trainees and physicians think, and to address limitations of current teaching strategies that do not enhance critical thinking skills, 2) Review theoretical foundations and existing literature about cognitive processing as they relate to clinical decision making, and 3) Examine teaching strategies that likely enhance synthesis and analysis of data rather than recitation of factual content

Keynote: “Shifting the Medical Education Paradigm from Knowledge to Critical Thinking”

Mark Quirk, EdD, Professor and Assistant Dean, University of Massachusetts Medical School

Workshops:

Interactive Teaching Demonstration Session #1: Theories & Strategies

The Need to Try & the Utility of Failure – Keith Baker, MD PhD

Mechanisms via Concept Mapping: Visualizing Cognitive Links – Richard Schwartzstein, MD & David Roberts, MD

Assessment Strategies to Enhance Critical Thinking – Edward Krupat, PhD

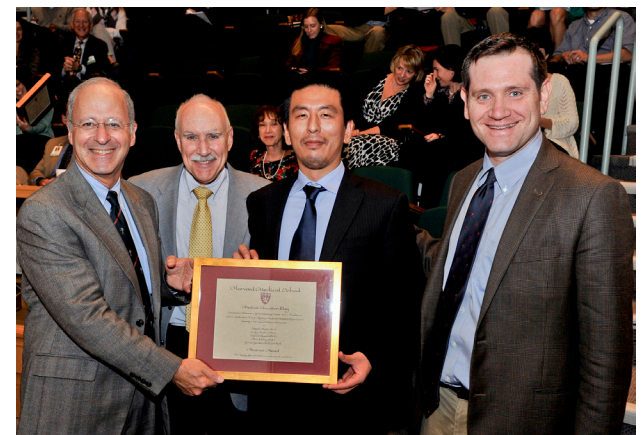
Interactive Teaching Demonstration Session #2: Putting Theories into Practice

Teaching Critical Thinking at the Bedside - Sylvia McKean, MD & Lidia Schapira, MD

Teaching Critical Thinking in the Lecture Hall – Jeremy Richards, MD MA & Melanie Hoenig, MD

Teaching Critical Thinking in Small Groups – Barbara Cockrill, MD and Pieter Cohen, MD

Plenary: Reflection, Next Steps and Discussion – Keith Baker, MD PhD & David Roberts, MD



Photos by Steve Lipofsky

2011 Medical Education Day Abstract Award Recipients

Teaching Critical Thinking Skills: From Theory to Practice

October 25, 2011

Variation and Imprecision of Clerkship Grading in US Medical Schools

Erik K. Alexander MD, Nora Y. Osman MD, Jessica L. Walling BA, & Vivian G. Mitchell MD

Department of Medicine, Brigham & Women's Hospital and Harvard Medical School

Undergraduate Medical Education Poster

Preliminary Data on the Effectiveness of a Resident-as-Teacher Program in Dermatology

Susan Burgin, MD, Assistant Professor, Harvard Medical School, Department of Dermatology, BIDMC; Ruth Ann Vleugels, MD, Instructor, Department of Dermatology, BWH; Amy Sullivan, EdD, Director of Education Research; Lori Newman, MEd, Director of Faculty Education, both at the Shapiro Institute for Education and Research at BIDMC

Graduate Medical Education Poster

Communication and Caring in the Clinic: a Randomized Educational Intervention

Beth A. Lown, MD, Matthew A. Carmody, MD, Richard N. Jones, PhD

Mount Auburn Hospital, Department of Medicine

Graduate Medical Education Poster

Comparison between a Global Rating Score and a Traditional OSCE Evaluation Tool for Rating Medical Student Performance during a Simulated Patient Encounter

Takashi Shiga, MD, Emily Hayden, MD, Edward Krupat, PhD, Anne Fabiny, MD, James Gordon, MD, MPA

Harvard Medical School; Department of Emergency Medicine, Massachusetts General Hospital; MGH Learning Laboratory; Cambridge Health Alliance

Simulation Poster

Strategies to Improve Small Group Teaching

September 14, 2011 & March 14, 2012

In 2010, the Taskforce on Classroom Learning reaffirmed the goals of small group learning at Harvard Medical School: to reinforce knowledge through problem solving, to plumb the depths of a problem, to test assumptions, generate hypotheses and practice reasoning critically, to collaborate with peers, and to receive feedback and reflect in action. To foster teaching to meet these goals, the Academy Center for Teaching and Learning offered an after-noon series of related workshops. Using a standard observation guide, participants observed videotaped small group discussions and then proposed strategies to improve facilitating group dynamics; fostering curiosity and critical thinking; and teaching basic concepts.

Welcome and Introduction - Richard Schwartzstein, MD

Orientation to Observation – Antoinette Peters, PhD

Observation Part I: Environment & Interaction

Observation Part II: Thinking, Learning, Problem Solving

Observation Part III: Sharing Information & Learning Basic Concepts

Facilitators: Randall King, MD PhD, Daniel Hunt, MD, Alberto Puig, MD PhD, David Roberts, MD, Robert Stanton, MD & Richard Schwartzstein, MD

Practice Group Facilitation Strategies & Summary



Photo by Steve Lipofsky

Educational Research Methods Course

February 29, 2012 & March 15, 2012

Effective educational practices and policies depend on evidence produced by sound educational, social, and behavioral research methods. The HMS Academy 2012 Medical Education Research Workshop was held in two half-day sessions, on February 29th and March 15th, from 2:00-5:15 pm. These sessions provided introductory and intermediate level workshops for applying social science research methods to educational issues in medicine and health care. The program covered basic design issues, survey development and validation, qualitative methods including how to conduct focus groups, and some basic analytic approaches including statistical tests for survey data and content analysis for qualitative data. Faculty leaders were also available for small group working sessions to help participants make progress on their individual projects.

February 29, 2012 - Session I

Medical Education Research Methods

Amy Sullivan, EdD

In this session, we reviewed the key, general principles of medical education research. Learners who attended this session were able to:

- Identify major approaches to education research, including: primary versus secondary data analysis; qualitative, quantitative, and mixed methods approaches
- Discuss key approaches to articulating a research question and formulating testable hypotheses
- Identify common methodological challenges to carrying out medical education research and ways to address them
- Understand the importance of theory and conceptual underpinnings of research

Getting started

Edward Krupat, PhD

This session reviewed specific examples of current research to illustrate a variety of research designs and methods. Learners who attended this session were able to:

- Describe a rationale for selecting alternative research designs
- Evaluate strengths and weaknesses of a variety of commonly-used research approaches

Workshop 1: Introduction to Survey Development

Eric Campbell, PhD

This workshop provided participants with an overview of methods in conducting survey research. Learners who attended this session were able to:

- Define key elements of design of a survey research study, including sampling and questionnaire construction
- Design a survey research study that aligns with research questions and intervention learning objectives
- Construct clear questionnaire items that avoid common errors made in survey research

Workshop 2: Conducting Focus Groups

Antoinette Peters, PhD

Focus group research is a qualitative method that can stand alone or inform other research methods such as surveys or interviews. We discussed how to select participants for a focus group and practiced writing focus group questions. Learners who attended this session were able to:

- Describe the purpose and justify the choice of a focus group approach
- Design a focus group moderator's guide
- Describe key ethical principles that need to be addressed in focus group research

Workshop 3: Are your measures valid?

Grace Huang, MD

Validity is an essential component of research that relates not to a measure itself but to how a measure is used with a specific population and for a particular purpose. Learners who attended this session were able to:

- Assess the reliability of survey instruments
- Distinguish among various types of validity

- Understand common approaches to validation, including the Delphi method

March 15, 2012 - Session II

IRB issues in Medical Education Research

Elizabeth Hohmann, MD, Debra Weinstein, MD, Carolyn Connolly, PhD, Alisa Jahns

Education researchers and IRB representatives lead this session describing key considerations in meeting Human Subjects Protections requirements. Learners who attended this session were able to:

- Distinguish characteristics of exempt, expedited, and full board studies
- Identify common problems encountered in medical education research, particularly in research with medical students and residents
- Describe key components of a successful IRB application

Track 1, Part 1: Data Analysis: The Basics

Edward Krupat, PhD

In Part 1, we reviewed the basic types of statistical tests used to describe and compare groups on survey or test measures. Learners who attended this session were able to:

- Understand the rationale for ways of coding, handling, and operating on different kinds of data, and feel confident applying these ideas to their research.
- Identify appropriate statistical tests for parametric and non-parametric analyses
- Understand the basic logic and language of data analysis so that they can communicate with experts and act as intelligent consumers as well as producers of research findings

Track 1, Part 2: Managing and Analyzing Data using SAS JMP

Amy Cohen, PhD

In Part 2 we had an opportunity for hands-on practice with the basics of data management and analysis (using available software—SAS JMP).

Learners who attended this session were able to:

- Access and download JMP through Harvard Medical School Research

Information Technology site (<http://ritg.med.harvard.edu/software.html>).

- Format and enter survey data in EXCEL and export it to JMP
- Carry out basic descriptive statistics and statistical tests on categorical and continuous data using JMP (e.g., chi square, t-tests)

Track 2, Part 1: Qualitative Methods: The Basics

Beth Lown, MD, Amy Sullivan, EdD, Steven Pelletier, PhD, Antoinette Peters, PhD

In Part 1 we reviewed the basic approaches to qualitative analysis, and discussed the strengths and limitations of interviews, focus groups, and observational research. We discussed how to develop qualitative research questions and how to identify and enroll an appropriate sample.

Learners who attended this session were able to:

- Justify the use of qualitative methods
- Critically appraise the validity of research using qualitative methods
- Describe a basic approach to conducting qualitative research in their research area
- Describe key ethical issues related to collecting and analyzing qualitative data

Track 2, Part 2: Qualitative Analysis: Practicing Content Analysis

Beth Lown, MD, Amy Sullivan, EdD, Steven Pelletier, PhD, Antoinette Peters, PhD

In Part 2 we had an opportunity for hands-on practice with the basics of qualitative data analysis. Using data generated by participants, we practiced coding and interpreting qualitative text data. Learners who attended this session were able to:

- Access and download qualitative data analysis software such as WEFT and Atlas.ti.
- Describe basic steps in coding text data
- Carry out a content/thematic analysis

Symposium on the Science of Learning:

Implications for Medical Education from the Neurosciences and Social Sciences

Memory and Judgment: Implications for Teaching Medical Students and Residents

Joshua Greene, PhD and John Gabrieli, PhD

April 6, 2012

The goal of the Symposium on The Science of Learning is to explore research in the cognitive and neurosciences for implications for teaching and learning in medicine. This year's symposium featured work on memory and moral judgment, respectively, by two renowned researchers, Drs. John Gabrieli and Joshua Greene. The nature of learning, memory and judgment changes over the lifespan and with context and content. Thus, we seek an understanding of the nuances of memory and how medical students and residents access past learning to make clinical, professional and ethical decisions. This session raised as many questions as it answered and sparked a range of discussions among attendees.



John D. E. Gabrieli, PhD

Grover Hermann Professor of Health Sciences and Technology and Cognitive Neuroscience Harvard-MIT Division of Health Sciences and Technology (HST) and Department of Brain and Cognitive Sciences
Massachusetts Institute of Technology

Forms of Memory

Dr. John Gabrieli presented work on the neural basis of the development of memory, thought and emotion. He described different kinds of memory and how each is mediated by different brain systems.



Joshua Greene, PhD

John and Ruth Hazel Associate Professor of the Social Sciences
Department of Psychology
Harvard University

Moral Judgment

Dr. Joshua Green addressed issues of moral judgment: the tension between automatic processes such as gut reactions and intuition and more controlled processes such as reflection. He reported research on moral judgment amongst physicians.

Education Technology Symposium:

Working with New Tools for Teaching and Learning

February 28, 2012

Planned in association with the Education Technology Academy Interest Group

Co Chairs: Michael Parker, MD & Deb Weiner, MD PhD

The array of technology available to faculty and students as part of their teaching/learning is expanding. Smartboards, iPads, smartphones, tablet PCs, video conferencing, and online collaboration tools are just a few of the many choices. This symposium included hands on workshops that gave opportunities to learn about and experiment with educational technology. In addition, since students are often ahead of the faculty in terms of using technology, and we asked students to demonstrate examples of how they are using technology in novel ways to enhance their learning.

Learning objectives:

- 1) Gain familiarity and hands on experience with educational technology tools
- 2) Learn about novel ways that students are using new technology to enhance their learning

Workshop Descriptions

Creating Khan Academy Style Video Lectures

Michael Parker, MD, Melanie Hoenig, MD

Short videos with narration and writing/drawing have become increasingly popular as a means

for teaching at any level, as reflected in current trends toward “flipping the classroom.” Participants:

- gained an understanding of the pedagogical principles underlying the use of narrated, annotated videos for learning
- participated in the process of creating a teaching video using readily available technology
- learned principles that lead to creation of more effective teaching videos at any level (pre-clinical or clinical)

Writing On Screens As A Tool For Teaching

Jeremy Richards, MD MA,

Richard Schwartzstein, MD

Students: Jess Hoy and Rob Montgomery

Writing on a chalkboard, whiteboard, or even on a piece of paper is a time-honored tool for teaching in the classroom or on rounds, and in educating patients. This mode of teaching has gained modern affordances through Smartboards, Tablet PCs, and iPads. Participants:

- gained an understanding of the affordances of writing digitally versus the conventional analog chalk and paper techniques
- spent time hands on learning to experience

how to use digital ink as part of teaching with Smartboards, Tablet PCs, and iPads

- saw how students are using handwritten digital notes as part of their learning

Students' Use of Technology for Learning

Jason Alvarez, Debra Weiner, MD, PhD

Students: Kiran Jay Agarwal-Harding, David Duong, Shekinah Elmore and Phil Kim

Students are often ahead of the curve in terms of finding and using technology that enhances their learning, and their use of technology may drive eventual faculty adoption and incorporation of teaching technology. Participants:

- learned about the broad range of how students are using technology in their learning
- spent time in smaller groups learning from students about technology tools they are using as part of their education
- gained exposure to mobile apps that students find useful in the classroom and on the wards

Writing for Scholarship Symposium:

Pathways to Prestige, Promotion, and Publication

May 3, 2012

Planned in association with the Writing for Scholarship Academy Interest Group

Co Chairs: Jonathan Borus, MD, Susan Pories, MD

This symposium focused on concrete strategies for producing scholarly publications that will assist in the promotion process at HMS.

Keynote Address: *Writing up Your Research*
Dr. Jeffrey Drazen, Editor-in-Chief of the New England Journal of Medicine, the former Chief of Pulmonary and Critical Care Medicine at the Brigham and Women's Hospital in Boston and the Parker B. Francis Distinguished Professor of Medicine at Harvard Medical School.

Workshop Sessions:

Using the Library and Technology Tools for Writing

This workshop reviewed the resources present on eCommons and in the Countway Library, how librarians can help you with your research, and how to use the library tools for effective literature searching.

Julie Whelan, Reference Librarian, Countway Library
Susan Pories MD, Assistant Professor, Surgery, BIDMC/MAH
Steve Schweitzberg MD, Associate Professor, Surgery, CHA

Working Through Conflicts and Competition in Scholarship

This workshop used case based discussion to

highlight conflicts that can arise in scholarly projects, such as authorship order and disagreement about conclusions.

Terry Bard DD, Lecturer on Pastoral Counseling, Psychiatry, BIDMC
Dara Brodsky MD, Assistant Professor, Pediatrics, BIDMC
Jonathan Fisher MD MPH, Assistant Professor, Medicine, BIDMC
Antoinette Peters PhD, Associate Professor, Population Medicine, HMS, and Associate Director, Academy Center for Teaching and Learning

Exploring Other Avenues for Medical Education Scholarship

This workshop focused on writing for the most used alternative peer reviewed publication venues, such as The MedEdPORTAL. We showed participants how to make the most of all their scholarly work using a case based approach.

Sigall Bell MD, Assistant Professor, BIDMC
Angela Catic MD, Instructor, Medicine, BIDMC
Sara Fazio MD, Associate Professor, Medicine, BIDMC
Joseph Garfield MD, Associate Professor, Anesthesia, BWH
Grace Huang MD, Assistant Professor, Medicine, BIDMC

The Journal Submission and Review Process

This workshop used cases to demonstrate the submission and review process. The participants were given examples of editorial correspondence and discuss how to properly address reviewer comments.

Jonathan Borus MD, Stanley Cobb Distinguished Professor of Psychiatry, BWH
Michele Burns Ewald MD, Assistant Professor, Pediatrics, CHB
Stuart Quan MD, Gerald E. McGinnis Professor of Sleep Medicine, BWH

Plenary Address: Writing for the public: Tales from the New Yorker.

Dr. Jerome Groopman, the Dina and Raphael Recanati Professor of Medicine at Harvard Medical School, Chief of Experimental Medicine at Beth Israel Deaconess Medical Center. Dr. Groopman is one of the world's leading researchers in cancer and AIDS. He is a staff writer for The New Yorker and has written for other lay publications. He is author of *The Measure of Our Days* (1997), *Second Opinions* (2000), *Anatomy of Hope* (2004), *How Doctors Think* (2007), and coauthor with Dr. Pamela Hartzband of the recently released, *Your Medical Mind: How to Decide What is Right for You* (2011).

Academy Center for Teaching and Learning

The Academy Center for Teaching and Learning at Harvard Medical School was established in 2006, to create, implement and evaluate educational faculty development programs, assess faculty teaching and support faculty members' educational endeavors as a recognized element in academic achievement. The Academy Center for Teaching and Learning is committed to implementing educational programs for teaching faculty that enhance student learning and ultimately provide for the best care of patients. The Center is committed to the educational development of HMS quad-based faculty as well as faculty and residents at HMS affiliated institutions who are involved in core and elective courses that are part of the HMS curriculum. All individuals within the HMS community who teach in classroom or clinical settings are invited to participate in Center activities.

We believe that the central moral responsibility of medical education is the improvement of the health of the society. Toward that end, the Academy Center for Teaching and Learning is committed to implementing educational programs for teaching faculty that enhance student learning and ultimately provide for the best care of patients.



Photo by Steve Lipofsky

Programs

Medical Education Grand Rounds

Open to all HMS faculty, Medical Education Grand Rounds comprise a series of one-hour monthly sessions that are held throughout the year.

Medical Education Grand Rounds: How Neurologists Think: What My Errors Taught Me

Friday, September 16, 2011

Martin Samuels, MD

Dr. Samuels used real case histories to help the learner recognize the source for some of the common types of cognitive errors that occur in diagnosis. This was done by presenting the patients' histories, encouraging participation from the audience, and then analyzing the heuristic (rule of thumb) that was used in making the error.

Medical Education Grand Rounds: Interdisciplinary Science in the Freshman Year at Harvard

Friday, October 7, 2011

Robert Lue, PhD

Harvard College has just completed the fifth year of an interdisciplinary curriculum that integrates biology and chemistry for Harvard freshmen. This integrated foundation replaced the traditional freshman courses in biology and chemistry, and now serves the needs of science concentrators, students with pre-medical aspirations, as well as general education students. This grand rounds session discussed the history of the new curriculum as well as current assessments of how well it works.

Medical Education Grand Rounds: Explicit reasoning: teaching students the science and art of the diagnostic process

Friday, November 18, 2011

Richard Kopelman, MD & Joseph Rencic, MD

The aims of this session were to: 1) Provide an overview of the cognitive psychology and expertise literature on clinical reasoning, 2) Discuss tips for teaching clinical reasoning derived from the above literature, and 3) Present a novel curriculum in teaching clinical reasoning to second year medical students at Tufts University School of Medicine.

Medical Education Grand Rounds: Oliver Wendell Holmes, Medical Education, and the Spirit of Skepticism

Friday, December 2, 2011 - 7:30 to 9 am

Scott Harris Podolsky, MD

Oliver Wendell Holmes spent large parts of the nineteenth century as America's best-known physician and one of its best-selling authors, famous for both his therapeutic skepticism and literary iconoclasm. He was also dean of Harvard Medical School during a brief but tumultuous period of its development, and HMS' most beloved lecturer for many more decades. Dr. Podolsky discussed the fundamental skepticism that imbued Dr. Holmes' entwined medical, literary, and philosophical pursuits, and their impact upon medical education and medical thinking at HMS and beyond, both during and after his lifetime.

Medical Education Grand Rounds: Critical Thinking: Use of Mechanism Maps to Enhance Learning in Medical Students

Wednesday, January 25, 2012

Richard Schwartzstein, MD

Medical students typically perceive their education as an impossible demand to memorize a mountain of facts. The Taskforce on Classroom Learning at Harvard Medical School made recommendations one year ago to refocus our teaching efforts on conceptual understanding and critical thinking. This session explored some of the neurobiological and cognitive theories underlying the concepts of elaborated knowledge, deep learning, and critical thinking. We also examined data acquired in a study of the use of "mechanism maps" as a strategy to enhance learning in a pre-clinical course at Harvard Medical School.

Medical Education Grand Rounds: How the Social Brain Processes Positive and Negative Feedback or "Why don't students take our feedback and improve?"

Friday, March 2, 2012

Antoinette Peters, PhD

Feedback is information about one's performance received from an external source. We assume that such information will motivate learners to improve their performance. Not always! Here, we considered how individuals respond to positive and negative feedback delivered directly by

another person – i.e., in a social context. Specifically, we examined from both psychological and neuro-physiological perspectives (a) possible outcomes of feedback (improvement in performance, decline in performance, no change in performance); (b) relative effectiveness of positive versus negative feedback; and (c) effectiveness of the feedback sandwich (positive and negative). Last, we considered implications for ourselves as life-long learners and as teachers.

Medical Education Grand Rounds: Health Care and the Supreme Court

Wednesday, April 4, 2012

Gregory Curfman, MD, Executive Editor, New England Journal of Medicine

In March of 2012, the U.S. Supreme Court heard oral arguments on the constitutionality of the Affordable Care Act. The Court's opinion in this landmark case, announced this summer, has sweeping implications for the future of health care in our country and for the authority of the federal government to regulate health care. In this session, we looked at the constitutional questions the Court will address. Following the presentation, there was a panel on the implications for both undergraduate and graduate medical education.

Medical Education Grand Rounds: Revisiting the role of knowledge in expert development and practice

Friday, May 4, 2012

Maria Mylopoulos, PhD, University of Toronto

Excellence in the education and training of future experts is crucial to the success of all professions. Extensive efforts have therefore been made to explore expertise, with the aim of translating understanding of expert performance into more effective expert development. However, our understanding of what it means to perform at the highest levels of a profession and the particular competencies that we value as the core of excellence have proven to be dynamic and often controversial issues. In the expertise literature over the last half-century, the accrual and organization of an extensive knowledge base has become widely recognized by educators and researchers as the foundation for expertise and expert performance. The dominance of the view of acquired knowledge as the foundation for

expertise is mirrored in the many competency frameworks that foreground the application of clinical knowledge, skills and procedures even as they seek to be inclusive of additional competencies. Moreover, while additional competencies associated with ‘elite’ physician practice are gaining traction in the medical community, peer nomination data still shows that the primary basis for nominating ‘outstanding practitioners’ remains their perceived extensive knowledge base. However, as our understanding of expertise has expanded to include previously unexplored facets of expert performance, the particular role of knowledge in expert development and practice is being increasingly revisited. In particular, the ability of practitioners to not only apply their repertoire of knowledge to problems they face, but to also deal with novel, emergent or unexpected problems of practice effectively and use these experiences as the basis for a process of continual improvement is not adequately accounted for by models of expertise that conceptualize problem solving as the application of an acquired database of knowledge. This presentation critically explored various cognitive constructions of expertise, with a particular focus on the differing ways in which the role of accrued knowledge has been conceptualized in models of expert development and practice.

Medical Education Grand Rounds: Reflections of a Clinical Teacher Friday, June 1, 2012

Daniel Federman, MD, Carl W. Walter Distinguished Professor of Medicine, Harvard Medical School

Participants developed an understanding teaching based on the reflections of Dr. Federman on his career as an educator, as presented by Dr. Federman.

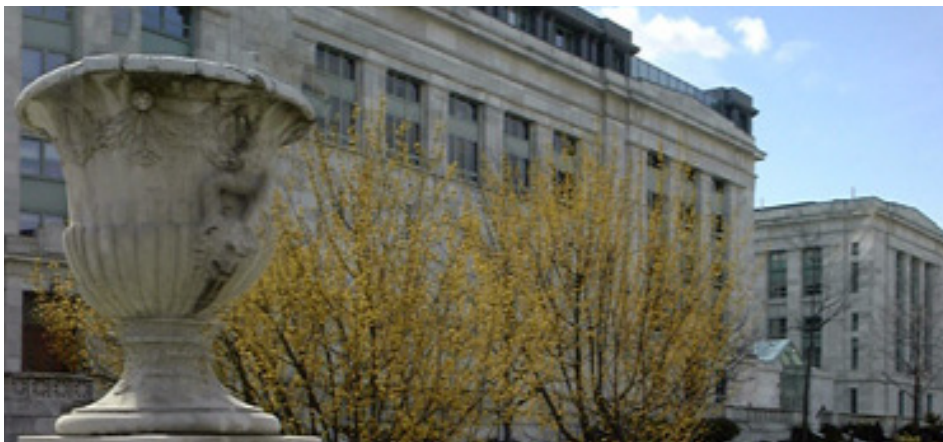


Photo by the Department of Microbiology

Inter-Hospital Medical Education Collaborative

The aim of these sessions is to share a selection of affiliated hospitals’ educational initiatives so that we may report on and answer questions related to the development and implementation of these projects and identify inter-hospital educational research opportunities.

Inter-hospital Collaborative: Starting with Stories: The Hidden Curriculum at HMS

Wednesday, November 16, 2011

BIDMC / Cambridge Hospital

Drs. Gaufberg and Bell presented the results of their collaborative research using medical student narrative reflections to understand and engage with the hidden curriculum at HMS. They also reviewed pilot data from an interactive online curriculum focusing on “micro-ethical challenges” encountered by students in the hidden curriculum, and facilitated a discussion on approaches to positively impact medical culture at HMS and affiliates hospitals.

Inter-hospital Collaborative: Children’s Hospital and Brigham and Women’s Hospital

Wednesday, February 15, 2012

1. Elizabeth Doherty, MD - “Implementation of 360-Degree Assessment for Harvard Neonatal-Perinatal Fellows” (CHB)
2. Brigid Dolan, MD - “A Spaced Education Curriculum to Improve Bone Health Care by Internal Medicine Residents” (BWH)
3. Stuart Goldman, MD - “Promoting Adult Learning : The Educational Kanban” CHB

Inter-hospital Collaborative: Brigham & Women’s Hospital and Massachusetts General Hospital

Wednesday, March 28, 2012

1. Nora Osman, MD and Erik Alexander, MD - “Variation and Imprecision in Clerkship Grading across the United States” (BWH)
2. Cindy Cooper, MD - “Have It Your Way: Teaching Students To Customize Their Feedback Sandwich” (MGH)
3. Lawrence Tsen, MD, Jonathan F. Borus, MD, Carol C. Nadelson, MD,

Ellen W. Seely, MD, Audrey Haas, MBA, Anne L. Fuhlbrigge, MD, MS
- “The Development, Implementation, and Assessment of an Innovative Mentoring Leadership Program for Faculty Mentors” (BWH)

Inter-hospital Collaborative: Massachusetts General Hospital and Beth Israel Deaconess Medical Center

Wednesday, April 25, 2012

1. Marc de Moya, MD – “Integration of Simulation into Third Year Clerkship” (MGH)
2. Jeffrey Greenwald, MD – “Education about Professional Accountability: Where Health Care Reform and Medical Education Roads Cross in Our Own Backyard” (MGH)
3. Wendy Stead, MD – “There is no “I” in Team: Using Inter-Professional Education Strategies to Improve Provider Collaboration” (BIDMC)

Inter-hospital Collaborative: Mt Auburn Hospital/Cambridge Health Alliance and Children’s Hospital

Wednesday, May 23, 2012

1. Saira Samani, MD and Beth Lown, MD – “Communicating with families of patients who are critically ill”
2. Arthur Chang, MD – “Benefits and challenges of a longitudinal/integrated clerkship in Radiology (a work-in-progress)”
3. Alan Woolf, MD, MPH – “Appraising how HMSII students write about cases”

In Course Programs

Patient Doctor I Faculty Development Meeting

Wednesday, September 7, 2011

Beverly Woo, MD

Primary Care Clerkship Fall Faculty Meeting

Wednesday, September 14, 2011

Rebecca Cunningham, MD & Susan Frankl, MD

Patient Doctor III Peer Observation Workshop

Tuesday, October 18, 2011 & Thursday, January 19, 2012

Ronald Arky, MD, Eugene Beresin, MD, Susan Frankl, MD, Toni Peters, PhD

Primary Care Clerkship Winter Faculty Meeting

Wednesday, January 11, 2012

Rebecca Cunningham, MD, Susan Frankl, MD, James Heffernan, MD

Gastrointestinal Pathophysiology Faculty Development Sessions

Tuesday, February 14, 2012 & Tuesday, February 28, 2012

James Honan, EdD, Daniel Leffler, MD, Roxana Llerena-Quinn, PhD, Brian Mandell, PhD, Barbara Nath, MD, Toni Peters, PhD, Laurie Raymond, MD, Helen Shields, MD



Photo by Leonard Rubenstein

Tutor Development

Workshops for both new and experienced tutors focus on a number of teaching elements including small group facilitation; giving effective feedback; underlying processes and theories behind teaching and learning. Members of the Center for Teaching and Learning provide support for faculty participation in many elements of teaching at the HMS

Introduction to Tutorial Facilitation

Course Specific Sessions (year round)

Samuel Kennedy, PhD, Lecturer on Cell Biology

These sessions are specific to a given course. They are by invitation only.

This session explores:

- Aspects of tutorial learning and facilitation
- Expectations of the tutorial process
- Strategies to promote the highest likelihood of success
- Best practices for required feedback and evaluation
- Communication style and the fostering of collaboration through communication

Introduction to Tutorial for Prospective Tutors

Monday, September 19, 2011 & Tuesday, February 7, 2012

Samuel Kennedy, PhD, Lecturer on Cell Biology

This is a small group informational session for faculty interested in the tutorial format in HMS courses. This session introduced the basis of tutorial based learning and present strategies for success, specific to the Harvard Medical School use of that format. While providing a highlights presentation of information, this session also allowed opportunities for questions of interest or concern from the participants. References for how to become involved in tutoring at HMS were provided.

Microtutoring I: Managing Problem Tutorials (The Quiet Student & The Domineering Student)

Wednesday, December 7, 2011 & Tuesday, April 10, 2012

Antoinette Peters, PhD, Associate Professor of Population Medicine

This workshop was offered as a follow up to the Academy's mini-symposium on small group facilitation and Medical Education Day workshops

on critical thinking. In the workshop, participants rotated roles, each having an opportunity to tutor a group problem or to be a student within the problem group. The group debriefed each scenario and collectively generated strategies to manage such groups effectively. Goals of this session included: practicing tutoring a group when a student is quiet or domineering, identifying strategies to improve group dynamics, and serving as a peer coach to provide feedback to fellow tutors.

Microtutoring II: Managing Problem Tutorials (The Unprepared Group & The Unscientific Discussion)

Thursday, December 8, 2011 & Wednesday, April 11, 2012

Antoinette Peters, PhD, Associate Professor of Population Medicine

This workshop was offered as a follow up to the Academy's mini-symposium on small group facilitation and Medical Education Day workshops on critical thinking. In the workshop, participants rotated roles, each having an opportunity to tutor a group problem or to be a student within the problem group. The group debriefed each scenario and collectively generated strategies to manage such groups effectively. Goals of this session included: practicing tutoring a group when a student is quiet or domineering, identifying strategies to improve group dynamics, and serving as a peer coach to provide feedback to fellow tutors.

Tutor Observation

In addition to this orientation the Program for Medical Education requests all new tutors participate in observation of one of their tutorial sessions conducted by a member of the Center for Teaching and Learning and in order to receive individual feedback: faculty members are contacted by the Center for Teaching and Learning via email to arrange this opportunity once the course has commenced. In addition the Center for Teaching and Learning produces a full calendar of events in faculty development, many of which are appropriate for new or experienced tutors.

Academy Fellowships in Medical Education

Fellowships provide physician educators with dedicated time over the course of one academic year to increase their knowledge of educational principles, to improve their skills as teachers, and to pursue a scholarly project in medical education. In addition to receiving support provided from Academy resources, fellows benefit from funding provided by grants provided by several benefactors:

The Fellows met monthly with Dr. Hundert to review the Fellowship Curriculum. The Academy Fellows also convened with their colleagues in the Rabkin and Mt. Auburn Fellowships for a course in the basic elements of research in medical education under the guidance of Dr. Nicholas Christakis, Professor of Medical Sociology in the Department of Health Care Policy, at Harvard University.

The Jackson Academy Fellowship (focus: teaching and mentoring) is named for Dr. James H. “Jimmy” Jackson, MD, HMS ’43, through the generous gift of his wife of 57 years, Mrs. Susan M. Jackson.

The Curtis Prout Academy Fellowship (focus: primary care) is named for Dr. Curtis Prout, HMS ’41, through the generous gifts of his past and present patients, colleagues, family and friends.

The Morgan-Zinsser Fellowship (focus: early career development of junior faculty) is named for Dr. Herbert Morgan, HMS ’42, and his mentor, Dr. Hans Zinsser, through the generous gift of Dr. Herbert Morgan.



Academy Fellows 2011-2012

CURTIS PROUT FELLOWS OF THE ACADEMY



Cynthia Cooper, MD
Student-Initiated Feedback
Assistant Professor of Medicine
Department of Medicine
Massachusetts General Hospital



Karen Wood, MD
Designing a Curriculum for Patient Safety in the Ambulatory Setting
Assistant Clinical Professor of Population Medicine
Department of Medicine
Harvard Vanguard Medical Associates

MORGAN-ZINSSER FELLOWS OF THE ACADEMY



Amin Sabet, MD
Impact of Progress and Cumulative Achievement Testing on Medical Student Stress and Readiness for the USMLE Step 1 Examination
Instructor in Medicine
Department of Medicine
Beth Israel Deaconess Medical Center



Kathleen Wittels, MD
Development of a Simulation Based Assessment Tool to Measure Emergency Medicine Resident Competency
Instructor in Medicine
Department of Emergency Medicine
Brigham & Women's Hospital

DIRECTOR OF THE ACADEMY FELLOWSHIPS:

Edward Hundert, MD
Senior Lecturer on Medical Ethics in the Department of Social Medicine
Director of the Academy Center for Teaching and Learning
Harvard Medical School

Academy Office of Education Research

The Office for Education Research was established in October 2010. The mission of the Office for Education Research is to:

- Foster faculty development in research related to medical education
- Serve as a resource for students pursuing scholarly research projects in medical education
- Act as a networking center for medical education research throughout the Harvard Medical community
- Carry out research to advance the field of medical education
- Provide scientific review for all medical education research projects involving HMS students as research subjects

In AY 2011-2012, the office has accomplished the following:

(1) Completed the first 2-year Fellowship Program in Medical Education Research. Program Directors: Amy Sullivan and Toni Peters.

The Academy fellowship in medical education research is a two year program available to Harvard-affiliated fellows or surgical residents in their research years of training. Fellows meet twice monthly for two hour sessions with the Program Directors. The focus of this program is to develop core skills in social science research methods as applied to undergraduate, graduate and continuing education in the health professions. This program prepares fellows to apply social science and education research methods to educational issues in medicine and health care. Through lectures, discussion, in-class practice, and projects, fellows gain familiarity with a range of social and behavioral approaches to studying medical education and evaluating psychoeducational and behavioral interventions, with an emphasis on interview and survey research methods.

Our first graduates of this program are Jeremy Richards, MD and Luise Pernar, MD.

(2) Conducted the first major research training offering for faculty. The two-session Academy Medical Education Research Course was held on February 29, 2012 and March 15, 2012.

Course Director: Amy Sullivan, EdD;

Course faculty: Ed Krupat, PhD; Eric Campbell, PhD; Toni Peters, PhD; Grace Huang, MD; Deb Weinstein, MD; Elizabeth Hohmann, MD; Carolyn Connelly, PhD; Alisa Jahns; Beth Lown, MD; Amy Cohen, EdM, Steve Pelletier, PhD

The course was developed to support faculty's skills and knowledge in conducting research and evaluation in medical education. The course sessions provided introductory and intermediate level workshops that covered basic design issues, survey development and validation, qualitative methods including how to conduct focus groups, and some basic analytic approaches including statistical tests for survey data and content analysis for qualitative data. Faculty mentors also met with attendees for small group working sessions to help participants make progress on their individual projects. Over 70 faculty attended the program. The full course will be offered again in 2014.

(3) Implemented further improvements to the review process for medical education research applications. The Office for Research has worked closely with the Harvard Medical School Committee on Human Subjects (CHS) to streamline the approval process for studies involving Harvard Medical School students (and/or the faculty who teach students). The system has been converted from a paper-based to an electronic system, and step-by-step instructions are now posted on the Academy website at: <http://www.hms.harvard.edu/Academy/research/irb.html>.

(4) Provided consultation and mentoring to a broad range of faculty, fellows, residents and students. The Office for Research has provided consultation to faculty, fellows and residents from MGH, BWH, BIDMC, CHA, and Mt. Auburn hospitals. This has included work to develop surveys on end-of-life training, development of oral exams for surgical clerkships, peer observation in primary care clerkships, evaluation of the impact of feedback on students, and advising on conducting focus groups and analyzing interview and survey data. The office has also provided mentoring

to Harvard Medical students conducting multi-method research on critical thinking in medical school and assessing the impact of communication training on residents in the ICU, and to current fellows from the Academy Medical Education and Rabkin Fellowships.

(4) Recruited mentors for the HMS Scholars in Medicine Program. The 2011-2012 academic year at Harvard Medical School marked the start of a requirement for all students to conduct a mentored scholarly project. The HMS Academy has supported this effort by providing opportunities for students to conduct rigorous medical education research and perhaps consider this as a future academic pursuit. To date, we have recruited mentors who are pursuing a wide range of research related to medical education, and we will help match interested students with mentors who are conducting research in their area of interest. In addition, Dr. Sullivan serves as a member of the Advisory Committee for the Scholars in Medicine program, and she will be available to mentor and advise students interested in scholarly projects in medical education.

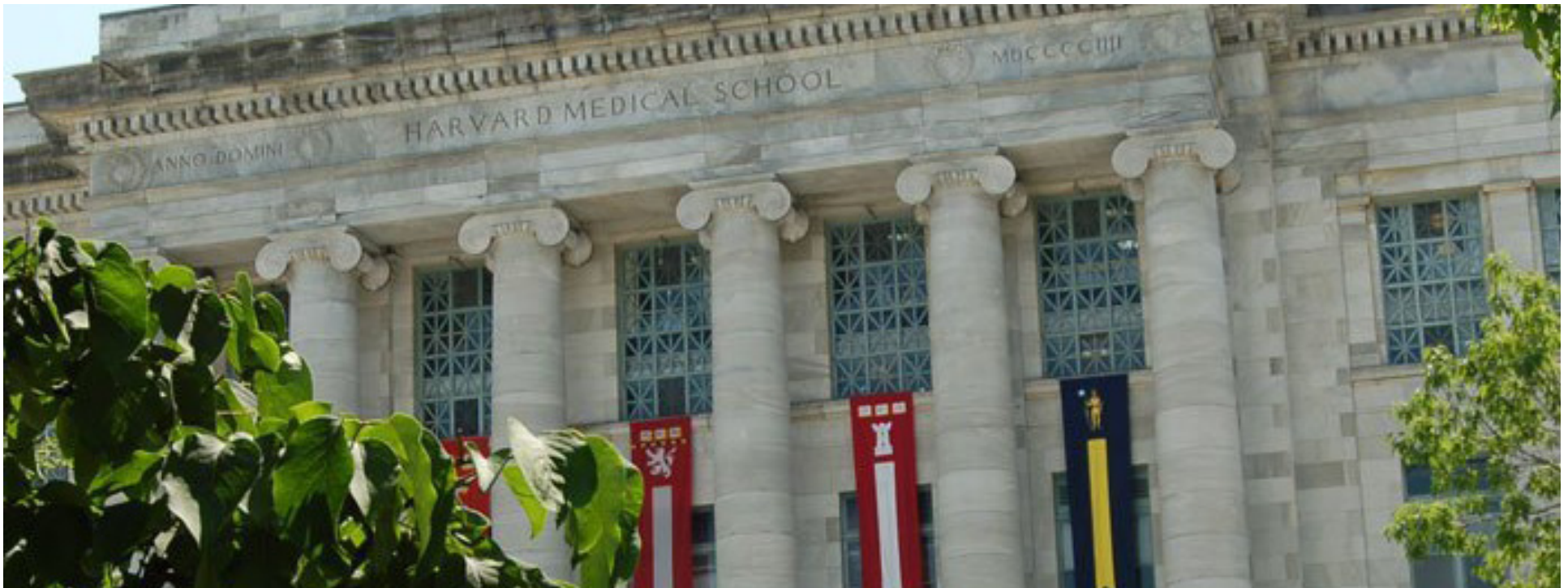
(5) Delivered seminars on qualitative research methods and survey research for HMS Academy Medical Education Fellows, BIDMC Rabkin Medical Education Fellows, and Mt. Auburn Medical Education Fellows.

Planned Activities for 2012-2013

(1) The Office of Research has established a new interest group in Medical Education Research (co-directed by Amy Sullivan and Ed Krupat). The group plans to undertake a research effort using existing HMS databases to explore key questions related to medical student education, and will prepare a research methods symposia for the medical education community in 2013.

(2) We plan to continue to deliver seminars on qualitative research methods and survey research for HMS Academy Medical Education Fellows, BIDMC Rabkin Medical Education Fellows, and Mt. Auburn Medical Education Fellows. In addition, we plan to deliver hospital-based sessions on preparing applications for IRB review, and continue to provide outreach and consultation to affiliated hospitals.

Photo by Jaime Lyons



Academy Fellows in Medical Education Research

2010-2012



Jeremy Richards, MD and Luise Pernar, MD

Jeremy B. Richards, MD, is Instructor of Medicine in the Beth Israel Deaconess Medical Center Division of Pulmonary, Critical Care & Sleep Medicine. Dr. Richards' primary research interests involve assessing components of curiosity and inquisitiveness in medical students and residents. He is currently engaged in a prospective study (with Dr. David Roberts) tracking measures of curiosity in medical learners as they progress through their training. In addition to measuring indices of curiosity, he is employing qualitative needs assessments to identify strategies with which to develop curricula and educational interventions intended to prevent decline in curiosity and inquisitiveness during medical school and residency training.

Luise Pernar, MD, is a surgical resident at Brigham and Women's Hospital. Dr. Pernar's research examines the operating room as a learning environment for the training of safe surgeons. Under the mentorship of Dr. Lisa Breen, Dr. Pernar's research uses cognitive task analyses to examine the content of operating room teaching and teaching in the simulation center to determine how to optimize and streamline the educational process. Dr. Pernar is also studying the uses and value of methods of assessment of medical students in surgical clerkships, including observation of patient care using the mini-CEX (Clinical Evaluation Exercise) and faculty-administered oral exams.

Academy Fellows in Medical Education Research

2012-2014



Eli Miloslavsky received his M.D. from the Mount Sinai School of Medicine and completed his internal medicine residency training at the Massachusetts General Hospital in Boston. He is currently completing a rheumatology fellowship at the Massachusetts General Hospital with a research focus in vasculitis. His interests within medical education include training of residents and fellows as teachers, curriculum development and the use of simulation in clinical decision making.



Jakob McSparron is currently a third-year fellow in the Harvard Pulmonary and Critical Care Medicine Fellowship. He graduated Phi Beta Kappa from Cornell University. Following a year of service with Ameri-corps focused on social justice education, he attended Weill Cornell Medical College in New York City. Jakob completed his residency in Internal Medicine at New York Presbyterian-Cornell before coming to Boston to continue training. He has taught both clinical and pre-clinical students at Harvard Medical School, and regularly participates in teaching medical residents throughout the Harvard Community. Jakob is a member of the BIDMC Academy, and he recently earned The Soma Weiss Award for excellence in teaching by a clinical fellow at Brigham and Women's Hospital. He will be spending the research portion of his fellowship focusing on medical education research at BIDMC. His research interests include assessment of teaching skills as well as the development of novel methods for procedural education.

Academy Interest Groups

At the Academy membership meeting in March 2011, we discussed the importance of the role of an Academy member in making our efforts successful. Members were selected for the Academy because of their leadership roles and commitment to medical education at the UME and GME levels. One of the mechanisms by which they can make a difference in education at HMS is through their participation in one of the Academy “interest groups.” Two new interest groups were added this year: mentoring, and cross-cultural care. Among the responsibilities of the interest groups is to assist in the planning and implementation of a major symposium once every three years for the benefit of the faculty at-large. Based on comments from the spring Academy meeting and feedback on Academy membership applications, we have identified common themes that have emerged for the organization of interest groups. In addition to the symposia, interest groups pursue a range of activities including:

- Generating ideas for medical education grand rounds
- Creating proposals for special faculty development sessions of the Academy
- Developing proposals for changes in or development of new curricula or assessment procedures.
- Pursuing outreach to junior faculty in the hospital-based academies and centers for education.
- Sponsoring journal clubs focused on their topic.

The Interest Groups and chairs are as follows:

Critical Thinking

Co-Chair - Edward Krupat, PhD
Co-Chair - Richard Schwartzstein, MD

Cross Cultural Care

Chair - Alexander Green, MD MPH

Education Technology

Co-Chair - Michael Parker, MD
Co-Chair - Debra Weiner, MD PhD

Feedback and Evaluation

Co-Chair - Jonathan Alpert, MD PhD
Co-Chair - Eugene Beresin, MA MD

Hidden Curriculum

Co-Chair - Sigall Bell, MD
Co-Chair - Elizabeth Gauferg, MD MPH

Mentoring

Co-Chair - Carol Bates, MD
Co-Chair - Jonathan Borus, MD

Peer Review

Co-Chair - Lori Newman, EdM
Co-Chair - Susan Frankl, MD

Research Methods

Co-Chair - Ed Krupat, PhD
Co-Chair - Amy Sullivan, EdD

Resident as Teacher

Co-Chair - Tracey Cho, MA MD
Co-Chair - Hope Ricciotti, MD

Simulation

Chair - James Gordon, MD MPA

Writing for Scholarship

Co-Chair - Jonathan Borus, MD
Co-Chair - Susan Pories, MD
FACS



Photo by Leonard Rubenstein

Critical Thinking

Co-Chair - Edward Krupat, PhD

Co-Chair - Richard Schwartzstein, MD

Members:

Ayse Atasoylu, MD MPH

Keith Baker, MD PhD

Lisa Breen, MD

Thomas Byrne, MD

Zeina Chemali, MD MPH

Vincent Chiang, MD

Charles Day, MD

Marc de Moya, MD

Jon Fox, MD

Lisa Frontado, MS EdM

Joseph Garfield, MD

Arundhati Ghosh, MBBS

FRCS FACS

Leo Ginns, MD

Stuart Goldman, MD

Alexander Green, MD MPH

Lisa Gruenberg, MD

Richard Haspel, MD PhD

Emily Hayden, MD

Grace Huang, MD

Katharine Johnston, MD MA

MSc

Bernard Kinane, MD BCh

BAO

Lisa Lehmann, MD PhD

Clifford Lo, MD PhD

Sylvia McKean, MD

Eliza Menninger, MD

Barbara Ogur, MD

Antoinette Peters, PhD

Joseph Rhatigan, MD

Jeremy Richards, MD MA

Elizabeth Rider, MD MSW

Helen Riess, MD

David Roberts, MD

Amelie Rorty, PhD

Leon Sanchez, MD MPH

Lidia Schapira, MD

David Sloane, MD

Douglas Smink, MD

MPH

Robert Stanton, MD

Carrie Tibbles, MD

Augustus White III, MD

Alan Woolf, MD MPH

Accomplishments and Future Goals:

The Academy Interest Group on Critical Thinking had a busy and successful year. The highlight of the year involved the group's sponsorship of Medical Education Day on Oct. 25, 2011. Planned by Interest Group members David Roberts and Keith Baker, the theme for the day was "Teaching Critical Thinking Skills: From Theory to Practice." Mark Quirk of the University of Massachusetts Medical School, our keynote speaker, gave a very well-received presentation on why we should, and how we can, shift the medical education paradigm from knowledge to critical thinking; and workshops were offered on concept mapping, assessment of critical thinking, the utility of failure in learning, and utilizing critical thinking teaching techniques at the bedside, in small groups and in the lecture hall. Many of the interest group members served as workshop leaders and facilitated enthusiastic and insightful discussion.

Meetings of the Interest group subsequent to Medical Education Day focused on proposing ways of building upon the excitement and momentum generated by that program. Discussions and tentative plans focused on several strategies for teaching and enhancing critical thinking, both for experienced and relatively inexperienced faculty. Plans are being made to introduce tutorial faculty into new means of incorporating techniques to encourage critical thinking into all FOM courses, and to initiate peer observation sessions that focus on feedback on instructors' skills in encouraging critical thinking in both large-group and small-group settings. Discussions of the Group also centered on how best to use simulation to encourage critical thinking, how to encourage students to appreciate the distinction between the mere operations of the physical exam vs. using the exam to engage in physical diagnosis, and how to make best use of and further encourage curiosity among students.

Group members heard presentations from faculty both in and beyond the Interest Group about several instructional innovations, in various states of development and implementation, in which Course Directors have revised teaching methods, content, and exams with the goal of getting students to take an active and analytic role in their learning.

The challenge for the group in the coming year will be to encourage closer scrutiny of our goals, thereby defining a role for our Group in curriculum reform. In particular, we hope to expand the critical thinking orientation across the curriculum so that students consistently receive the message that we want them to question, to think, and to discover, not simply to absorb information.

Edward Krupat, PhD
Richard Schwartzstein, MD

Cross Cultural Care

Chair - Alexander Green, MD MPH *Accomplishments and Future Goals:*

Members:

Joseph Betancourt, MD
Lisa Frontado, MS EdM
Barbara Gottlieb, MD MPH
Fidencio Saldana, MD
Helen Shields, MD
Lidia Schapira, MD
Antoinette Peters, PhD

The overarching goal of the Cross-Cultural Care (CCC) Interest Group is to enhance the educational experience of Harvard medical students and better prepare them with the knowledge, skills and attitudes needed to provide the highest quality of care for every patient in the context of their unique sociocultural background.

The specific goals of the interest group include:

- Integrating educational experiences and teaching on cross-cultural care into all core courses in the existing HMS curriculum where it is reasonable to do so.
- Ensuring that students are taught by faculty members who are well versed in the concepts, principles, and skills of cross-cultural care.
- Monitoring the quality of cross-cultural care education provided by HMS to medical students through feedback from students and formal evaluation.
- Developing educational opportunities for medical students, faculty members, and others in the Harvard medical community to learn about cross-cultural care.
- Undertaking, presenting and publishing scholarly work on the topic of cross-cultural medical education that fosters Harvard Medical School's leadership role on these issues nationally.

The CCC interest group, which currently has seven members, has had one meeting to date and a second is being scheduled. We are planning to communicate with course directors to determine where and how they address issues of cross-cultural care into their curricula, and to work to incorporate these issues as widely as possible. We are also planning to present a practical action oriented workshop on integrating teaching on cross-cultural care into courses, especially for course directors potentially in November.

Alexander Green, MD MPH

Education Technology

Co-Chair - Michael Parker, MD
Co-Chair - Debra Weiner, MD PhD

Members:

Jason Alvarez
Katherine Andriole, PhD
Ayse Atasoylu, MD MPH
Kamran Badizadegan, MD
David Brown, MD
Matthew Carty, MD
Lisa Frontado, MS EdM
Joseph Garfield, MD
Melanie Hoenig, MD
Joel Katz, MD MA

B. Price Kerfoot, MD EdM
Bernard Kinane, MD BCh BAO
Randall King, MD PhD
Leonard Lilly, MD
Antoinette Peters, PhD
Laurie Raymond, MD
David Roberts, MD
Priscilla Slanetz, MD MPH
Zaldy Tan, MD MPH



Accomplishments and Future Goals:

The focus of the Technology Interest Group is to identify medical education technology priorities, options and opportunities, and to facilitate use of technology by HMS students and faculty.

Specific goals are to assess and increase faculty awareness and expertise in use of available educational technology resources; and to identify and recommend policy, approaches, and best practices regarding dissemination and use of hardware and software educational technologies. Accomplishments to date include a review of the recent HMS student and faculty Educational Technology survey results; establishment of an educational technology Wiki covering technology resources including those available through MyCourses, as well as SpacedEd, electronic whiteboards, and WebEx conferencing; and planning and running an Educational Technology Symposium (February 2012). This symposium offered unique interactive workshops on timely topics such as writing on screens for teaching, integrating mobile technology into teaching and learning, and creating Khan Academy style videos. Workshops provided the opportunity for faculty to explore how they might effectively use technology in their teaching. Students were engaged to teach faculty about technologies and software that the students found most valuable in their learning. Feedback from workshop attendees was highly positive.

Future plans include ongoing assessment of technology needs and resources for the HMS community, including other Academy Interest Groups; and promoting awareness and training surrounding available resources and technological advances at HMS including the new “classrooms of the future”, the re-design of the MyCourses platform, and the curriculum map project.

Michael Parker, MD
Debra Weiner, MD PhD

Feedback and Evaluation

Co-Chair - Jonathan Alpert, MD PhD *Accomplishments and Future Goals:*

Co-Chair - Eugene Beresin, MA MD

Members:

Christian Arbelaez, MD MPH
Keith Baker, MD PhD
Terry Bard, DD
Kriti Bhatia, MD
David Brown, MD
Vincent Chiang, MD
Marc DeMoya, MD
Susan Farrell, MD
John Fox, MD
Lisa Frontado, MS EdM
Stuart Goldman, MD
Melanie Hoenig, MD
Vicki Jackson, MD MPH
Kate Johnston, MD MA M.Sc
Stephanie Jones, MD
Jennifer Kesselheim, M.Ed MD
MBioethics
Graham McMahon, MD MMSc
Russell Nauta, MD
Elisabeth Peet, MA
Stephen Pelletier, PhD
Antoinette Peters, PhD
Helen Riess, MD
David Topor, PhD
Beverly Woo, MD

The HMS Academy Interest Group on Feedback and Evaluation has the following goals and objectives:

- To appreciate the formative and summative means of providing feedback to medical students, residents and fellows regarding their performance in didactic settings including lectures, seminars, small group tutorials, and in their clinical performance in rotations.
- To appreciate the formative and summative means of providing faculty peer feedback in their teaching roles in lectures, seminars, small group tutorials and in clinical rotations.
- To define the ways in which feedback and evaluation may be delivered and received in didactic and clinical settings.
- To provide local and national evidence-based instruments that may be used as guidelines in the formulation of feedback and evaluation.
- To make the instruments for feedback and evaluation available to the HMS community on the Interest Groups' webpage.
- To provide an annotated bibliography of the best research and review papers on feedback and evaluation to the HMS community
- To develop local teaching modules at HMS teaching hospitals and mini-symposia for the HMS community on best practices of feedback and evaluation of students, residents, fellows and faculty
- To coordinate with other HMS Academy Interest Groups that have relevance to feedback and evaluation, such as the groups on Critical Thinking, Residents as Teachers and Peer Observation

Achievements

- In 2011 the Interest Group presented a mini-symposium on Feedback and Evaluation for the HMS community
- In 2012, the Interest Group sponsored two peer observation workshops for faculty of Patient Doctor III during two PCE Intersessions.
- The website now has a number of feedback and evaluation instruments posted.
- The website also has a substantial annotated bibliography of papers on feedback and evaluation

Future Goals:

- To provide a new mini-symposium for the HMS Community
- To provide new in-hospital training modules on feedback and evaluation
- To increase coordination and collaboration with other HMS Interest Groups with related goals and objectives.

Jonathan Alpert, MD PhD
Eugene Beresin, MD MA

Hidden Curriculum

Co-Chair - Sigall Bell, MD

Co-Chair - Elizabeth Gauferg, MD MPH

Members:

David Brown, MD

Zeina Chemali, MD MPH

Lisa Frontado, MS EdM

Alexander Green, MD MPH

Edward Hundert, MD

Jennifer Kesselheim, MD EdM

Edward Krupat, PhD

Antoinette Peters, PhD

Laurie Raymond, MD

Hope Ricciotti, MD

Elizabeth Rider, MD MSW

Amelie Rorty, PhD

Sadath Sayeed, MD JD

Jo Shapiro, MD

Amy Ship, MD

Priscilla Slanetz, MD MPH

Katharine Treadway, MD

Alan Woolf, MD MPH

Accomplishments and Future Goals:

The Hidden Curriculum Interest Group explores the various ways in which the culture of our learning environments supports or hinders the professional development of our students. We are particularly interested in disparities between what we at HMS say we do and what we actually do. There are five areas of focus with dedicated subcommittees:

1. Assessment of hidden curriculum/Developing metrics
2. Self-awareness and self-reflection
3. Hidden Curriculum and patient safety
4. Medical student mistreatment/respectful environments
5. Organizational culture change with a focus on the change strategies of Appreciative inquiry and Public narrative

The larger group plans to gather 3 times per year for extended meetings focused on social networking, report-out from subcommittees, and peer-mentorship/consultation on issues and projects.

Sigall Bell, MD

Elizabeth Gauferg, MD MPH

Mentoring

Co-Chair - Carol Bates, MD
Co-Chair - Jonathan Borus, MD

Members:

Kriti Bhatia, MD
Michael Cahalane, MD
Zeina Chemali, MD
S Jean Emans, MD
Melissa Mattison, MD
Antoinette Peters, PhD

Accomplishments and Future Goals:

The Mentoring Interest Group is relatively new, having held its initial organizational meeting on November 3, 2011 and meeting three additional times in the 2011-12 academic year. Its broad focus has been on finding ways to help faculty improve their skills in mentoring students, trainees, and other faculty, clarifying the importance of mentoring in the HMS promotion process, and linking helpful mentors to mentees.

Since faculty mentoring of other faculty is already a focus in some hospitals with substantial programs in place, and because of the Academy's focus on medical education, we initially have explored mentoring students and trainees. So far we have discussed the varied and at times contradictory results found in literature reviews performed by Interest Group members about mentoring programs for students and trainees as well as ways for faculty to provide such mentoring.

We have also worked on potential revisions to our current HMS curriculum vita guidance on mentoring as that relates to promotion reviews. Our committee has taken this on because of interest amongst committee members and because of the presence of both Jean Emans who chaired the Subcommittee on Mentoring of the HMS Task Force on Faculty Development and Diversity, and of committee co-chair Assistant Dean for Faculty Affairs Carol Bates. As a next step, this committee's recommendations will be brought to the Office for Faculty Affairs.

We hope to continue to work on ways to improve mentoring at HMS with a particular focus on medical educators and to enlarge and connect the community of mentors across the School and its hospitals. As we have had a small group of interest group members to date, with the new cycle of Academy membership this summer, in the coming academic year we look forward to broadening the membership of our Interest Group as we further define programs and projects to achieve our goals.

Carol Bates, MD
Jonathan Borus, MD

Peer Observation

Co-Chair - Susan Frankl, MD
Co-Chair - Lori Newman, EdM

Members:

Stanley Ashley, MD
Maren Batalden, MD
Lisa Breen, MD
Dara Brodsky, MD
David Brown, MD
Susan Burgin, MD
Anne Fabiny, MD
Laurie Fishman, MD
Barbara Gottlieb, MD MPH
Antoinette Peters, PhD
Alberto Puig, MD PhD
David Roberts, MD
Robert Thomas, MD
Kamen Vlassakov, MD

Accomplishments and Future Goals:

The primary goals of the HMS Academy's Interest Group in Peer Observation of Teaching are to develop a culture of teaching improvement across HMS that welcomes peer observation; individualize faculty development for those involved in teaching at the UME, GME, and CME levels; and generate a community-wide conversation about best teaching practices. During our inaugural year, we focused our efforts on cataloguing current HMS peer observation programs; surveying the faculty to determine their level of interest in and attitudes towards a peer observation of teaching program; and presenting an HMS Academy mini-symposium on peer observation.

Despite the interest group's small size, we were able to accomplish the goals set forth for this year. After obtaining IRB approval, we designed a peer observation of teaching survey that was distributed to the HMS Academy membership and the pre-clinical faculty and course directors. Results of the survey indicate that the majority of respondents (n=159) are interested in participating in a peer observation program and receiving training as a peer observer. Moreover, respondents believe that such a program would provide insight into their teaching and enhance their teaching skills.

The goals of the symposium, presented in early June 2011, were to determine the elements needed to introduce peer observation of teaching in courses, clerkships, and residency programs as well as identify barriers and viable solutions to implementation of peer observation of teaching programs. Through a keynote address, small and large group discussions, a panel Q&A, and a summary of the day's findings, participants reached consensus that a peer observation of teaching program would help make teaching explicit, objectify best teaching practices, and benefit both those being observed and those conducting observations. However, participants determined that the success of such a program would depend on institutional support, training faculty observers, and using the criteria of effective teaching to develop reliable and valid observation instruments.

In the coming year we would like to increase the interest group's membership, support the development of existing and new peer observation of teaching programs, and continue work on creating HMS peer observation forms that are anchored in behavioral descriptors of effective teaching. Finally, we would like to assist in developing training programs for faculty interested in becoming peer observers.

Susan Frankl, MD
Lori Newman, EdM

Research Methods

Co-Chair - Ed Krupat, PhD

Co-Chair - Amy Sullivan, EdD

Members:

Jonathan Alpert, MD PhD

Jonathan Fisher, MD MPH

Edward Krupat, PhD

Stephen R. Pelletier, PhD

Helen Shields, MD

Accomplishments and Future Goals:

The aim of the research methods interest group is (1) to identify several key research questions related to school policy and practices that can be answered using the newly integrated student database, and (2) to bring to the community of HMS education researchers skills training in both fundamental and cutting edge research methods that can be used to conduct rigorous research with valid and relevant outcomes. The research methods group supports the Academy's bi-annual research methods course, and will offer annual workshops that address a single research method in depth.

Ed Krupat, PhD
Amy Sullivan, EdD



Photo by Leonard Rubenstein

Resident as Teacher

Co-Chair - Tracey Cho, MD MA
Co-Chair - Hope Ricciotti, MD

Members:

Kamran Badizadegan, MD
Angela Botts, MD
David Brown, MD
Vincent Chiang, MD
Ariel Frey, MD
Amanda Growdon, MD
Alberto Puig, MD
Tom Sandora, MD MPH
Christopher Smith, MD
Michele Szabo, MD
James Takayesu, MD MS
Ann-Marie Thomas, MD

Accomplishments and Future Goals:

The Resident as Teacher Interest Group aims to provide guidance to faculty and chief residents in creating formal curricula to help train residents as teachers. Our goals are to:

- Share a best-practice curricula to the Harvard residency and fellowship training programs so that all house staff receive formal training and evaluation in teaching skills
- Ensure that all residents and fellows understand the learning goals and objectives of Harvard Medical students in the various rotations

To date we have shared interdisciplinary examples of resident as teacher training programs that have included:

- How to incorporate an OSTE in residency programs
- Bedside teaching training for residents
- Teaching on the fly training for residents
- Tips for giving large presentations
- Surgical/procedural resident as teacher training

In February of 2013, we will have our first Academy Resident as Teacher Symposium to share resident as teacher curricula and training ideas with faculty and chief residents.

Tracey Cho, MD MA
Hope Ricciotti, MD

Simulation

Chair - James Gordon, MD MPA

Members:

Christian Arbelaez, MD MPH
Stanley Ashley, MD
Kriti Bhatia, MD
Debra Boyer, MD
Calvin Brown, MD
Jeffrey Cooper, PhD
Steve Dawson, MD
Marc de Moya, MD
Emma Eggleston, MD
Alice Flaherty, MD PhD
Emily Hayden, MD
John Herman, MD
Daniel Jones, MD MS
Kimberly Khoury, MD
Jean Klig, MD
Carolyn Kloek, MD
Brian Labow, MD
Joshua Nagler, MD
Nancy Oriol, MD
John Pawlowski, MD PhD
Roy Phitayakorn, MD
May Pian-Smith, MD MS
Charles Pozner, MD
Jan Pruszek, MD
Helen Riess, MD
Laura Rock, MD
Amelie Rorty, PhD
Sunil Sabharwal, MD
Gary Setnik, MD
David Sloane, MD
Douglas Smink, MD MPH
Kamen Vlassakov, MD
Peter Weinstock, MD PhD

Accomplishments and Future Goals:

The HMS Academy Simulation Interest Group is a key element of the consolidated city-wide consortium of simulation centers (the CIMIT-Boston Simulation Consortium), and continues to provide a venue for collaboration among the HMS-affiliated hospital simulation programs and facilities. Consortium business meetings (with a standing agenda item dedicated to the HMS Simulation Interest Group) are held quarterly as part of the monthly Boston Simulation Community Research and Education Meeting, sponsored by the Center for Medical Simulation in Cambridge.

A consolidated website to help identify and coordinate simulation faculty, activities and resources across the HMS/Boston community was constructed and vetted in AY12, now planned to go live early in AY13 (www.simconsortium.org).

Planning for a fall 2013 Academy Symposium on Simulation is underway, organized by the Interest Group with input from all HMS-affiliated centers.

Other FY12 activities include:

- Two new TMEC experimental classrooms were designed, built, and piloted to accommodate larger tutorial groups and new leaning methods. These rooms each include a new full-body mannequin simulator, installed to explore how distributed, classroom-based simulation could be used as a complement to the “center-based” Gilbert Simulation Labs.
- The HMS PCE Executive Committee considered the topic of simulation as a unifying experience across hospital clerkship sites. The HMS Gilbert Program Simulation Casebook, (with accompanying learning objectives, debriefing points, and multimedia links) is available as an online resource for clerkship directors (<http://mycourses.med.harvard.edu/public>; go to: “View Course List” - “Gilbert” - “Simulation Casebook”).
- Also during AY12, the HMS CME Subcommittee on Pedagogy and Faculty Development formally recommended the expansion of simulation offerings and methods as part of HMS-sponsored CME initiatives.

James Gordon, MD MPA

Writing for Scholarship

Co-Chair - Jonathan Borus, MD
Co-Chair - Susan Pories, MD
FACS

Members:

Terry Bard, DD
Carol Bates, MD
Sigall Bell, MD
Angela Botts, MD
Lisa Breen, MD
Dara Brodsky, MD
Michele Burns-Ewald, MD
Sara Fazio, MD
Jonathan Fisher, MD MPH
Lisa Frontado, MS EdM
Joseph Garfield, MD
Antoinette Peters, PhD
May Pian-Smith, MD MS
Stuart Quan, MD
Steven Schwartzberg, MD

Accomplishments and Future Goals:

The Writing for Scholarship Interest Group recently presented *Writing for Scholarship: Pathways to Publication, Prestige, and Promotion*. We were very honored to have Dr. Jeffrey M. Drazen, the Editor-in-Chief of the New England Journal of Medicine, the former Chief of Pulmonary and Critical Care Medicine at the Brigham and Women's Hospital in Boston and the Parker B. Francis Distinguished Professor of Medicine at Harvard Medical School, open the symposium with an inspired talk on Writing Up Your Research. We then had four concurrent workshops. Julie Whelan, MS, AHIP, Reference Librarian at the Countway Library presented a very useful hands-on workshop demonstration: Using the Library and Technology Tools for Writing. She and her colleagues at the Countway Library sought to convey research resources available to HMS faculty. The Conflicts and Competition in Scholarship Workshop used case-based discussion to highlight conflicts that can arise in scholarly projects, such as authorship order. The Exploring Other Avenues for Medical Education Scholarship Workshop focused on alternative pathways to publication including case reports, review articles, book chapters, curricular-based products, Multi-media projects and MedEdPORTAL. The Journal Submission and Review Process Workshop used cases to demonstrate the submission and review process. The participants were given examples of editorial correspondence and learned how to properly address reviewer comments. All of the workshop handouts have been posted on the Academy Website. Our closing Plenary Address was delivered by Dr. Jerome Groopman, the Dina and Raphael Recanati Professor of Medicine at Harvard Medical School, Chief of Experimental Medicine at Beth Israel Deaconess Medical Center. Dr. Groopman gave a brilliant and engaging talk entitled: Writing for the public: Tales from the New Yorker. In addition to being one of the world's leading researchers in cancer and AIDS, Dr. Groopman is a staff writer for The New Yorker and has written for other lay publications. He is author of *The Measure of Our Days* (1997), *Second Opinions* (2000), *Anatomy of Hope* (2004), *How Doctors Think* (2007), and coauthor with Dr. Pamela Hartzband of the recently released, *Your Medical Mind: How to Decide What is Right for You* (2011).

The Writing for Scholarship Interest Group also co-authored *A Writer's Toolkit*, a 58-page resource to help young faculty members learn the nuances of scientific writing and the publication process. This resource was designed for junior medical school faculty to assist with successful publication in peer-reviewed scientific journals. The Toolkit is a compendium of information that explains how to plan a scholarly project and conduct a literature search. All of the basics of publication are addressed, including choosing the appropriate target journal, establishing a timetable, writing mechanics, and submission. The review process and how to respond to reviews is explained. Multiple links to outside resources are also provided within the text. The Toolkit was printed for symposium participants and has been submitted to MedEdPortal for online publication. We will also plan to post the Toolkit on the Academy Website.

Our future plans include planning additional workshops and expanding the Toolkit to address other types of publications.

Jonathan Borus, MD
Susan Pories, MD FACS

Primary Care Clerkship Peer Observation Project

The Observation of Teaching Program for the Primary Care Clerkships (PCC) was launched in February 2011 to meet the faculty development needs of course preceptors who teach medical students in their busy outpatient clinics. Teaching in this setting is a particularly challenging task given the pressures on clinicians of time, space, the breadth and complexity of patients' medical needs and demands for clinical productivity.

The goals of this program are to assess the feasibility and impact of providing faculty with individualized feedback on their teaching. During the Academic Year 2011- 2012, the program entered its second phase. In the fall of 2011, a training workshop was developed to prepare volunteer faculty to serve as peer observers. Twice during the 8-month course, these observers traveled to PCC preceptors' clinics that were interested in receiving feedback on their teaching, once in the fall and again in the spring. Each time, the observers provided detailed verbal and written feedback to PCC preceptors on their teaching.

To date, observers in this program have completed a total of 45 ninety minute, one-on-one observations. All participants completed post-observation surveys, and these data will be analyzed to serve as a metric of the program's impact as well as used to plan for a more comprehensive rollout of the program in the academic year 2012-13. Observation of teaching can be a powerful tool for faculty development in a wide variety of settings throughout the medical school. The lessons learned from this program may serve to inform the development of similar efforts to improve teaching across the HMS curriculum.

Susan Frankl, MD

Academy Staff Members



Richard Schwartzstein, MD
Director of the Academy

Dr. Richard Schwartzstein is the Ellen and Melvin Gordon Professor of Medicine and Medical Education. Since joining the HMS faculty in 1986, Dr. Schwartzstein has been a member of the division of pulmonary and critical care medicine at Beth Israel Hospital and now, Beth Israel Deaconess Medical Center (BIDMC). In addition to his clinical work and research on the physiology of dyspnea, Dr. Schwartzstein has devoted a substantial portion of his career to medical education. He is course director for Integrated Human Physiology, one of the core courses in the first year curriculum and has served on multiple committees with oversight of the HMS program of studies. In 2004, he was named the vice president for education at BIDMC, where he created the first hospital-based Center for Education in the Harvard system. Dr. Schwartzstein is also the executive director of the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center. The Institute supports the Rabkin Fellowship in Medical Education, sponsors national conferences on key educational topics biannually, provides a range of professional development activities for physicians, and oversees the Shapiro Simulation and Skills Center. Dr. Schwartzstein has a particular interest in the cognitive processes underlying analytical reasoning and the strategies for teaching and assessing critical thinking. Dr. Schwartzstein served on the MR 5 Task Force of the Association of American Medical Colleges, which developed recommendations for revisions of the Medical College Admissions Test (MCAT). In AY 12, Dr. Schwartzstein chaired a strategic planning process for HMS' Department of Continuing Education.



Edward Hundert, MD
*Director of the Center for Teaching
and Learning*

Dr. Hundert is Senior Lecturer in Medical Ethics in the Department of Global Health and Social Medicine at Harvard Medical School, where he serves as co-director of the first year course, Medical Ethics and Professionalism, as well as teaching ethics in the Patient-Doctor III sequence in the third year clerkships. An HMS alumnus, he is an internationally known academic leader, scholar, educator, psychiatrist, and medical ethicist. Over the past 20 years, he has served as President of Case Western Reserve University, Dean of the University of Rochester School of Medicine and Dentistry, and Associate Dean for Student Affairs at Harvard Medical School. He has held professorial appointments in psychiatry, medical ethics, cognitive science, and medical humanities, with a particular focus on developing innovative institutional affiliations and curricula in medical schools and across all levels of higher education.

Dr. Hundert earned his bachelor's degree in mathematics and the history of science and medicine, *summa cum laude*, from Yale University, where he received Yale's Chittenden Prize "to the graduating senior with highest standing in mathematics or the natural sciences." He attended Oxford University as a Marshall Scholar, receiving the Batterby Prize from Hertford College for "highest first class honours in philosophy, politics and economics." Four years later he earned the M.D. from Harvard Medical School, receiving the Sanger Prize for "excellence in psychiatric research." He completed his psychiatric residency at McLean Hospital, where he served as chief resident.

Academy Staff Members



David Roberts, MD

Associate Director of the Academy

Dr. David H. Roberts is an Assistant Professor of Medicine at Harvard Medical School (HMS), and he is the Clinical Director of the Division of Pulmonary, Critical Care and Sleep Medicine at the Beth Israel Deaconess Medical Center (BIDMC). His clinical practice as a pulmonologist is focused on patients with dyspnea and pulmonary hypertension. Dr. Roberts is a graduate of both the Harvard-Macy program and the Rabkin Fellowship in Medical Education at BIDMC.

Dr. Roberts is the Associate Director of the Carl J. Shapiro Institute for Education and Research and Director of Undergraduate Medical Education at BIDMC. Dr. Roberts has won several major teaching awards including the “Teacher of the Year” award in the Combined Harvard Program in Pulmonary Medicine (2005), the HMS Faculty Prize for Excellence in Teaching (2006), and the BIDMC’s S. Robert Stone Award (2007).



Antoinette Peters, PhD

*Associate Director of the Center for Teaching
and Learning*

Antoinette Peters, PhD, is an educational psychologist and associate professor of Ambulatory Care & Prevention. Her expertise lies in curriculum development, faculty development, and program evaluation in medical education. She is particularly interested in small group teaching and learning, and the relationship between instructional design and learning outcomes.

Academy Staff Members



Amy Sullivan, EdD

Associate Director of Education Research

Amy M. Sullivan, Ed.D., is Associate Director for the Office of Education Research at the Academy. Dr. Sullivan is a research psychologist with expertise in research in medical education and psychosocial oncology and palliative care. She joined the Academy in October 2010 from the Virginia Commonwealth University School of Medicine Department of Social and Behavioral Health, where she taught qualitative and quantitative research methods and conducted research in patient-clinician communication related to care at the end of life. Before she joined the VCU faculty, Dr. Sullivan was Assistant Professor of Psychiatry at the Dana-Farber Cancer Institute and Brigham and Women's Hospital Department of Psychiatry, and has served as Co-Chair of the Dana-Farber/Harvard Cancer Center IRB panel for social and behavioral studies. She obtained her doctorate in Human Development and Psychology from the Harvard Graduate School of Education.



Samuel Kennedy, PhD

Dr. Samuel Kennedy, Lecturer on Cell Biology at Harvard Medical School, has taught as a lecturer and served as a tutor in the HMS Human Body course for more than 20 years and over that time has served as lecturer in several other HMS anatomy and pharmacology courses. As a faculty member in the New Pathway curriculum, Dr. Kennedy has led sessions as a new tutor trainer for over 15 years and, more recently, has served as a follow-up observer of faculty in tutorials.

Academy Staff Members



Lisa Frontado, MS EdM
Manager of Academy Programs

Lisa Frontado is the Manager of Academy Programs. She manages the development, implementation and evaluation of Academy Faculty Development Programs, Interest Groups, and Membership. She joined the Academy after having spent nine years at Harvard Graduate School of Education's Project Zero, a think tank focusing on the enhancement of learning and thinking skills in the humanistic and scientific disciplines. While at HGSE, Lisa was also part of the Learning Innovation Laboratory, a consortium of researchers and practitioners who considered the challenges of human learning and innovation in organizations focused on scientific development, engineering, national defense, and aviation. Lisa's interests lie in the development of thinking skills, reasoning attitudes, problem solving and decision-making in complex environments. Lisa is bilingual in English and Spanish. She holds a BA in International Relations from Mount Holyoke College, an MS in Mass Communications from Boston University's College of Communication and an EdM from Harvard Graduate School of Education.



Nicole Wong
Program Coordinator

Nicole Wong is a graduate of the University of Hawaii with a degree in Ethnic Studies with a minor in Chinese. Prior to moving to Boston, she lived in Honolulu with a career in special events, assisting with weddings, fashion shows, and fundraisers. Nicole is responsible for producing professional development programs including Medical Education Day, The Academy Symposia and various workshops. She maintains the Academy and CME Membership credits for participants. Nicole also manages the logistics of the Academy Fellowships program.



Suzanna Shorey
Program Assistant

Suzanna Shorey is a graduate of UMass Amherst with a degree in history. She is currently studying for an MS in Higher Education Administration. Suzanna is responsible for the design and production of the Academy publications, namely the Academy Annual Report and brochure. She has also designed and currently maintains the Academy website. She manages the logistics for the implementation of all Academy programs. She is also responsible for the coordination of the Academy Center for Teaching and Learning's Orientation Program for New Tutors in the Pre-clinical Courses at Harvard Medical School.

Academy Faculty Consultants

Task goals: FOM course exam review



Susan Farrell, MD EdM

Dr. Farrell graduated from Syracuse University and Tufts School of Medicine and trained in emergency medicine and medical toxicology at Medical College of Pennsylvania. She is Director of Student Programs and the Emergency Medicine Clerkship at BWH, and Course Co-Director, Emergency Medical Care, at HMS. Dr. Farrell created and writes “TOX TALKS,” a case-based toxicology newsletter. She teaches in numerous courses at HMS, including an emergency medicine elective for 1st-year students, “Beyond Shadowing.” She participates in the Mentor/Mentee Program, Harvard Affiliated Emergency Medicine Residency, and has been a Macy Scholar and Rabkin Fellow in Medical Education.

Activities: The literature on exam question creation, purpose, and psychometric characteristics was reviewed. Thirteen exams from seven FOM Year 1 and six exams from three FOM Year 2 courses were reviewed, with attention to the number and format of questions. A spreadsheet of pertinent data was created and a comparative analysis and summary was written.

Courses reviewed:

FOM YEAR 1

THE MOLECULAR AND CELLULAR BASIS OF MEDICINE (IN751)

INTEGRATED HUMAN PHYSIOLOGY (IN752)

THE HUMAN BODY (IN753)

IMMUNOLOGY, MICROBIOLOGY, AND PATHOLOGY (IN754)

HUMAN GENETICS (IN755)

CLINICAL EPIDEMIOLOGY AND POPULATION HEALTH (AC511)

INTRODUCTION TO HEALTHCARE POLICY (HC750)

FOM YEAR 2

HUMAN DEVELOPMENT (IN731)

PSYCHOPATHOLOGY AND INTRODUCTION TO CLINICAL PSYCHIATRY (PS700M.J)

HUMAN SYSTEMS (IN757)

Brief summary: Nearly all examinations use a combination of question formats, MCQs being used the most frequently across all exams. Exceptions include two exams, (one from Year 1 and one from Year 2), that employ only MCQs and two exams, (one from Year 1 and one from Year 2), that use only short answer question formats. Many MCQ format questions use negative question stems, which may be more difficult for students to understand.

Type 1 questions were defined as: a question that requires an answer that is defined or informed by one concept. Type 1 questions are characterized by a single-step relationship between the question and the correct answer; commonly ask for a definition, an identification, or recall of a single concept. For example, “Identify the structure at the tip of the arrow.” Type 2 questions were defined as: a question that requires an answer that is informed by the linkage of greater than one concept. Type 2 questions are characterized by multiple-step thinking and the application of knowledge in order to subsequently support or explain reasoning or decision-making in the answer. For example, “What microbe is associated with the pathology shown on this slide?” Type 1 questions dominated exam questions, with the exception of the two exams that employed only short answer formats, both exams using only Type 2 questions.

Academy Faculty Consultants



Susan Frankl, MD

Dr. Frankl, a community-based general internist, graduated from SUNY, Binghamton, and Stanford Medical School, and trained in internal medicine at University of Washington and Brigham & Women's Hospital. Dr. Frankl is Deputy Director, Primary Care Clerkship, and a member of the Generalist Education and Faculty Development Leadership Group of the Association of Professors of Medicine and the Teaching for Tomorrow Initiative at U Mass Medical School. She is also involved in faculty development initiatives for ambulatory preceptors, and precepts medical students in her primary care practice. She has been a Harvard-Macy Scholar and a Rabkin Fellow in Medical Education.

My major goal as a Faculty Consultant in the Academy at HMS in the Academic Year 2011-2012 was to implement the second phase of the Observation of Teaching Program for the Primary Care Clerkship.

In the fall of 2011, I developed a training workshop for this program and subsequently recruited and trained six additional faculty to serve as peer observers. Fifteen preceptors agreed to participate and to receive feedback on their teaching. Observers traveled to the preceptors' clinics twice during the course, once in the fall and again in the spring. Each time, the observers provided detailed verbal and written feedback to PCC preceptors on their teaching. All participants completed post-observation surveys, and these data will be analyzed to serve as a metric of the program's impact as well as used to plan for a more comprehensive rollout of the program in the academic year 2012-13.

In addition, I coordinated and implemented two large group faculty development sessions that were presented for the PCC faculty; the first focused on "Innovations for Teaching Primary Care Medicine" and the second on "The Use of On-line Resources for Teaching Evidence-Based Medicine". In addition, I created and presented a new session in Fall 2011 specifically designed to provide necessary orientation and skills to faculty joining the PCC for the first time.

Another significant focus of my activity as a Faculty Consultant was serving in a leadership role as co-chair of the Academy Interest Group on Peer Review of Teaching. In collaboration with the other co-chair, Lori Newman, we used the Delphi method to develop and validate an instrument to be used for peer review of teaching in HMS Pre-Clerkship Courses.

Presentations of research included (1) a poster at HMS Medical Education Day and (2) an oral abstract at the AAMC RIME conference in Denver, CO.

Academy Faculty Consultants



James Gordon, MD MPA

Dr. James Gordon graduated from Princeton, University of Virginia Medical School, and University of Michigan School of Public Policy and trained in emergency medicine at the University of Michigan Medical Center. As Director of the MEC Program in Medical Simulation for medical students, he precepts simulation exercises for numerous HMS courses, including IHP, Human Systems, Pt/Dr II and III, Transition to the Wards, and the surgery and emergency medicine clerkships. He has completed the Harvard Macy Physician Educator and Leadership Programs. In 2001, he was awarded a Morgan-Zinsser Fellowship in the Academy at HMS.

During AY12 two new TMEC experimental classrooms were designed, built, and piloted to accommodate larger tutorial groups and new leaning methods. Two new full-body mannequin simulators were acquired for these rooms to explore how classroom-based simulation could be used as a complement to the “center-based” Gilbert Simulation Labs. Pilot work within Integrated Human Physiology focused on the new team-based tutorial method itself, setting the stage for dedicated experimentation with distributed simulation resources into AY13. To facilitate this work, the Center for Integration of Medicine and Innovative Technology (CIMIT, an HMS-affiliated Center), is leading a collaborative effort to explore how simulation technology can be made available at a much lower cost, and with a much simpler user interface—allowing for more flexible experimentation with simulator technology across settings.

This year, the HMS PCE Executive Committee considered the topic of simulation as a unifying experience across hospital clerkship sites, capitalizing on the growth of hospital-based simulation available to students during their clinical rotations. A Simulation Casebook, containing 22 core cases tested and deployed in the laboratories of the Gilbert Program in Medical Simulation (with accompanying learning objectives, debriefing points, and multimedia links), was presented as a resource to help clerkship directors explore how simulation clerkship experiences might be shared across sites (the Casebook can be found online at <http://mycourses.med.harvard.edu/public>; goto “View Course List” - “Gilbert” - “Simulation Casebook”).

Also during AY12, the HMS CME Subcommittee on Pedagogy and Faculty Development convened to consider recommendations for future directions of the Department of Continuing Education at HMS. Simulation was an important part of the discussion, with a focused presentation on the topic. A formal committee recommendation emerged to expand simulation offerings and methods as part of HMS CME initiatives.

Academy Faculty Consultants



Alexander Green, MD MPH

Dr. Green is Associate Director at the Disparities Solutions Center at Massachusetts General Hospital and lecturer at Harvard Medical School. He has authored articles, and widely presented his work, on topics including cross-cultural education, culturally competent health care systems, and language barriers and interpreters. Dr. Green has been involved in a variety of research projects on racial/ethnic disparities in health and cultural competence and his research has been funded by RWJF, The Commonwealth Fund, NIH, and HCFA (now CMS). He helped produce a documentary film and education project, “Worlds Apart,” designed to teach health professionals to better care for patients across cultural divides.

My work with the HMS Academy over the past academic year has focused on the overarching goal of improving the teaching of cross-cultural care and communication skills. To achieve this I have divided my efforts at HMS into four components, each of which intersects with the others and aims to improve the overall educational experience for both faculty and students in this important area.

1) Assessment: In order to gain a deeper understanding of students’ perspectives on the teaching of cross-cultural care at HMS and their level of cultural competency across the four-year continuum, we developed and conducted a longitudinal, yearly survey for HMS students at each class level. We now have three years of data with a response rate of over 60%. Our findings will help to shape the redesign and teaching of cross-cultural care throughout the pre-clerkship curriculum. In addition, this year I have collected data from the student course evaluation survey to explore how students perceived the incorporation of cross-cultural issues into all courses from 2003 to the present.

2) Curriculum enhancement: I was appointed to serve on the HMS Clinical Skills Taskforce in 2010 and 2011 to help restructure how HMS teaches and evaluates clinical skills. I co-led the communication skills and cross-cultural care working group and have developed a plan to integrate 8 core cross-cultural skills into a revamped Patient-Doctor I and II curriculum. This will require an extensive faculty development program for the new combined PD1/PD2 faculty, which I will lead. However, this is currently on hold and will likely be incorporated into the broader curriculum redesign that is underway.

3) Funded projects: I was recently awarded a grant from the Macy Foundation as PI to create web-based and facilitated interprofessional group sessions for medical and nursing students dealing with the prevention of medical errors for patients with limited English proficiency. This curriculum will be developed this year and piloted next year, and discussions are underway for how to integrate this into the overall curriculum at HMS.

4) Leadership: This year I started an Interest Group within the Harvard Academy focusing on cross-cultural care and we have held our first meeting, agreeing on a set of goals and objectives including a broad review of course directors to understand where these issues spear currently in their courses. In addition as chair of the cross-cultural care committee at HMS, I have overseen a cadre of 25 faculty members through regular meetings and faculty development sessions, who are skilled in cross-cultural education. These faculty have led sessions in ITP, PD1, PD2, the PD2 OSCE, and the 4th year OSCE. I plan to write a paper on cross-cultural education this year with David Roberts based on the “twelve tips” model.

Academy Faculty Consultants



Michael Parker, MD

Dr. Parker is a Senior Interactive Media Architect in the Center for Educational Technology at Harvard Medical School and Assistant Professor of Medicine in the Division of Pulmonary and Critical Care Medicine at Beth Israel Deaconess Medical Center. Dr. Parker received Bachelor's and Master's degrees in Electrical Engineering and Computer Science from MIT. He went to medical school at University of Colorado and returned to Boston for internal medicine residency at Brigham and Women's Hospital. He now combines his computer and medical knowledge to create interactive Web-based animations and simulations to enhance medical education. He also has multiple teaching roles at HMS, including lecturer and tutor in the Human Systems course. The interactive diagrams Dr. Parker created as co-author of a respiratory physiology textbook were recently honored with the 2006 Frank Netter Award.

As part of his work with the Academy, Michael Parker collaborates closely with staff in the Center for Educational Technology, including Director of Educational Applications Jason Alvarez, to assess new educational technologies for faculty and student use. These technologies include electronic whiteboards, web conferencing solutions, collaborative learning applications, and mobile learning tools. As part of this work, Dr. Parker has helped evaluate and guide incorporation of medical mobile applications into teaching and learning. During AY12, Dr. Parker helped initiate the use of Piazza as a wiki-like question and answer collaborative site now being phased into use with HMS courses after a successful rollout in the Integrated Human Physiology course. As co-chair of the Academy's Educational Technology Special Interest Group (SIG), Dr. Parker looks for ways to raise faculty and student awareness of existing resources (for example, through initiation of an educational technology wiki) and to further faculty outreach and development with respect to best practices in leveraging technology for education. Activities accomplished during AY12 with the SIG include organizing and running an Educational Technology Symposium that offered unique interactive workshops on timely topics such as writing on screens for teaching, integrating mobile technology into teaching and learning, and creating Khan Academy style videos. Students were engaged to teach faculty about technologies and software that the students found most valuable in their learning.

Future plans include promoting awareness and training surrounding new resources and technological advances at HMS including the new "classrooms of the future", the re-design of the MyCourses platform, and the curriculum map project.

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Academy Member Publications 2011-2012

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