Integrating Education, Simulation, Assessment and Research: Moving Forward from State of the Art

A catalyst for discussion, networking and scholarship among faculties of New York University’s health professional schools and colleges

Monday, June 2, 2008
8:30AM-5:00PM
Smilow Conference Center

Sponsored by
THE PROGRAM FOR MEDICAL EDUCATION INNOVATIONS AND RESEARCH
Division of General Internal Medicine
Section of Primary Care
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELCOME</td>
<td>SECTION 1</td>
</tr>
<tr>
<td>PROGRAM FOR MEDICAL EDUCATION INNOVATIONS AND RESEARCH (PrMEIR)</td>
<td>SECTION 1</td>
</tr>
<tr>
<td>SCHEDULE</td>
<td>SECTION 1</td>
</tr>
<tr>
<td>SPEAKER BIOGRAPHIES</td>
<td>SECTION 2</td>
</tr>
<tr>
<td>KEYNOTE ADDRESS: MEDICAL EDUCATION RESEARCH – CURRENT ISSUES AND FUTURE DIRECTIONS</td>
<td>SECTION 3</td>
</tr>
<tr>
<td>SIMULATION, ASSESSMENT, AND RESEARCH: STATE OF THE ART AT NYU</td>
<td>SECTION 4</td>
</tr>
<tr>
<td>BUILDING THE EVIDENCE FOR MEDICAL EDUCATION: DATABASE FOR RESEARCH ON EDUCATION IN ACADEMIC MEDICINE (DREAM)</td>
<td></td>
</tr>
<tr>
<td>VIRTUAL PATIENTS</td>
<td></td>
</tr>
<tr>
<td>SIMULATION</td>
<td></td>
</tr>
<tr>
<td>STANDARDIZED PATIENTS: CURRENT USES AND PROSPECTS</td>
<td></td>
</tr>
<tr>
<td>REFLECTIONS ON PRESENTATIONS</td>
<td>SECTION 5</td>
</tr>
<tr>
<td>SAMPLE OF MEDICAL EDUCATION INITIATIVES AT NYU</td>
<td>SECTION 6</td>
</tr>
<tr>
<td>NEW INITIATIVES</td>
<td>SECTION 7</td>
</tr>
<tr>
<td>CONFERENCE PARTICIPANTS</td>
<td>SECTION 8</td>
</tr>
<tr>
<td>CONFERENCE PLANNING TEAM</td>
<td>SECTION 9</td>
</tr>
</tbody>
</table>
WELCOME

Dear Participants:

As the inaugural event of the Program for Medical Education Innovations and Research (PrMEIR), we proudly welcome you to today’s conference on Integrating Education, Simulation, Assessment and Research: Moving Forward from State of the Art. Through this conference, we aim to catalyze discussion and increase networking and scholarship among the health professional schools and colleges at New York University.

Our goals today are to explore (1) simulation technologies being utilized in education nationally and locally at NYU, (2) the impact of an educational research database on patient outcomes, and (3) the power of collaborative educational research projects across professional schools, an envisioned conference outcome. Please keep these goals and your programs in mind throughout the day, as we envision our collective efforts to take us a great stride forward in the level of education and research we provide at our institution.

We hope this experience both enlightens and enhances our work together.

Sincerely,

Sondra Zabar, MD  Adina Kalet, MD, MPH
Conference Co-Director  Conference Co-Director
PrMEIR Program Director  PrMEIR Education Director
The Division of General Internal Medicine, Section of Primary Care, received a generous gift from Stanley and Judith M. Zabar to establish the Program for Medical Education Innovations and Research.

The Program for Medical Education Innovations and Research is led by Drs. Sondra Zabar, Adina Kalet and Mack Lipkin, nationally recognized medical education innovators and researchers, who will work with Executive and Advisory Committees to strategically plan for program integration and success. Funding will support the development of the Program’s infrastructure and new initiatives, and will facilitate efficient management of current medical education initiatives including:

- The Merrin Faculty Development Program and its related Master Clinician Fellowship Program which provides faculty with focused training to become masters of the physical examination
- The Research on Medical Education Outcomes (ROMEO) Initiative focused on improving the understanding of the links between medical education and healthcare outcomes
- The NYUSOM Internal Small Grants Program which supports faculty initiatives in medical education and research
- An extensive Performance Based Assessment Program with validated patient cases and tools

A distinguishing feature of the Program will be to study which educational efforts have the greatest positive impact on patient care delivery, outcomes and safety.

For further information about the Program, please email Sondra Zabar (sondra.zabar@nyumc.org) or Adina Kalet (adina.kalet@nyumc.org).
<table>
<thead>
<tr>
<th>TIME</th>
<th>SESSION</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 A.M.</td>
<td>REGISTRATION &amp; CONTINENTAL BREAKFAST</td>
<td>Smilow Breezeway</td>
</tr>
<tr>
<td>9:00 A.M.</td>
<td>WELCOME</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Robert Grossman, MD, Dean, School of Medicine &amp; CEO, NYU Langone Medical Center</td>
<td></td>
</tr>
<tr>
<td>9:05 A.M.</td>
<td>CONFERENCE GOALS</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Sondra Zabar, MD, Assistant Professor of Medicine &amp; Director, Primary Care Residency Program, NYUSOM</td>
<td></td>
</tr>
<tr>
<td>9:10 A.M.</td>
<td>KEYNOTE ADDRESS: MEDICAL EDUCATION RESEARCH – CURRENT ISSUES &amp; FUTURE DIRECTIONS</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>David Cook, MD, MHPE, Associate Professor of Medicine, Mayo Clinic College of Medicine</td>
<td></td>
</tr>
<tr>
<td>10:00 A.M.</td>
<td>DISCUSSION</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Facilitator: Sondra Zabar, MD</td>
<td></td>
</tr>
<tr>
<td>10:15 A.M.</td>
<td>BREAK</td>
<td></td>
</tr>
<tr>
<td>10:30 A.M.</td>
<td>SIMULATION, ASSESSMENT &amp; RESEARCH: STATE OF THE ART AT NYU</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>• Database for Research in Education and Medicine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Colleen Gillespie, PhD, Assistant Professor &amp; Director, Population Health Research, NYUSOM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Virtual Patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marc Triola, MD, Director, Division of Educational Informatics, NYUSOM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Simulation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thomas Riles, MD, Associate Dean for Medical Education &amp; Technology, NYUSOM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Performance Based Assessments</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sondra Zabar, MD</td>
<td></td>
</tr>
<tr>
<td>11:30 A.M.</td>
<td>WHERE ARE WE NOW? REFLECTIONS ON PRESENTATIONS</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Facilitator: Adina Kalet, MD, MPH, Associate Professor and Director, Education and Research, Division of Educational Informatics &amp; Section of Primary Care</td>
<td></td>
</tr>
<tr>
<td>12:15 P.M.</td>
<td>LUNCH &amp; SAMPLING OF MEDICAL EDUCATION INITIATIVES AT NYU</td>
<td>Smilow Café &amp; Garden Area (Ground Floor)</td>
</tr>
<tr>
<td></td>
<td>(POSTER/COMPUTER PRESENTATIONS)</td>
<td></td>
</tr>
<tr>
<td>1:15 P.M.</td>
<td>FRAMING THE FUTURE (Large Group Discussion)</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Facilitator: Mack Lipkin, MD, Professor of Medicine; Director, Section of Primary Care; Co-Director, Primary Care Residency Training Program</td>
<td></td>
</tr>
<tr>
<td>1:45 P.M.</td>
<td>NEW INITIATIVES (Working Groups)</td>
<td>Smilow Seminar Room, Conference Room A, Conference Room B, 13th Floor Conference Room</td>
</tr>
<tr>
<td></td>
<td>Facilitators: David Cook, MD, MHPE; Colleen Gillespie, PhD; Adina Kalet, MD, MPH; Mack Lipkin, MD; Thomas Riles, MD; Marc Triola, MD; Sondra Zabar, MD</td>
<td></td>
</tr>
<tr>
<td>3:15 P.M.</td>
<td>BREAK</td>
<td>Smilow Breezeway</td>
</tr>
<tr>
<td>3:30 P.M.</td>
<td>REPORTS FROM WORKGROUPS &amp; DISCUSSION</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Facilitator: Mack Lipkin, MD</td>
<td></td>
</tr>
<tr>
<td>4:30 P.M.</td>
<td>PUTTING IT ALL TOGETHER: REFLECTIONS FROM THE DAY</td>
<td>Smilow Seminar Room</td>
</tr>
<tr>
<td></td>
<td>Facilitators: Mack Lipkin, MD; Adina Kalet, MD, MPH,;and Sondra Zabar, MD</td>
<td></td>
</tr>
<tr>
<td>5:00 P.M.</td>
<td>NETWORKING RECEPTION</td>
<td>Smilow Café &amp; Garden Area (Ground Floor)</td>
</tr>
</tbody>
</table>
SPEAKER BIOGRAPHIES

David Cook, MD, MHPE
Associate Professor of Medicine, Mayo Clinic College of Medicine

Dr. Cook received a BS in chemistry from Utah State University and an MD from the Johns Hopkins University School of Medicine before going to the Mayo Clinic, where he completed residency in Internal Medicine, a fellowship in General Internal Medicine, and joined the staff in 2004. He subsequently completed a Masters degree in Health Professions Education through the University of Illinois at Chicago - Department of Medical Education. He is currently an Associate Professor of Medicine in the Mayo Clinic College of Medicine, Consultant in the Division of General Internal Medicine, and Chair of the Mayo Clinic Medical Education Research Group. He is a deputy editor for the Journal of General Internal Medicine, and co-editor of the forthcoming JGIM 2008 special issue on medical education. Dr. Cook's research interests include the theory and design of web-based learning, the quality of medical education research methods and reporting, learning theory and instructional design, and assessment of clinical performance and clinical teaching. He has developed and studied multiple web-based courses for residents and medical students, presented at numerous national and international conferences, and published over 40 journal articles and book chapters on medical education topics. He and his wife Jennifer are the parents of five incredibly wonderful children.

Colleen Gillespie, PhD
Associate Professor of Medicine, NYU School of Medicine

Dr. Gillespie received her PhD in community psychology from NYU Graduate School of Arts and Science and her BA in psychology and history from Rice University. As an Associate Professor of Medicine at NYUSOM, she conducts medical education and health services research, seeking to reduce the distance between these two areas of research through efforts to link medical education with the quality of patient care, focusing in particular on communication, the doctor-patient relationship, professionalism and the promotion of behavior change. Dr. Gillespie has a strong interest in research design and methods and in the challenges of measurement, especially performance-based assessment. She also teaches research methods and program evaluation within the Division of General Internal Medicine and at NYU’s Wagner School of Public Service.
Adina Kalet, MD, MPH
Associate Professor of Medicine and Surgery, NYU School of Medicine

Dr. Kalet graduated from the Mount Sinai School of Medicine, was in the first cohort of NYU/Bellevue Primary Care Internal Medicine Residents, a New York Academy of Medicine Bowen-Brooks Fellow, and a graduate of the Robert Woods Johnson Clinical Scholars Program where she received her MPH in Epidemiology. She is a tenured Associate Professor of Medicine and Surgery, Director of Medical Education for the Section of Primary Care, Medical Education Advisor to the Surgery Education Center, the Director of Medical Education for the Division of Educational Informatics, Society Master for the Master Scholars Program Walter Reed Society of Public Health and Health Policy at NYU SOM, the founding Director of the Primary Care Public Health Scholars Program at NYU School of Medicine and the faculty leader of the Professional Development Portfolio project for UME. Dr. Kalet practiced and taught at Governor Diagnostic and Treatment Center before becoming the Program Director of the Macy Initiative in Health Communications at NYU. Since then she has been instrumental in developing and implementing innovative curricular changes in undergraduate and graduate curricula which prepare future physicians for practice in medically underserved communities. Dr. Kalet loves mentoring students who want to make the world a better place almost as much as she loves her husband (also a Primary Care Physician), 2 children, and her dog.

Mack Lipkin, Jr., MD
Professor of Medicine, NYU School of Medicine
Co-Chief, Section of Primary Care

Dr. Lipkin graduated (magna, phi beta kappa) from Harvard’s College and Medical School. After Residency at UNC and USPHS Fellowship in Medicine and Psychiatry with George Engel, he joined faculty at the University of Rochester where he was Coordinator for Psychosocial Aspects of Primary Care and developed the first fellowship program on psychosocial aspects of primary care and the first psychosocial, intensive, block curriculum. He developed a unique model integrating mental health into primary care mental health services at an HMO he helped start, ran an award winning free clinic, Threshold, and a post-residency fellowship program in psychosocial aspects of primary care, and researched genetic counseling as a model of patient doctor educational interactions. The Lipkin Model, which he developed, uses simultaneous teaching of knowledge, skills, and attitudes in intensive workshop formats that have been demonstrated to change knowledge, skills, attitudes, and enduring behavioral patterns of students, residents, and practitioners. The model has been adopted for teaching of the doctor patient relationship, the medical interview, pain, alcoholism, cancer care, end of life care, teaching, and personal awareness of physicians. Dr. Lipkin was PI of the Macy Initiative in Health Communication, a three-school four-year
study of education in humanism, medical interviewing, and related issues. Dr. Lipkin is PI of NYU's award winning development of a first responders' training program, Psychosocial Aspects of Bio-terrorism and Disaster Preparedness. He has produced twelve books (including The Medical Interview) and over 160 articles and chapters.

**Thomas Riles, MD**  
Associate Dean for Medical Education & Technology, NYUSOM

Dr. Riles is the Associate Dean for Medical Education and Technology and Frank C. Spencer Professor of Surgery at NYU Langone Medical Center. He received a BA in Biology from Stanford University and an MD from Baylor College of Medicine. He completed his general surgical residency training and vascular surgery fellowship at NYU School of Medicine. He is a national leader in vascular surgery and a pioneer in carotid artery surgery for stroke prevention and aneurysm repair. Over his three decades at NYU, he has served as Director of the Division of Vascular Surgery, Senior Vice President for Clinical Affairs in the Office of the President, and Chairman of the NYU Department of Surgery, in addition to his current role. He is currently a member of the Vascular Surgery Board of the American Board of Surgery and a member of the Committee on Resident Education for the American College of Surgeons. He has had a long-standing commitment to development in medical education: during his tenure as Chairman of the Department of Surgery, Dr. Riles was a key architect for the WISE-MD (Web Initiative for Surgical Education) program and continues to serve as a member of the WISE-MD Board of Directors. He is also a champion of simulation at the NYU Langone Medical Center, co-chairing the Committee on Simulation and Clinical Skills.

**Marc Triola, MD**  
Director, Division of Educational Informatics, NYUSOM

Dr. Triola is a graduate of Johns Hopkins University and the NYU School of Medicine. He completed residency training in Internal Medicine at NYU School of Medicine and subsequently served as Chief Resident for the Internal Medicine Training Program. He completed a Research Fellowship in Medical Informatics at the NYU and Mount Sinai Schools of Medicine, is Board Certified in Internal Medicine and is a practicing Hospitalist at the Manhattan Veterans Affairs Medical Center in New York City. Dr. Triola serves as the Director of the Division of Educational Informatics at NYUSOM, one of the largest Educational Informatics laboratories in the country. He is also the Chief of the Section of Medical Informatics at NYU
School of Medicine, an academic research group focused on both educational and clinical Informatics. Dr. Triola's research experience and expertise includes computer-based medical education, the use of Virtual Patients, factors affecting the usability and impact of clinical information systems, and the assessment of change in knowledge and attitudes resulting from online patient education programs. Dr. Triola is PI of an NIH/NLM funded IAIMS grant evaluating the use of technology in medical education of health care providers and patients and has participated in several multi-center trials evaluating both clinical and educational Informatics interventions. He is a national expert on Virtual Patients and serves on the national advisory board for creating standards for Virtual Patients, is a Project Chair of an AAMC subcommittee on distance learning in education, and co-Chairs a national task force on databases in medical education. Addison Wesley recently published Dr. Triola's first textbook, entitled “Biostatistics for the Biological and Health Sciences.”

Sondra Zabar, MD
Assistant Professor of Medicine, NYU School of Medicine

Dr. Zabar received an AB from Brown University (magna cum laude), her MD degree from the NYU School of Medicine, where she also completed a Primary Care Residency and served as Chief Resident, and has hospital appointments at Bellevue Hospital Center and Gouverneur Healthcare System. Dr. Zabar is Director of the Primary Care Internal Medicine Residency Training Program at the NYU School of Medicine and Co-Director of the Section of Primary Care, Division of General Internal Medicine. Her contributions to medical education at the undergraduate, graduate and postgraduate levels include: designed and evaluated a comprehensive 10-station performance based assessment of residents’ knowledge, skills and attitudes – done annually for all primary care residents, categorical residents and by invitation to other residency training programs; chairs the NYU School of Medicine’s Graduate Medical Education Curriculum Committee; led the faculty development component of the Macy Initiative in Health Communication – a multi-site medical school project which integrated a common set of doctor/patient communication competencies during the third clerkship year; serves as curriculum leader for the CDC funded program to plan, develop, implement and evaluate a model educational program to teach health care providers about the psychosocial aspects of bio-terrorism preparedness and response; coordinated the design and implementation of a Systems Based Practice web-based curriculum for all NYU Residency Programs and developed and piloted several other web-based learning modules. Dr. Zabar has published and presented at local and national professional meetings on topics which include: teaching and learning in medicine, faculty development and measuring residents’ teaching competencies. She was the recipient of the 2002 Excellence in Medical Education Award of the NYU Section of Primary Care, and was the recipient of the 2006 Society of General Internal Medicine award for Scholarship in Medical Education and the 2006 Mid-Atlantic Regional SGIM Medicine Medical Educator Award.
KEYNOTE ADDRESS:
MEDICAL EDUCATION RESEARCH – CURRENT ISSUES AND FUTURE DIRECTIONS

David Cook, MD, MHPE
Articles Referenced


Since the latter part of the 1990’s, the English-speaking medical education community has been engaged in a debate concerning the types of research that should have priority. To shed light on this debate and to better understand its implications for the practice of research, 23 semistructured interviews were conducted with “influential figures” from the community. The results were analyzed using the concept of “field” developed by the sociologist Pierre Bourdieu. The results reveal that a large majority of these influential figures believe that research in medical education continues to be of insufficient quality despite the progress that has taken place over the past 2 decades. According to this group, studies tend to be both redundant and opportunistic, and researchers tend to have limited understanding of both theory and methodological practice from the social sciences. Three factors were identified by the participants to explain the current problems in research: the working conditions of researchers, budgetary restraints in financing research in medical education, and the conception of research in the medical environment. Two principal means for improving research are presented: intensifying collaboration between PhD’s and clinicians, and encouraging the diversification of perspectives brought to bear on research in medical education.


Boyer and Glassick’s broad definition of and standards for assessing scholarship apply to all aspects of education. Research on the quality of published medical education studies also reveals fundamentally important elements to address. In this article a three-step approach to developing medical education projects is proposed: refine the scholarly question, identify appropriate designs and methods, and select outcomes. Refining the scholarly question requires careful attention to literature review, conceptual framework, and statements of problem and study intent. The authors emphasize statement of study intent, which is a study’s focal point, and conceptual framework, which situates a project within a theoretical context and provides a means for interpreting the results. They then review study designs and methods commonly used in education projects. They conclude with outcomes, which should be distinguished from assessment methods and instruments, and are separated into Kirkpatrick’s hierarchy of reaction, learning, behavior and results.


While writing a grant proposal may take a few days, the planning of the study takes much longer and requires thoughtful consideration. The use of a systematic and itemised approach can help in planning crucial details of a study. An eight-step, 28-question, iterative approach is proposed to help with the careful planning of experiments in order to maximise the researchers’ chances of acceptance when submitting the study for funding and its results for publication. The steps include defining a relevant research question; selecting instrumentation, study design and statistics; determining sample size and sampling procedure; ensuring data quality throughout data collection and analysis; setting personnel and budget requirements, and writing a convincing grant proposal. Reviewers pay particular attention to the importance of the research topic and question, the presence of a clear problem statement and up to date review of the literature, the use of an optimal design and instrumentation, a sufficient and unbiased sample,
and appropriate and well applied statistics. They also appreciate a clear and easy to follow proposal. The research question is the keystone of the entire enterprise, followed by the selection of an optimal study design and the control of possible confounding variables. No study is perfect. The researchers must constantly weigh advantages and disadvantages and select the most scientifically sound and feasible alternatives. While the steps and questions presented are best applied to experimental studies, the principles are also applicable to a wide range of questions and observational, evaluative and qualitative designs.


Media-comparative research—that is, the comparison of computer-based learning (CBL) to noncomputer instruction—is logically impossible because there are no valid comparison groups. Results from media-comparative studies are thus confounded and difficult to meaningfully interpret. In 1994, Friedman proposed that such research be supplanted by investigations into CBL designs, usage patterns, assessment methods, and integration. His proposal appears to have largely been ignored. In this article, the author updates the agenda for research in CBL (including Web-based learning). While media-comparative studies are confounded, CBL-CBL comparisons are often not. CBL instructional designs vary in configuration (e.g., discussion board or tutorial), instructional method (e.g., case-based learning, personalized feedback, or simulation), and presentation (e.g., screen layout, hyperlinks, or multimedia). Comparisons within one level (for example, comparing two instructional methods) facilitate evidence-based improvements, but comparisons between levels are confounded. Additional research questions within the CBL-CBL framework might include: Does adaptation of CBL in response to individual differences such as prior knowledge, computer experience, or learning style improve learning outcomes? Will integrating CBL with everyday clinical practice facilitate learning? How can simulations augment clinical training? And, how can CBL be integrated within and between institutions? In addressing these questions it is important to remember the most important outcome—effect on patients and practice—and outcomes specific to CBL including costs, cognitive structuring, and learning unique to the computer-based environment. CBL is not a panacea, but holds great promise. Realization of this potential requires that media-comparative studies be replaced by rigorous, theory-guided comparisons of CBL interventions.


Validity and reliability relate to the interpretation of scores from psychometric instruments (eg, symptom scales, questionnaires, education tests, and observer ratings) used in clinical practice, research, education, and administration. Emerging paradigms replace prior distinctions of face, content, and criterion validity with the unitary concept “construct validity,” the degree to which a score can be interpreted as representing the intended underlying construct. Evidence to support the validity argument is collected from 5 sources:

- Content: do instrument items completely represent the construct?
- Response process: the relationship between the intended construct and the thought processes of subjects or observers
- Internal structure: acceptable reliability and factor structure
- Relations to other variables: correlation with scores from another instrument assessing the same construct
- Consequences: do scores really make a difference?
Evidence should be sought from a variety of sources to support a given interpretation. Reliable scores are necessary, but not sufficient, for valid interpretation. Increased attention to the systematic collection of validity evidence for scores from psychometric instruments will improve assessments in research, patient care, and education.


As medical education research advances, it is important that education researchers employ rigorous methods for conducting and reporting their investigations. In this article we discuss several important yet oft neglected issues in designing experimental research in education. First, randomization controls for only a subset of possible confounders. Second, the posttest-only design is inherently stronger than the pretest–posttest design, provided the study is randomized and the sample is sufficiently large. Third, demonstrating the superiority of an educational intervention in comparison to no intervention does little to advance the art and science of education. Fourth, comparisons involving multifactorial interventions are hopelessly confounded, have limited application to new settings, and do little to advance our understanding of education. Fifth, single-group pretest–posttest studies are susceptible to numerous validity threats. Finally, educational interventions (including the comparison group) must be described in detail sufficient to allow replication.


Review Date: 1969 to 2003, 34 years.
Background and Context: Simulations are now in widespread use in medical education and medical personnel evaluation. Outcomes research on the use and effectiveness of simulation technology in medical education is scattered, inconsistent and varies widely in methodological rigor and substantive focus.
Objectives: Review and synthesize existing evidence in educational science that addresses the question, 'What are the features and uses of high-fidelity medical simulations that lead to most effective learning?'.
Search Strategy: The search covered five literature databases (ERIC, MEDLINE, PsycINFO, Web of Science and Timelit) and employed 91 single search terms and concepts and their Boolean combinations. Hand searching, Internet searches and attention to the 'grey literature' were also used. The aim was to perform the most thorough literature search possible of peer-reviewed publications and reports in the unpublished literature that have been judged for academic quality.
Inclusion And Exclusion Criteria: Four screening criteria were used to reduce the initial pool of 670 journal articles to a focused set of 109 studies: (a) elimination of review articles in favor of empirical studies; (b) use of a simulator as an educational assessment or intervention with learner outcomes measured quantitatively; (c) comparative research, either experimental or quasi-experimental; and (d) research that involves simulation as an educational intervention.
Data Extraction: Data were extracted systematically from the 109 eligible journal articles by independent coders. Each coder used a standardized data extraction protocol.
Data Synthesis: Qualitative data synthesis and tabular presentation of research methods and outcomes were used. Heterogeneity of research designs, educational interventions, outcome measures and timeframe precluded data synthesis using meta-analysis.
Headline Results: Coding accuracy for features of the journal articles is high. The extant quality
of the published research is generally weak. The weight of the best available evidence suggests that high-fidelity medical simulations facilitate learning under the right conditions. These include the following: providing feedback—51 (47%) journal articles reported that educational feedback is the most important feature of simulation-based medical education; repetitive practice—43 (39%) journal articles identified repetitive practice as a key feature involving the use of high-fidelity simulations in medical education; curriculum integration—27 (25%) journal articles cited integration of simulation-based exercises into the standard medical school or postgraduate educational curriculum as an essential feature of their effective use; range of difficulty level—15 (14%) journal articles address the importance of the range of task difficulty level as an important variable in simulation-based medical education; multiple learning strategies—11 (10%) journal articles identified the adaptability of high-fidelity simulations to multiple learning strategies as an important factor in their educational effectiveness; capture clinical variation—11 (10%) journal articles cited simulators that capture a wide variety of clinical conditions as more useful than those with a narrow range; controlled environment—10 (9%) journal articles emphasized the importance of using high-fidelity simulations in a controlled environment where learners can make, detect and correct errors without adverse consequences; individualized learning—10 (9%) journal articles highlighted the importance of having reproducible, standardized educational experiences where learners are active participants, not passive bystanders; defined outcomes—seven (6%) journal articles cited the importance of having clearly stated goals with tangible outcome measures that will more likely lead to learners mastering skills; simulator validity—four (3%) journal articles provided evidence for the direct correlation of simulation validity with effective learning.

**Conclusions:** While research in this field needs improvement in terms of rigor and quality, high-fidelity medical simulations are educationally effective and simulation-based education complements medical education in patient care settings.
SIMULATION, ASSESSMENT, AND RESEARCH: STATE OF THE ART AT NYU

Colleen Gillespie, PhD
Marc Triola, MD
Thomas Riles, MD
Sondra Zabar, MD
BUILDING THE EVIDENCE BASE FOR MEDICAL EDUCATION: DATABASE FOR RESEARCH ON EDUCATION IN ACADEMIC MEDICINE (DREAM)

Colleen Gillespie, PhD
DREAM: The Database

<table>
<thead>
<tr>
<th>Assessment Domains</th>
<th>Medical School</th>
<th>Residency</th>
</tr>
</thead>
</table>
| Trainee Characteristics | Data from Admission | MCATS GPA
Survey | Career Goals |
| Knowledge | Grades | Core Courses
Exams | Shelf Step 1 & 2 USMLE |
| Faculty Ratings | PPS and Phys Dx Courses |
| Clinical Skills | Faculty Ratings | PPS and Phys Dx Courses
OSCEs | CCSE (High Stakes Exam) |
| Performance | Unannounced SPs
360° Data
Patient Exit Interviews
Chart Reviews
EMR/Info Systems |
| Patient Outcomes | Satisfaction
Activation/Motiv
Health Status
Functioning
Physiological Outcomes |

Steps to Making DREAM a Reality

1. Create Registry
   - IRB Approval
   - Informed Consent

2. Inventory Available Data
   - Quality varies
   - Faculty ratings incomplete

3. Provide Technical Assistance
   - Standardize
   - Improve Assessment

4. Map Core Domains
   - Knowledge
   - Competence

5. Explore Causal Process
   - Medical Education Activities
   - Competence
   - Patient Outcomes

6. Collect Patient Outcomes Data

7. Compile Data
   - Anonymized but linked
   - Quanifiable

8. Explore Links between Educational and Outcomes Data

Definitions

Data Warehouse

A data warehouse is a repository of an organization's electronically stored data. Data warehouses are designed to facilitate reporting and analysis. This classic definition of the data warehouse focuses on data storage. However, the means to retrieve and analyze data, to extract, transform and load data, and to manage the dictionary data are also considered essential components of a data warehousing system.
Registry

Patient registries are prospective, observational cohort studies of patients with or at risk for a particular disease and/or receiving a particular treatment/intervention. They can be used for understanding natural history, assessing or monitoring real-world safety and effectiveness, assessing quality of care and provider performance, and assessing cost-effectiveness. [See Using Real World Data for Coverage and Payment Decisions: The ISPOR Real World Data Task Force Report at: RWTFManuscript.pdf or Garrison LP, Jr., Neumann PJ, Erickson P, et al. Using real world data for coverage and payment decisions: the ISPOR real world data task force report. Value in Health 2007; 10 (Sept/Oct 2007).]

Time series designs

A quasi-experimental research design similar to a one-group pretest-posttest design except that instead of a single pretest and a single posttest, the data consist of a time series in the form of a sequence of baseline measurements, followed by a change in the independent variable, usually called an intervention, and then a sequence of post-intervention measurements.

360° Ratings

360-degree feedback, also known as 'multi-rater feedback', 'multisource feedback', or 'multisource assessment', is feedback that comes from all around the physician – patients, nurses and other care providers, peers. "360° refers to the 360 degrees in a circle.

Articles Referenced


Context: Although physicians' communication skills have been found to be related to clinical outcomes and patient satisfaction, teaching of communication skills has not been fully integrated into many medical school curricula or adequately evaluated with large-scale controlled trials.

Objective: To determine whether communications training for medical students improves specific competencies known to affect outcomes of care.

Design and Setting: A communications curriculum instituted in 2000-2001 at 3 US medical schools was evaluated with objective structured clinical examinations (OSCEs). The same OSCEs were administered to a comparison cohort of students in the year before the intervention.

Participants: One hundred thirty-eight randomly selected medical students (38% of eligible students) in the comparison cohort, tested at the beginning and end of their third year (1999-2000), and 155 students in the intervention cohort (42% of eligible students), tested at the beginning and end of their third year (2000-2001).

Intervention: Comprehensive communications curricula were developed at each school using an established educational model for teaching and practicing core communication skills and engaging students in self-reflection on their performance. Communications teaching was integrated with clinical material during the third year, required clerkships, and was supported by formal faculty development.
**Main Outcome Measures:** Standardized patients assessed student performance in OSCEs on 21 skills related to 5 key patient care tasks: relationship development and maintenance, patient assessment, education and counseling, negotiation and shared decision making, and organization and time management. Scores were calculated as percentage of maximum possible performance.

**Results:** Adjusting for baseline differences, students exposed to the intervention significantly outperformed those in the comparison cohort on the overall OSCE (65.4% vs 60.4%; 5.1% difference; 95% confidence interval [CI], 3.9%-6.3%; *P*<.001), relationship development and maintenance (5.3% difference; 95% CI, 3.8%-6.7%; *P*<.001), organization and time management (1.8% difference; 95% CI, 1.0%-2.7%; *P*<.001), and subsets of cases addressing patient assessment (6.7% difference; 95% CI, 5.9%-7.8%; *P*<.001) and negotiation and shared decision making (5.7% difference; 95% CI, 4.5%-6.9%; *P*<.001). Similar effects were found at each of the 3 schools, though they differed in magnitude.

**Conclusions:** Communications curricula using an established educational model significantly improved third-year students' overall communications competence as well as their skills in relationship building, organization and time management, patient assessment, and negotiation and shared decision making—tasks that are important to positive patient outcomes. Improvements were observed at each of the 3 schools despite adaptation of the intervention to the local curriculum and culture.


While the need to develop the evidence base for medical education is widely recognized, practical research strategies for doing so have not been sufficiently explored. Evaluation research and quality improvement approaches have demonstrated the usefulness of time series research designs for understanding complex, naturalistic processes and linking those processes not only to outcomes but also to the interventions that influence them. The central aims of this paper are to 1) suggest that time series research designs hold great promise for building the evidence base for medical education, 2) describe how one medical school is capitalizing on the time series approach by establishing a longitudinal database of medical education outcomes, and 3) describe preliminary data from that database to illustrate the possibilities for understanding the processes and outcomes of medical education.


**Statement of Problem:** While great strides have been made in identifying, assessing and focusing curricular interventions on core competencies in medical education, establishing the evidence base for such efforts is hampered by the inability to link these educational interventions to ultimate outcomes – those that affect patient care.

**Objectives of Program/Intervention:** We are working to establish DREAM as a “Framingham Heath Study-style” longitudinal cohort study of medical education outcomes. Through the DREAM infrastructure we will align diverse institutional assessments of trainees over time and link these to physician behaviors in clinical settings and, ultimately, to patient outcomes. In the first phase of this work we are linking educational outcomes across training levels for the 20-
30% of NYU SOM graduates who go on to participate in NYU residency training. NYU has made extensive use of OSCEs and therefore has access to a wealth of reliably collected performance-based data.

**Description of Program/Intervention:** Building DREAM is proceeding as follows:
1. Obtained IRB approval to create a Resident “Registry” of educational outcomes data where residents consent annually to having data compiled and linked through DREAM.
2. Inventoried available data on educational outcomes, making preliminary quality determinations.
3. Provide technical assistance and support to standardize and improve assessments across programs.
4. Map out the core domains of knowledge and competence assessed.
5. Explore the causal processes that produce relevant patient outcomes, working backwards to identify “educationally sensitive” outcomes.
6. Collect relevant data on patient outcomes through information systems, chart abstractions, and exit interviews.
7. Compile the educational and patient outcomes data into a useable, queryable, anonymized database.
8. Explore links between educational and outcomes data across educational experiences at NYU.

**Findings to Date:** Available educational data varies in quality and comprehensiveness. Program Directors are enthusiastic about the Resident Registry and the opportunities it provides for obtaining more immediate feedback on program effectiveness and eliminating the need for multiple, separate IRB consent procedures. Residents appear to understand and accept the need for and utility of such a Registry (80-90% consent rates). We are currently piloting an in-depth exploration of the impact of obesity prevention and treatment training on patient outcomes by comparing the results of patient exit interviews, unannounced standardized patients, chart abstractions, and information system queries among two groups of residents: pre- and post-obesity curriculum exposure. Preliminary analyses of the longitudinal data linked thus far indicate broad patterns of relationships among core competencies across resident cohorts and program years, as well as variation among individual residents and, at the program level, in apparent response to curricular changes.

**Key Lessons Learned:** The need for longitudinal databases like DREAM is widely accepted but the practical steps for creating such databases may appear overwhelming. Obtaining the necessary buy-in and support is challenging but not impossible. Developing a clear understanding of the causal processes linking educational competencies to patient outcomes and then creating the infrastructure to collect and link data on these processes are essential for establishing the evidence base for medical education.


**Background:** Effective patient education and counseling (PE&C) and relationship building (RB) skills are both linked with patient compliance, behavioral change, satisfaction and outcomes but little is known about the relationship between these skills and their development over time. Using 7 years of performance-based data (a 10-station OSCE), we assess the relationship between PE&C and RB skills as it changes through Primary Care Internal Medicine (PCIM) residency (from PGY1 through PGY3) and over time (2001-2007). In addition, we examine this relationship cross-sectionally in residents from other specialties (Emergency Medicine, n=15;
Surgery, n=25) and in 3rd year medical students (n=160).

**Methods:** Data are from 7 years (2001-2007) of a 10-station faculty observed and rated annual OSCE required for all PGYs in a PCIM Residency program (n=161, 22-24 residents/ year, 7-8 residents/PGY). Many of the same cases were used from year to year. Across cases, communication skills were assessed using a behaviorally anchored checklist in 3 main domains: RB (5 items, e.g., communicated concern, acknowledged patient’s emotions, was accepting/non-judgmental), PE&C (3 items, asked questions to see what patient understood, provided clear explanations, collaborated with patient in identifying next steps), and information gathering (IG) (6 items, e.g., started with open-ended questions, elicited story using appropriate questions, did not interrupt). These same items were used in the OSCEs assessing communication skills with the other specialties and medical students. Scores derived from these checklist items have moderate to high reliability (Cronbach’s alpha=.60 -.90, inter-rater reliability=.70 to .89).

**Results:** PE&C skills are highly correlated with RB skills (r=.96, p<.001). On average, however, PE&C are 10% lower than RB skills (mean differential =-10.10%, SD 11.22%, paired t-test=1.97, p=.05). RB and IG are not significantly different (mean=-0.66%, SD 10.16%). The difference between PE&C and RB scores varied significantly by year (F=11.09 df 6, 161, p<.001) ranging from 2.8% lower in 2005 (SD 10.50%) to 21.9% lower (SD 16.49%) in 2007. By PGY(F=3.26 df 2, 161, p=.041) with PGY1s PE&C scores on average 12.71% (SD=11.84%) lower than their RD scores, PGY2 s= 8.12% (SD 10.43%) and PGY 3s=9.6% (SD 10.98%). The interaction of year and PGY was not significant. This same overall, albeit more extreme, pattern was found among Emergency Medicine (mean difference=-31.8%, SD 30.4%) and Surgery (mean difference=-53.4%, SD 28.6%) residents and also with 3rd year medical students (mean difference=-48.3%, SD 14.2%).

**Conclusions:** Residents from multiple specialties as well as medical students had PE&C scores that were consistently lower than their RB scores. The gap was greatest among PGY1s and decreases during residency. Further research will help determine whether variations in the gap are due to changes in the curriculum, cohort differences, or differences in cases. It may be that the patient education skills called for are too advanced – however, the items were designed to capture those provider actions necessary for patients to fully understand and participate in their care. Ultimately, our curricula may be overemphasizing RD skills or learners/trainees may simply need more targeted efforts to improve their PE&C skills.

Gillespie C, Tewksbury L, Ark TK, Kalet AL. What are the Dimensions of Standardized Patients’ Recommendation Ratings: Is SP Satisfaction More than just the Sum of Their (Checklist) Ratings?

Abstract accepted at the Research in Medical Education, AAMC Conference, October 31 – November 5, 2008, San Antonio Texas.

**Purpose:** This study explores the relationship between Standardized Patients’ satisfaction and their ratings of core clinical competencies.

**Methods:** Clinical performance among 3rd year medical students was assessed in an 8-station, high stakes OSCE (4 classes, 2004-2007; n=549, consent rate 87%). Trained Standardized Patients (SPs) used a behaviorally anchored checklist to assess communication (information gathering, relationship building, patient education and counseling), history taking, physical examination and clinical reasoning. SPs then rated their satisfaction by indicating whether they would recommend the student as a physician (4-point scale: not recommend, with reservations, recommend, highly). Derived scores are sufficiently reliable (Cronbach’s alpha .60 to .92). Assessed skills were entered into a hierarchical regression model predicting recommendation ratings.
**Results:** Students’ MCAT, USMLE Step 1 and 2, and Shelf Exam scores each explained non-significant proportions of variance (7.3%, p=.210; 3.0%, p=.395; 4.5%, p=.840 respectively). Communication domains were entered next: relationship building accounting for an additional 22.0% of the variance (p<.001), information gathering 15.6% (p<.001) and patient education and counseling 7.5% (p=.004). Clinical reasoning scores did not explain any additional variance (0.5%, p=.465), but history taking (4.3%, p=.023) and patient education and counseling scores did (9.3%, p=.000). The full model accounted for 64.3% of the variance (adjusted R², p<.001) in SP satisfaction.

**Conclusions:** SP satisfaction appears to reflect a multi-dimensional assessment of competence that is strongly influenced by relationship building but also incorporates most of the core clinical skills. That these variables don’t explain all of the variance suggests that satisfaction may, in part, transcend assessed competencies.


**Purpose:** This study explores the development of patient education and counseling (PEC) as compared to relationship building (RB) skills. While RB skills are now appreciated as a core clinical competency, PCC skills receive less emphasis despite their role in adherence and behavior change.

**Methods:** A behaviorally anchored checklist has been used to assess clinical skills in OSCEs (8-10 cases) among 3rd year medical students since 2004 (n=549; 87% consented) and among Primary Care Internal Medicine residents (PCIM) since 2001 (n=161; 96% consented). RB is assessed using 5 items (e.g., communicated concern, acknowledged emotions, non-judgmental) and PEC using 3 items (checked understanding, clear explanations, collaborated in next steps). Derived scores demonstrate adequate reliability (Cronbach’s alpha .60-.92). To compare across slight differences in use of anchors, PEC scores are reported as a % of RB scores.

**Results:** At the undergraduate level, PEC scores were significantly lower than RB scores (33.6%, SD=16.7%, vs. 65.2%, SD=14.3%; paired t-test=50.4, p<.001). Thus, PEC scores were 51.9% (21.0%) of RB scores, a consistent finding across all 4 years. Among residents, the differential was much smaller (PEC scores were 89.8% of RB scores, SD=11.2%, paired t-test=1.97, p=.049) and was greatest among PGY1s (87.3%; F=3.26, df=2, p=.041). Additional longitudinal analyses explore the roles of developmental processes, specialization, curriculum and/or measurement variance (generalizability theory).

**Conclusions:** Medical students and residents had significantly lower PEC than RB scores but that differential decreased from UME to GME. Lower PEC skills may stem from gaps in education or because PEC are more advanced skills than RB skills.
VIRTUAL PATIENTS

Marc Triola, MD
Definitions

Virtual Patient

Virtual Patients are interactive computer programs that simulate real-life clinical scenarios in which the learner acts as a health care professional obtaining a history and physical exam and making diagnostic and therapeutic decisions.

Unauthenticated use is prohibited. © 2001 NYU School of Medicine. These papers were written by Nancy Appignani, MD | Marc Trapp, MD — NYUMH Medical Literacies Project.

Background: We developed computer-based virtual patient (VP) cases to complement an interactive continuing medical education (CME) course that emphasizes skills practice using standardized patients (SP). Virtual patient simulations have the significant advantages of requiring fewer personnel and resources, being accessible at any time, and being highly standardized. Little is known about the educational effectiveness of these new resources. We conducted a randomized trial to assess the educational effectiveness of VPs and SPs in teaching clinical skills.

Objective: To determine the effectiveness of VP cases when compared with live SP cases in improving clinical skills and knowledge. DESIGN: Randomized trial.

Participants: Fifty-five health care providers (registered nurses 45%, physicians 15%, other provider types 40%) who attended a CME program.

Interventions: Participants were randomized to receive either 4 live cases (n=32) or 2 live and 2 virtual cases (n=23). Other aspects of the course were identical for both groups.

Results: Participants in both groups were equivalent with respect to pre-post workshop improvement in comfort level (P=.66) and preparedness to respond (P=.61), to screen (P=.79), and to care (P=.055) for patients using the skills taught. There was no difference in subjective ratings of effectiveness of the VPs and SPs by participants who experienced both (P=.79).

Improvement in diagnostic abilities were equivalent in groups who experienced cases either live or virtually.

Conclusions: Improvements in performance and diagnostic ability were equivalent between the groups and participants rated VP and SP cases equally. Including well-designed VPs has a potentially powerful and efficient place in clinical skills training for practicing health care workers.
SIMULATION

Thomas Riles, MD
DEFINITIONS

Partial Task Simulation
Simulators designed to teach specific technical tasks such as knot-tying, suturing, endoscopy, catheterization, intubation, intra-osseous placement, etc.

Mannequin Simulation
Mannequins that resemble humans, used for teaching the clinical skills required for common medical problems such as cardiac arrhythmias, multi-organ failure, trauma, etc. Mannequin simulations are also used for team training. This type of simulation is also referred to as Human Simulation.

High-fidelity Simulation Models
High-fidelity simulation models utilize sophisticated mannequins hooked up to a computer program that allows for realistic real-time physiologic derangements and response to treatments.

Low-fidelity Simulation Models
Low-fidelity simulation models are often simple mannequins. However, recent low fidelity simulation models do allow practicing procedures such as setting up intravenous infusions, performing a lumbar puncture, and delivering a baby; albeit without the sounds, simulated patient movements, and vital signs feedback.

ARTICLES REFERENCED


Recommendations from the Committee on Simulation and Clinical Skills:
Executive Summary
February 15, 2008

To maintain our position among the elite medical schools and medical centers, NYU Medical Center must make an immediate and significant financial investment in both simulation activities and in establishing a centralized simulation center, and must undertake a major faculty development effort in this area. Our rationale for these recommendations is based on two observations: the first is that there is overwhelming evidence that simulation is fundamentally changing the character of medical education at all levels, and the second is that the NYU Medical Center has lagged woefully behind and is now at a dangerous competitive disadvantage relative to its peers.

This report aims to provide three progressive levels of recommendations in order to address these issues:

- Specific proposals including centralized, cross-curricular simulation facilities to raise NYU to levels competitive with its peers
- Short-term measures to initially support the simulation effort
- Proposals to elevate simulation development, implementation and teaching to the cutting-edge level of excellence towards which NYU continually aims

In order to serve our educational needs, and for NYU to continue to be competitive in the areas of simulation and education, we propose the following:

Facilities and Equipment
- Dedicated, central simulation facilities, including:
  - 5,000 square foot Standardized Patient Simulation Center
  - 7,000 square foot Mannequin Simulation Laboratory, including 6 to 12 mannequin simulators
  - Partial & Surgical Skills Laboratory re-design and expansion
- Hospital-centered satellite facilities for simulation training, including:
  - 600 square foot facilities in Tisch Hospital for nursing training, obstetrics, and pediatrics
  - Spaces for in-service simulation training in the new clinical building
- Mobile simulation units at Tisch and Bellevue Hospitals for mock codes and in-situ drills
- NYUMC Learning Space-centered mannequins (estimated need of 7 dedicated simulators)

Administration and Program Development
- Formation of a Simulation Board with representation from the School of Medicine, Tisch Hospital, Bellevue Hospital Center, the VA Medical Center Manhattan, the Colleges of Nursing and Dentistry, and possibly the Health and Hospitals Corporation
- Hiring of a full-time Director for Simulation
- Top-down review of the medical school curriculum to determine what subjects or skills could be better taught with simulation
The following are recommendations to raise the caliber of simulation activities from competitive to world-class:

- Focus upon collaboration between schools and departments to maximize resources and inter-curriculum support and development
- Provide funding for innovations in simulation development, particularly for e-learning and virtual patients
- Focus on the full integration of traditional basic science and clinical instruction with simulation and e-learning
- Development of further educational efforts in simulation to include fellowships or additional degree-granting programs in order to further integrate and train faculty, advance and innovate through research, and develop in-house experts in the field
- Establish incentives for faculty recruitment and development in education with the intent of NYU becoming a leader and trend setter in medical education
- Build upon our current leadership in educational technology research by incorporating and funding a research component for simulation to evaluate effectiveness and guide development and deployment
Committee on Simulation and Clinical Skills Members

Co-Chairs
Thomas S. Riles, M.D., Associate Dean for Medical Education and Technology; Frank C. Spencer Professor of Surgery
Jonathan H. Weider, Assistant Dean for Advanced Applications; Assistant Professor of Educational Informatics

Committee Members
Julianne Chase, Ph.D., Associate Dean for Education; Clinical Associate Professor of Medicine; Director, Office of Medical Education
Thomas Diflo, M.D., Associate Professor of Surgery; Director of Surgical Skills Lab Curriculum
Jessica C. Foltin, M.D., Associate Professor of Pediatrics and Emergency Medicine; Director, Pediatric Emergency and Transport
Robert Glickman, D.M.D., Professor of Oral & Maxillofacial Surgery (College of Dentistry); Professor of Surgery
Peter Gordon, M.D., Assistant Professor of Emergency Medicine
Linda Iervolino, RN, MSN, Director of Nursing for Education
Adina L. Kalet, M.D., M.P.H., Associate Professor of Medicine and Surgery
Brian Kaufman, M.D., Associate Professor of Medicine, Anesthesiology and Neurosurgery
Norma Keller, M.D., Assistant Professor of Medicine, Division of Cardiology
Sabrina W. Lee, Director, Program for Medical Education and Technology
Joseph McCarthy, M.D., Lawrence D. Bell Professor of Plastic Surgery; Director of the Institute of Reconstructive Plastic Surgery
Martin Nachbar, M.D., Director Emeritus of the Division of Educational Informatics; Associate Professor of Microbiology and Medicine
Hila Richardson, R.N., DrPH, FAAN, Associate Dean Undergraduate Program, New York University College of Nursing
Andrew Rosenberg, M.D., Professor of Anesthesiology
Pierre Saadeh, M.D., Associate Program Director, Division of Plastic Surgery
David Seubert, M.D., Associate Professor of Obstetrics and Gynecology
Andrew I. Spielman, D.M.D., Ph.D., Professor and Associate Dean for Academic Affairs, New York University College of Dentistry
Kerry Walton, Ph.D., Associate Professor of Physiology and Neuroscience
Sondra Zabar, M.D., Assistant Professor of Medicine, Division of General Internal Medicine; Co-Director, NYU Primary Care Internal Medicine Residency Program

For a copy of the report in its entirety, please contact Rummy Saunders, Executive Assistant to Thomas S. Riles, MD, Associate Dean for Medical Education and Technology (Rummy.Saunders@nyumc.org; 212-263-2330).
STANDARDIZED PATIENTS: CURRENT USES AND PROSPECTS

Sondra Zabar, MD
DEFINITIONS

Standardized Patient

*Standardized Patient* is a person trained to portray a patient scenario, or an actual patient in a highly reproducible manner using specified history and physical exam findings, for the instruction, assessment, or practice of communication and/or examining skills of a health care provider. In the health and medical sciences, SPs are used to provide a safe and supportive environment conducive for learning or for standardized assessment. Standardized patients can be trained to be highly reliable raters of performance.

Objective Structure Clinical Exam (OSCE)

*An Objective Structured Clinical Examination* is a type of examination used in medicine to test skills such as communication, clinical examination, medical procedures, prescribing and interpretation of results. A learner interacts with a series of standardized patients, which allows for reliable and valid measure of performance across cases. It normally consists of several short (5-10 minute) stations and each is examined on a one-to-one basis with either real or standardized patients.

Objective Structured Teaching Exercise (OSTE)

During an *Objective Structured Teaching Exercise*, a faculty-learner interacts with a series of standardized learners and patients in order to practice and assess his/her teaching skills, including teaching learners of various levels, time management, small group teaching, etc.

**SAMPLE CASE BANK & DOMAINS: Primary Care Residency OSCE**

<table>
<thead>
<tr>
<th>Competencies Assessed</th>
<th># Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>ALL</td>
</tr>
<tr>
<td>History Gathering</td>
<td>19</td>
</tr>
<tr>
<td>Patient Education and Counseling</td>
<td>18</td>
</tr>
<tr>
<td>Physical Examination</td>
<td>8</td>
</tr>
<tr>
<td>Management and Tx Plan</td>
<td>30</td>
</tr>
<tr>
<td>Handling Difficult Situations</td>
<td>8</td>
</tr>
<tr>
<td>Teaching</td>
<td>8</td>
</tr>
<tr>
<td>TOTAL # of CASES</td>
<td>48</td>
</tr>
<tr>
<td>Avg # of Yrs Used</td>
<td>1.74</td>
</tr>
</tbody>
</table>
SAMPLE CASE: INTERPRETER CASE

STATION OVERVIEW

OBJECTIVES
This station is designed to test resident’s ability to:

- Appropriately use an interpreter
- Obtain informed consent
- Develop a plan

LOGISTICS
Personnel: SP, female, 50 y.o., wearing a gown, sitting in chair. Interpreter, male, sitting next to SP

Station Materials:
- Resident instructions
- Informed consent sheet
- SP Instructions
- SP evaluation forms
- Faculty evaluation forms

Room Arrangement:
- Station signs
- Examination table
- Chair (3)
PATIENT INFORMATION
Name: Kamrun Naher
Age: 50 y.o.

REASON FOR VISIT
Bengali speaking woman with history of Type II Diabetes controlled on Glucophage presenting with right lower quadrant pain for 1 day. She has associated fever and chills, poor appetite with nausea and vomiting.

VITALS
T: 99.5  BP: 115/75  HR: 75  RR: 10  O2sat: 100% room air

LABS
CBC    WBC: 18, otherwise normal
Electrolytes BUN 18  Cr 1.3, otherwise normal
Other labs  Normal

YOUR ROLE
Resident

YOUR TASKS
1) Obtain informed consent from the patient for a CT with IV contrast to evaluate for a diagnosis.
2) Effectively and appropriately use an ad hoc interpreter

*DO NOT PERFORM A PHYSICAL EXAM
# STANDARDIZED PATIENT INSTRUCTIONS

## THE SCENARIO

Your name is Afzal Hossein. You work as a registration clerk in the ER. Today, things have been slow and one of the nurses has asked you to translate for a Bengali speaking patient who is here today. You have done this a few times before and you enjoy it. Your job is relatively boring and you feel important when you get asked to translate. Also, you like chatting with Bengali speaking patients because you often feel lonely at your job.

You live with four Bengali men in Jackson Heights, all of whom are married, including you. The rest of your families still live in Bangladesh. You miss them a lot but are hopeful that you will be able to move them out here soon.

You have already been speaking with the patient, Momena Khatu, for about 10 minutes before the doctor enters the room. She seems very shy, but pleasant. You learn her family is from a village near where your family is from and that she lives in Queens. You learn that she may need a CT scan. Your aunt had one for her head last year. Mrs. Khatu didn’t seem to know all that much about it so you are eager to educate her and share some of the thoughts you had on your aunt’s situation.

## CHARACTER DESCRIPTION

### Objective:
- To effectively translate for the patient and the doctor

### Obstacles:
- You are chatty and can’t help yourself sometimes to go off on tangents
- You editorialize sometimes because you feel you are helping

### Tactics:
- After the first question posed by the doctor, have an extended back and forth with the patient and then give a one word or very brief answer.
- Occasionally, interrupt the patient in Bangali and have a brief back and forth.
- If there is a pause in the interview, start a casual conversation with the patient.
Kamrun Naher is a 50 year old Bengali woman who has been living with her husband and her 3 children (2 sons and a daughter) in the US for 10 years. She lives in a fairly isolated community where she almost exclusively speaks Bengali. She does not work outside of the home. Her knowledge of medicine is limited. She had a grandmother who had kidney failure.

With respect to her possible appendicitis, she understands that it is serious and that she could die if it is not treated. She also understands that contrast has risks (could cause kidney failure, but thinks that the likelihood of that happening is high). She remembers her grandmother who had kidney failure and is does not want to end up like her.

If the resident adequately explains (by using the interpreter correctly) the risks (i.e. shares that the risk is low, preventable and reversible) and is not dismissive and does not minimize of the patient’s concerns, then she decides to have the CT with contrast. If the resident does not completely explain the nature of the risks and address the patient’s concerns, then she refuses the CT with contrast.

With respect to her abdomen:

Where is the pain? – lower right side
What does it feel like? – it is an achy pain, that is sharp at times
Is it constant? – yes
How severe? – 7 of 10 (where 10 is the worst)
Does the pain radiate anywhere? - No
Does it hurt when you touch it? - Yes

In general:

Fever? – Feel feverish, but never measured it
Nausea? – Yes
Vomiting? – No
Diarrhea? – No
Blood in stool? - No
Able to eat? - No
Back pain? – No
Pain with urination? – No
Vaginal pain or irritation? – No
Any recent travel? - No

Until one day ago she had felt fine. She sees a doctor intermittently for her diabetes and high blood pressure.
The patient has 3 other siblings, 2 younger and one older. One died a few years ago from cancer in Bangladesh but she does not know of what kind. Her mom is 80 and is still alive and lives in Bangladesh with one of her siblings and she has a brother who lives in California with whom she is not very close to. Her father died of some kind of infection about 4 years ago at the age of 80.

Glucophage for diabetes
Lasix for high blood pressure

None

Alcohol: None
Smoking: None, nor anyone at home
Illicit drugs: None

When the resident enters the room, you are sitting next to the patient discussing her family and where she is from. You are happy to be interacting with her enjoying speaking with someone from a similar background. When the resident enters, smile and introduce yourself first as a clerk in the ER who speaks Bengali. Then introduce the patient who just nods her head and smiles. You state you are here to translate for her since as she speaks almost no English.

If the resident thanks you for helping, you tell him it is not a problem. State: “Things aren’t too busy right now.”

If the resident expresses concern about your translating, state: “Don’t worry, I speak English and Bengali very well.”

For the first few questions, have an extended back and forth exchange with the patient before answering the doctor with either a yes, no or few word answer. For example, if the resident asks how she is feeling, talk with her for a minute before answering “She feels fine.”

Make minimal eye contact with the patient when you are talking as you are strangers, but still face her. Then turn or move closer to the resident to give them the answers. You should give the impression you are separating yourself from the patient when you interact with the resident.

If the resident makes too much eye contact with you, keep talking to him/her.

If the resident asks you once to please just translate word for word, explain that the patient seems very shy and you are just coaxing her to answer. You
agree verbally to translate as asked by the resident; but, you continue to translate as before having a back and forth with the patient before answering the question. If the resident asks you a second time to translate word for word, you now do exactly what the resident asks of you.

Should the resident never give you instructions on how they want you to translate (or only stops the interview once in a while to clarify with you what the patient said but never specifically tells you how they want you to translate) you conduct the entire interview in the original manner, continuing a back and forth conversation with the patient and summarizing what she says for the resident.

If the resident begins the interview by telling you how they want you to translate, you still have a back and forth with the patient before answering/responding. However, the resident only needs to correct your behavior once for you to follow the resident’s instructions.

When the resident is first explaining the risks of contrast, regardless of what he/she says, state: “You know, my aunt had one of those once. She got a very warm feeling when it happened. Is that normal?”

Once the patient understands what the CT is, she explains that she wants to consult with her husband before agreeing to get the CT. He is, however, about an hour away. If the resident explains that the test is urgent, she agrees to get the CT anyway.

When it comes to making a final decision about treatment, if the resident has built rapport, focused on the patient, given appropriate instructions and redirections to the interpreter, and addresses her concerns respectfully, then the patient chooses to get the CT with contrast. If the resident has not, she still agrees, but becomes more withdrawn from the encounter.

- Discuss with the patient the risks and benefits of having a CT with contrast using an ad hoc translator.
- Exhibit non verbal communication with the patient
- State clearly what your expectations are from the interpreter
- Make clear statements to redirect interpreter
- Elicit the patient’s preferences.

**Non-verbal:** Continue to make eye contact with the resident if the resident makes too much eye contact with you.

**Verbal/ Non verbal:** Shake the resident’s hand first and then introduce the patient

**Verbal 1:** Have an extended back and forth with the patient during the first few questions
Verbal 2: When the resident is explaining what a CT is/the risks or benefits, you ask if feeling a warm sensation while having a CT is normal.

**TIMING**

**Initially:** You are sitting chatting with the patient as the doctor comes in. You first introduce yourself and then the patient. If the resident asks you to ask the patient how she is, you speak for a bit and then tell him/her she is fine.

**Ongoing:** You continue to respond directly to the resident and editorialize the patient’s responses until the resident does the following:

- Explains why it is important that you translate properly
- Gives you very specific instructions about what to do and reminds you a few times

**2-minute warning:** If the resident has built rapport and explained his/her concerns and attempted a number of time to focus on the patient not the interpreter, then the patient will decide to get the CT with contrast. If not, then the patient refuses.
<table>
<thead>
<tr>
<th>SAMPLE CHECKLIST: Interpreter Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluator’s Name: ________________________________</td>
</tr>
</tbody>
</table>

## COMMUNICATION

<table>
<thead>
<tr>
<th>Information Gathering</th>
<th>Not Done</th>
<th>Partially Done</th>
<th>Well Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used open-ended questions</td>
<td>Relied heavily on single response questions</td>
<td>Used some open-ended questions but stopped prematurely</td>
<td>Used open-ended questions as appropriate to fully gain your perspective</td>
</tr>
<tr>
<td>Managed the narrative flow of your story</td>
<td>Not able to elicit story because questions not organized logically</td>
<td>Elicited main elements of story, but illogical order of questions disrupted flow</td>
<td>Elicited full story by asking questions that facilitated natural flow of story</td>
</tr>
<tr>
<td>Elicited your responses using appropriate questions:</td>
<td>Impeded story by asking leading/judgmental questions AND more than one question at a time</td>
<td>Used leading/judgmental questions OR asked more than one question at a time</td>
<td>Asked questions one at a time withoutleading patient in their responses</td>
</tr>
<tr>
<td>• No leading questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Only one question at a time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarified information by repeating to make sure he/she understood you on an ongoing basis</td>
<td>Did not clarify (did not repeat back to you the information you provided)</td>
<td>Repeated information you provided BUT did not give you a chance to indicate if accurate</td>
<td>Repeated information AND directly invited you to indicate whether accurate</td>
</tr>
<tr>
<td>Allowed you to talk without interrupting</td>
<td>Interrupted</td>
<td>Did not interrupt directly BUT cut responses short by not giving enough time</td>
<td>Did not interrupt AND allowed time to express thoughts fully</td>
</tr>
</tbody>
</table>

## Relationship Development

| Communicated concern or intention to help | Did not communicate intention to help/concern via words or actions | Words OR actions conveyed intention to help/concern | Actions AND words conveyed intention to help/concern |
| Non-verbal behavior enriched communication (e.g., eye contact, posture) | Non-verbal behavior was negative OR interfered with communication | Non-verbal behavior demonstrated attentiveness | Non-verbal behavior facilitated effective communication |
| Acknowledged emotions/feelings appropriately | Did not acknowledge emotions/feelings | Acknowledged emotions/feelings | Acknowledged AND responded to emotions/feelings in ways that made you feel better |
| Was accepting/non-judgmental | Made judgmental comments OR facial expressions | Did not express judgment BUT did not demonstrate respect | Made comments AND expressions that demonstrated respect |
| Used words you understood and/or explained jargon | Consistently used jargon without further explanation | Sometimes used jargon AND did not explain it | Explained jargon when used OR avoided jargon completely |

## Education and Counseling

| Asked questions to see what you understood | Did not check for understanding | Asked if patient had any questions BUT did not check for understanding | Assessed understanding by checking in throughout the encounter |
| Provided clear explanations/information | Gave confusing or no explanations which made it impossible to understand information | Information was somewhat clear BUT still led to some difficulty in understanding | Provided small bits of information at a time and summarized to ensure understanding |
| Collaborated with you in identifying possible next steps/plan | Told you next steps/plan | Told you next steps then asked your views | Elicited your views on next steps, shared own ideas, then mutually developed a plan of action |

## WORKING WITH AN INTERPRETER

<table>
<thead>
<tr>
<th>Overcoming Language Barriers</th>
<th>Not Done</th>
<th>Partially Done</th>
<th>Well Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made clear statements about translating process (e.g. word for word)</td>
<td>Did not direct the interpreter on how to proceed</td>
<td>Directed interpreter how to proceed once or made confusing statement about translation process</td>
<td>Clearly directed interpreter how to proceed more than once AND adjusted seating</td>
</tr>
<tr>
<td>Maintained eye contact with the patient</td>
<td>Did not make eye contact with patient</td>
<td>Made some eye contact with patient but spent majority of time looking at interpreter</td>
<td>Maintained eye contact with patient</td>
</tr>
<tr>
<td>Maintained respectful attitude towards interpreter</td>
<td>Demonstrated annoyance or disrespect towards interpreter</td>
<td>Attempted awkwardly to maintain respectful attitude towards interpreter</td>
<td>Maintained respectful attitude towards interpreter at all times</td>
</tr>
</tbody>
</table>
**Shared Decision Making/Informed Consent**

<table>
<thead>
<tr>
<th>Discussed patient’s role in the decision</th>
<th>Assumed the role patient would like to take (active OR passive) without checking</th>
<th>Only asked about patient’s preference OR only stated own preference</th>
<th>Stated own preference (e.g., I’d like us to make this decision together) BUT also inquired about and respected patient’s wishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussed the clinical issue clearly and advises CT scan with contrast</td>
<td>Did not clearly describe CT scan or advise patient to have test</td>
<td>Advised patient but had unclear, too much in-depth or complicated description of test or indications</td>
<td>Clearly advised CT scan AND had a short, clear description of procedure and indications</td>
</tr>
<tr>
<td>Described benefits:</td>
<td>Did not discuss benefits</td>
<td>Explained benefits of CT scan but not benefits of early diagnosis</td>
<td>Clearly explained benefits of early diagnosis of appendicitis</td>
</tr>
<tr>
<td>- Makes diagnosis fast</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Less chance of rupture and infection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Option of less invasive surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Described risks:</td>
<td>Did not discuss risks</td>
<td>Mentioned: Allergies yes OR no Rash yes OR no BUT did not explain in terms of risk benefit assessment</td>
<td>Mentioned both clearly AND explained low risk/reversibility of most complications</td>
</tr>
<tr>
<td>- Allergies: flush, itch, rash, shortness of breath or death</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Kidney damage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discussed alternatives to CT scan:</td>
<td>Did not discuss alternatives</td>
<td>Mentioned alternatives without adequate discussion</td>
<td>Discussed alternatives in clear and understandable manner</td>
</tr>
<tr>
<td>- Ultrasound - not reliable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Watch and wait - could be dangerous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assessed patient’s understanding</td>
<td>Did not assess your understanding</td>
<td>Asked if you have questions BUT did not specifically assess your understanding</td>
<td>Assessed your understanding by allowing you to explain what you understood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreed on an action plan and completed arrangements</td>
<td>Did not state next steps</td>
<td>Stated what you need to do next without checking if you agree to the plan</td>
<td>Summarized and checked on agreed upon plan</td>
</tr>
</tbody>
</table>

**Would you recommend this doctor to a friend for his/her interpersonal skills?**

<table>
<thead>
<tr>
<th>Not Recommend</th>
<th>Recommend with Reservation</th>
<th>Recommend</th>
<th>Highly Recommend</th>
</tr>
</thead>
</table>

**Would you recommend this doctor to a friend for his/her medical competence?**

<table>
<thead>
<tr>
<th>Not Recommend</th>
<th>Recommend with Reservation</th>
<th>Recommend</th>
<th>Highly Recommend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-exemplary Physician: superficial, artificial demeanor applied knowledge base inadequate to my situation</td>
<td>Unexceptional Physician: awkward, knowledge base only somewhat apparent in application to my situation</td>
<td>Satisfactory Physician: appropriate knowledge base applied adequately to my specific situation</td>
<td>Model Physician: sophisticated, wise, thoughtful, applied profound knowledge base specifically to my situation</td>
</tr>
</tbody>
</table>

**COMMENTS:**
SAMPLE REPORT CARD: PRIMARY CARE RESIDENCY OSC

Communication Scores for Resident A

Case Specific Skills for Resident A
Articles Referenced


Medical educators have a responsibility to teach students to communicate effectively, yet ways to accomplish this are not well-defined. Sixty-five percent of medical schools teach communication skills, usually in the preclinical years; however, communication skills learned in the preclinical years may decline by graduation. To address these problems the New York University School of Medicine, Case Western Reserve University School of Medicine, and the University of Massachusetts Medical School collaborated to develop, establish, and evaluate a comprehensive communication skills curriculum. This work was funded by the Josiah P. Macy, Jr. Foundation and is therefore referred to as the Macy Initiative in Health Communication. The three schools use a variety of methods to teach third-year students in each school a set of effective clinical communication skills. In a controlled trial this cross-institutional curriculum project proved effective in improving communication skills of third-year students as measured by a comprehensive, multistation, objective structured clinical examination. In this paper the authors describe the development of this unique, collaborative initiative. Grounded in a threeschool consensus on the core skills and critical components of a communication skills curriculum, this article illustrates how each school tailored the curriculum to its own needs. In addition, the authors discuss the lessons learned from conducting this collaborative project, which may provide guidance to others seeking to establish effective cross-disciplinary skills curricula.


Background: Residents must master complex skills to care for culturally and linguistically diverse patients.

METHODS: As part of an annual 10-station, standardized patient (SP) examination, medical residents interacted with a 50-year-old reserved, Bengali-speaking woman (SP) with a positive fecal occult blood accompanied by her bilingual brother (standardized interpreter (SI)). While the resident addressed the need for a colonoscopy, the SI did not translate word for word unless directed to, questioned medical terms, and was reluctant to tell the SP frightening information. The SP/SI, faculty observers, and the resident assessed the performance. RESULTS: Seventy-six residents participated. Mean faculty ratings (9-point scale) were as follows: overall 6.0, communication 6.0, knowledge 6.3. Mean SP/SI ratings (3.1, range 1.9 to 3.9) correlated with faculty ratings (overall r=.719, communication r=.639, knowledge r=.457, all P<.01). Internal reliability as measured by Cronbach’s alpha coefficients for the 20 item instrument was 0.91. Poor performance on this station was associated with poor performance on other stations. Eighty-nine percent of residents stated that the educational value was moderate to high.

CONCLUSION: We reliably assessed residents’ communication skills conducting a common clinical task across a significant language barrier. This medical education innovation provides the first steps to measuring interpreter facilitated skills in residency training.
REFLECTIONS ON PRESENTATIONS

Adina Kalet, MD, MPH
Articles Referenced


Conducting educational research in medical schools is challenging partly because interventional controlled research designs are difficult to apply. In addition, strict accreditation requirements and student/faculty concerns about educational inequality reduce the flexibility needed to plan and execute educational experiments. Consequently, there is a paucity of rigorous and generalizable educational research to provide an evidence-guided foundation to support educational effectiveness. "Educational epidemiology," ie, the application across the physician education continuum of observational designs (eg, cross-sectional, longitudinal, cohort, and case-control studies) and randomized experimental designs (eg, randomized controlled trials, randomized crossover designs), could revolutionize the conduct of research in medical education. Furthermore, the creation of a comprehensive national network of educational epidemiologists could enhance collaboration and the development of a strong educational research foundation.
SAMPLE OF MEDICAL EDUCATION INITIATIVES AT NYU
SAMPLE OF MEDICAL EDUCATION INITIATIVES AT NYU

POSTERS

Web Based Module
- Competency in System Based Practice: Teaching with a Web Based Module
  Zabar S, Gillespie C, Bernstein CA, Ark TK, Triola M, Holloway W, Kalet AL

Performance Based Assessment
- Medical Students Retain Skills of Pain Assessment and Management Long After an Experiential Curriculum: A Controlled Study
- A Curriculum in Patient-Centeredness for Surgery and Emergency Medicine Residents: Establishing the Baseline

Research on Medical Education Outcomes (ROMEO)
- The Validity of a Comprehensive Clinical Skills Exam
  Tewksbury LR, Gillespie C, Richter R, Kalet AL
- Need for Targeted Training in Substance Abuse Prevention and Treatment Competencies
  Truncali A, Gillespie C, Ark TK, Lee J, Zabar S, Kalet AL

Innovations in Medical Education (IME) Internal Grant-Funded Projects
- Improving Residents’ Doctor-Patient Communication Skills in Electronic Medical Record-Enabled Exam Rooms
  Tanner CT, Cavanaugh J, Triola M, Ark TK, Schwartz M
- Integrating Healthcare Policy, Finance, and Law Into Graduate Medical Education
  Narayana A, Mitchell J
- 2007 & 2008 Projects

Merrin Project
- The Merrin Bedside Teaching Program: Improving Cardiac Physical Examination and Its Clinical Teaching
  Merrin Master Clinician Fellows: Tanping Wong, MD; Gregory Mints, MD; Sabrina Felson, MD
  Merrin Leadership: Adina Kalet, MD, MPH; Mitchell Charap, MD; Marian Anderson, RN, MA, MS, Colleen Gillespie, PhD; Tavinder Ark, MSc

WEB MODULES
- Web Initiative for Surgical Education Modules (WISE-MD)
- Psychosocial Aspects Of Bioterrorism And Disaster Medicine
- Alcohol Module
NEW INITIATIVES
NEW INITIATIVES

The goal of this session is to produce a few initiatives that reflect the common interest and needs of our NYU community of educators. Our hope is that these new initiatives will enrich and support the development of a medical education research infrastructure and foster collaborations.

In 90 minutes, you must prepare a presentation to the large group that briefly describes the richness of the group discussion. You will be provided with flipcharts, markers, a laptop (with PowerPoint), and a USB drive to record your group’s discussion. The report of your discussion should be presented in 10 minutes and include the following details:

- Name of Group
- Who was in the group?
- What theme did you address?
- What strategies did you identify?
- What are your specific next steps?
- What is the timeline?
CONFERENCE PARTICIPANTS
CONFERENCE PARTICIPANTS

Ladan Ahmadi            Mitchell Charap
Lenox Hill              NYU Langone Medical Center
lahmadi@lenoxhill.net   mitchell.charap@NYUMC.org

Marian Anderson         Nancy Chiocci
NYU Langone Medical Center     NYU College of Nursing
marian.anderson@nyumc.org   nmc217@nyu.edu

Tavinder Ark            Edward Chung
NYU Langone Medical Center     NYU College of Nursing
tavinder.ark@nyumc.org  chunge03@nyu.edu

Marc Auerbach           Robin Dibner
NYU Langone Medical Center     Lenox Hill
dr.auerbach@gmail.com  rjdibs@aol.com; rdibner@lenoxhill.net

Felice Aull             Benard Dreyer
NYU Langone Medical Center     NYU Langone Medical Center
felice.aull@med.nyu.edu   benard.dreyer@nyumc.org

Russell Berman          Kathel Dunn
NYU Langone Medical Center     National Network of Libraries of Medicine
russell.berman@nyumc.org  dunn@library.med.nyu.edu

Carol Bernstein         Elise Eisenberg
NYU Langone Medical Center     NYU College of Dentistry
carol.bernstein@nyumc.org  elise.eisenberg@nyu.edu

Mary Brennan            Brenna Farmer
NYU College of Nursing     NYU Langone Medical Center
mmb921@yahoo.com          brenda.farmer@nyumc.org

Karen Brewer            Sabrina Felson
NYU Medical Libraries     NYU Langone Medical Center
karen.brewer@med.nyu.edu  sabrina.felson@va.gov

Terri Brooks            George Foltin
NYU Langone Medical Center - Development     NYU Langone Medical Center
terri.brooks@nyumc.org  gf16@nyu.edu

Lynn Buckvar-Keltz       Jessica Foltin
NYU School of Medicine     NYU Langone Medical Center
Lynn.Buckvar-Keltz@nyumc.org  foltij01@nyumc.org

Marilyn Castaldi         Jennifer Friedman
NYU Langone Medical Center - Office of Communications     CUNY
marilyn.castaldi@nyumc.org  Jennifer.Friedman@mail.cuny.edu
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleen Gillespie</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:colleen.gillespie@nyu.edu">colleen.gillespie@nyu.edu</a></td>
</tr>
<tr>
<td>Lisa Goodrich</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:lisa.goodrich@nyumc.org">lisa.goodrich@nyumc.org</a></td>
</tr>
<tr>
<td>Marc Gourevitch</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:marc.gourevitch@nyumc.org">marc.gourevitch@nyumc.org</a></td>
</tr>
<tr>
<td>Margaret (Peg) Graham</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:margaret.graham@nyumc.org">margaret.graham@nyumc.org</a></td>
</tr>
<tr>
<td>Rhonda Graves</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Rhonda.Graves@nyumc.org">Rhonda.Graves@nyumc.org</a></td>
</tr>
<tr>
<td>Gary Green</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:gary.green@nyumc.org">gary.green@nyumc.org</a></td>
</tr>
<tr>
<td>Robert Grossman</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Robert.Grossman@nyumc.org">Robert.Grossman@nyumc.org</a></td>
</tr>
<tr>
<td>Mark Hochberg</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:mark.hochberg@med.nyu.edu">mark.hochberg@med.nyu.edu</a></td>
</tr>
<tr>
<td>Amy Hsieh</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:amy.hsieh@nyumc.org">amy.hsieh@nyumc.org</a></td>
</tr>
<tr>
<td>Julia Hyland Bruno</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Julia.hylandbruno@nyumc.org">Julia.hylandbruno@nyumc.org</a></td>
</tr>
<tr>
<td>Elizabeth Kachur</td>
<td>Medical Education Development</td>
<td><a href="mailto:mededdev@earthlink.net">mededdev@earthlink.net</a></td>
</tr>
<tr>
<td>Adina Kalet</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Adina.kalet@nyumc.org">Adina.kalet@nyumc.org</a></td>
</tr>
<tr>
<td>Lois Katz</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Lois.Katz@va.gov">Lois.Katz@va.gov</a></td>
</tr>
<tr>
<td>Brian Kaufman</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:KaufNYUCCM@aol.com">KaufNYUCCM@aol.com</a></td>
</tr>
<tr>
<td>Shannon Kealey</td>
<td>NYU Medical Libraries</td>
<td><a href="mailto:shannon.kealey@library.med.nyu.edu">shannon.kealey@library.med.nyu.edu</a></td>
</tr>
<tr>
<td>Norma Keller</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Norma.Keller@nyumc.org">Norma.Keller@nyumc.org</a></td>
</tr>
<tr>
<td>David Kessler</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:drkessler@gmail.com">drkessler@gmail.com</a></td>
</tr>
<tr>
<td>Barbara Krainovitch-Miller</td>
<td>NYU College of Nursing</td>
<td><a href="mailto:bk30@nyu.edu">bk30@nyu.edu</a></td>
</tr>
<tr>
<td>Ari Laura Kreith</td>
<td>Creative Consultant</td>
<td><a href="mailto:arilaurakreith@gmail.com">arilaurakreith@gmail.com</a></td>
</tr>
<tr>
<td>George Kristinsson</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:George.kristinsson@med.nyu.edu">George.kristinsson@med.nyu.edu</a></td>
</tr>
<tr>
<td>Anil Lalwani</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:Anil.Lalwani@nyumc.org">Anil.Lalwani@nyumc.org</a></td>
</tr>
<tr>
<td>Sabrina Lee</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:sabrina.lee@med.nyu.edu">sabrina.lee@med.nyu.edu</a></td>
</tr>
<tr>
<td>Ji Yun Lee</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:jiyun.lee@nyumc.org">jiyun.lee@nyumc.org</a></td>
</tr>
<tr>
<td>Mack Lipkin</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:mack.lipkin@nyumc.org">mack.lipkin@nyumc.org</a></td>
</tr>
<tr>
<td>Jeffrey Manko</td>
<td>NYU Langone Medical Center</td>
<td><a href="mailto:mankoj01@med.nyu.edu">mankoj01@med.nyu.edu</a></td>
</tr>
<tr>
<td>Marilyn Mcmillian</td>
<td>New York University</td>
<td><a href="mailto:marilyn.mcmillan@nyu.edu">marilyn.mcmillan@nyu.edu</a></td>
</tr>
</tbody>
</table>
CONFERENCE PLANNING TEAM

Sondra Zabar, MD
Conference Co-Director
Assistant Professor of Medicine
sondra.zabar@nyumc.org
(212) 263-1138

Adina Kalet, MD, MPH
Conference Co-Director
Associate Professor of Medicine and Surgery
Adina.kalet@nyumc.org
(212) 263-1137

Mack Lipkin, MD
Professor of Medicine
Mack.Lipkin@nymc.org
(212) 263-6598

Colleen Gillespie, PhD
Assistant Professor of Medicine
colleen.gillespie@nyumc.org
(212) 263-4247

Marian Anderson, MA, MS, RN
Program Manager, Section of Primary Care
marian.anderson@nyumc.org
(212) 263-3071

Amy Hsieh, MPA
Program Coordinator, Section of Primary Care
amy.hsieh@nymc.org
(212) 263-8929

Julia Hyland Bruno
Program Associate, Section of Primary Care
Julia.HylandBruno@nyumc.org
(212) 263-2126

Ji Yun Lee
Program Associate, Section of Primary Care
JiYun.Lee@nyumc.org
(212)263-8896