Centennial Meeting

May 4-5, 2015
Ritz-Carlton Hotel
Philadelphia

INNOVATION IN FUTURE ASSESSMENT OF HEALTH PROFESSIONALS
NBME CENTENNIAL BRAINSTORMING COMMITTEE

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TABLE OF CONTENTS

Welcome Message..............................................................................................................................3
Schedule of Events .............................................................................................................................5
Speakers ............................................................................................................................................7
NBME Centennial Awards Program for Latin America .................................................................10
NBME Centennial Prize Competition: Innovation in Future Assessment of Health Professionals......13
Finalists...........................................................................................................................................14
Initial Submissions..........................................................................................................................17
Semifinalists ......................................................................................................................................18

We invite you to join our Facebook group (2015 NBME Centennial Conference) to share information and conversations among members and invited guests. When you join the group, please feel free to post any questions or topics of interest.

We also have a Twitter handle, @NBMENow, that you may follow for live updates during the meeting. Please use the hashtag #nbme2015 when tweeting about the meeting.

Since it is our centennial year, we also encourage you to use the hashtag #nbme100 if tweeting anything related to our anniversary. Using Twitter is easy. If you have no Twitter handle and prefer not to create one, you can still follow us by visiting www.twitter.com and searching for @NBMENow.
Dear Colleagues,

On behalf of the National Board of Medical Examiners, we are pleased to welcome you to NBME’s Centennial Meeting: Innovation in Future Assessment of Health Professionals. We hope you find this year’s meeting (NBME’s 100th birthday) fun and thought provoking.

This meeting is the culmination of many years of planning NBME’s centennial year. We began our planning in fall 2010 by assembling a brainstorming committee comprising current and former staff and board members. Through the brainstorming process, we identified three areas of focus for our centennial celebration: events, products, and philanthropy. Once these areas were identified, we formed the Centennial Steering Committee to further develop our ideas and move them into production.

Our centennial products include our video, *What is the NBME?*, which we debuted at the 2014 Annual Meeting of the NBME Membership. The video is available on our website (www.nbme.org). We developed a separate centennial website with three timelines that feature NBME people, publications, and events from 1915 to today. We hope you will visit the site at www.nbme100.org. We are using the website design and content to create a “mini museum” at our headquarters and hope to unveil it later this year. Finally, NBME U, an online series of learning modules centered on assessment and available at www.nbme.org, was launched and is provided free of charge through December 2015. NBME U is considered both a centennial product and a philanthropic endeavor.

The Centennial Awards Program for Latin America represents NBME’s desire to “pay it forward.” In 2013, NBME announced a call for proposals for the Awards Program for Latin America, the goal of which is to enhance the quality of student evaluation in medical school education in Latin America. Each of the three awards provides up to $50,000 and support from NBME staff experts over a two-year period to foster the development of a regional medical school evaluation consortium. In particular, NBME sought proposals designed to have a broad, sustainable impact in a region by building local capacity to evaluate key learning outcomes and improve program quality at participating schools. You will learn about the progress made by the three award recipients at the 2015 meeting.

Our centennial events began with the 100th Annual Meeting of the NBME in April 2014. The theme for that meeting was “a look back,” and we held the meeting at the Willard Hotel in Washington, DC, the site of the 1915 Meeting of Organization. Since April, we’ve presented relevant information about NBME at meetings of peer organizations and have held a series of staff events to celebrate each decade of NBME history.

That brings us to the 2015 Centennial Meeting and its theme of a look toward the future. The major focus of this meeting is the Centennial Prize Competition, the objective of which is to identify innovative ideas that address future assessment needs for individual health professionals, health professions institutions, licensing and certification bodies, and other
domains across the continuum of health professions education and practice. Seventy-two first-round submissions were received; of these, 27 were invited to submit full proposals. Ultimately, twenty-two full submissions were received and evaluated. At the 2015 Centennial Meeting, four finalist teams will compete for the grand prize, an award of $5,000, a pledge that NBME will include the idea in NBME’s new product development process, and an invitation to participate in the development process as NBME’s Centennial Fellow.

Our keynote speaker is Don Berwick, a leading advocate for high-quality healthcare. Dr. Berwick is former administrator for the Centers for Medicare and Medicaid Services and founding CEO of the Institute for Healthcare Improvement. Dr. Berwick is well known for his advocacy for a high-performance healthcare system, and we look forward to his thoughts about the role assessment might play in achieving that goal. We hope you will enjoy the meeting.
# SCHEDULE OF EVENTS*

**Grand Ballroom ~ Ritz Carlton Hotel, Philadelphia**

**MONDAY, MAY 4**

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<tr>
<th>Time</th>
<th>Event</th>
<th>Presenter(s)</th>
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<tbody>
<tr>
<td>1:00 PM</td>
<td><strong>Recap of NBME's Centennial Year</strong></td>
<td>Lewis First</td>
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<tr>
<td>1:15 PM</td>
<td><strong>Centennial Prize Competition</strong></td>
<td>Lewis First, Karen Hauer, Joy Doll</td>
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<td>The Population Health Assessment Tool</td>
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<td>Tying Teams Together: The Interprofessional Education Toolkit</td>
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<tr>
<td>2:50 PM</td>
<td><strong>Break</strong></td>
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<tr>
<td>3:15 PM</td>
<td><strong>Centennial Prize Competition</strong></td>
<td>Gregory Freund, Myung Sun Choi, Jennifer Hu, Abby Koff, Devan Patel</td>
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<td>A Next-Generation Style Video Game-based Interactive Simulation to</td>
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<td>Quantitatively Assess Non-Cognitive Abilities</td>
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<td>TOPCATS (Trainee-Oriented Patient Communication Assessment System)</td>
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<td>4:45 PM</td>
<td><strong>Day 1 Concluding Remarks</strong></td>
<td>Lewis First</td>
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<td>5:00 PM</td>
<td><strong>Recess</strong></td>
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<tr>
<td>6:00 PM</td>
<td><strong>Depart for Philadelphia Museum of Art</strong></td>
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* Schedule subject to change.

** Individual attending the gala reception and dinner at the Philadelphia Museum of Art should assemble at the north entrance of the hotel (near the shoeshine station) for transportation to the venue.
# SCHEDULE OF EVENTS* (continued)

Grand Ballroom ~ Ritz Carlton Hotel, Philadelphia

## TUESDAY, MAY 5

<table>
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<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
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| 8:30 AM | **Competition Recap**  
Comments and questions                                                   | Lewis First  
Judges  
Audience                                                                 |
| 9:05 AM | **Competition Voting**                                                 |                                                                           |
| 9:20 AM | **Presentations from Recipients of the NBME Centennial Awards Program for Latin America** | W.T. Williams, Jr.  
Giselle Myer  
Melchor Sánchez  
Ángel Centeno                                                      |
| 10:05 AM| **Break**                                                              |                                                                           |
| 10:20 AM| **Comments from the President**                                        | Don Melnick                                                                |
| 10:30 AM| **Keynote Address**                                                   | Don Berwick                                                                |
| 11:30 AM| **Results of Voting and Selection of Centennial Prize Winner**         |                                                                           |
| 11:45 AM| **Closing Remarks**                                                   | Lewis First                                                                |
| NOON   | **Adjourn**                                                            |                                                                           |

* Schedule subject to change.
SPEAKERS

KEYNOTE

Don Berwick

Don Berwick is the United States’ leading advocate for high-quality healthcare. In December, he stepped down as the Administrator of the Centers for Medicare and Medicaid Services. For 22 years prior to that, he was the founding CEO of the Institute for Healthcare Improvement, a nonprofit dedicated to improving healthcare around the world. A pediatrician by background, he has also served on the faculties of the Harvard Medical School and the Harvard School of Public Health.

Don sees tremendous unrealized potential in American medicine. Despite our outstanding knowledge base, expert practitioners, and world-class equipment, too many Americans do not have access to safe, high-quality care. Dr. Berwick presents a vision of how, through continual improvement, innovations in healthcare delivery, stronger leadership, and smarter policy, America can forge a system that satisfies our patients, achieves better outcomes, respects our limited resources, and honors our moral imperative to care for the disadvantaged. His focus on improving quality has gained him a reputation as a powerful motivator who can encourage institutions and individuals to do their work better.

Let’s make “best” the new norm.

For his important role in helping to redesign and improve Britain’s healthcare system, Dr. Berwick was appointed by Queen Elizabeth as Honorary Knight Commander of the Order of the British Empire. He is the recipient of many awards, including the Ernest A. Codman Award, the American Hospital Association’s Award of Honor, the Heinz Award for Public Policy and the Institute of Medicine’s Gustav O. Lienhard Award. He has been named as a Fellow of the Royal College of Physicians (London) and a Fellow of the Royal College of General Practice. His over 160 articles have appeared in professional journals on such topics as healthcare policy and healthcare quality management. His books include Promising Healthcare: How We Can Rescue Health Care by Improving It, Curing Health Care, and New Rules: Regulation, Markets and the Quality of American Health Care.

EMCEE

Lewis R. First, MD, MS

Lewis R. First, MD, MS was elected to a second term as chair of the NBME at the 2013 Annual Meeting of the Membership. He previously served on the Executive Board as an at-large member and as treasurer. Dr. First, a board-certified pediatrician, graduated from Harvard College, received his medical degree from Harvard Medical School, and received a master’s degree in epidemiology from the Harvard School of Public Health. Dr. First is professor and chairman of pediatrics at the University of Vermont College of Medicine and chief of pediatrics, University of Vermont Children’s Hospital. He also served as senior associate dean for medical education at the University of Vermont for six years prior to becoming Editor-in-Chief of Pediatrics, the official journal of the American Academy of Pediatrics in 2009, a position he continues to hold presently. His media and communications activi-
ties include weekly radio and television segments, as well as a newspaper column, “First with Kids.” On a local and national level, Dr. First has won numerous teaching awards including the AAMC’s Robert J. Glazier Distinguished Teacher Award (2002) and AAP’s National Medical Education Award (2007). In 2014 he was the recipient of the Joseph W. St. Geme Jr. Leadership Award from the Federation of Pediatric Organizations, the highest leadership honor bestowed jointly by all seven national pediatric academic organizations. Dr. First has been serving the NBME in volunteer positions for approximately 20 years. Highlights of his NBME service history include chair of the USMLE Step 2 Committee, chair of the Step 2 Pediatrics Committee, and chair of the Audit and Finance Committees. He has served as a member of numerous task forces and committees for NBME and USMLE.

JUDGES

John J. Norcini, PhD

John J. Norcini, PhD is president and CEO of the Foundation for Advancement of International Medical Education and Research (FAIMER®). FAIMER has an active research program in international health professions education and physician migration, global fellowship programs for faculty from health professions schools, and databases of recognized medical schools and accrediting bodies around the world. In conjunction with Keele University, FAIMER also offers a master’s degree in Health Professions Education: Accreditation and Assessment. For the 25 years before joining FAIMER, Dr. Norcini held a number of senior positions at the American Board of Internal Medicine, and his principal academic interest is in the assessment of healthcare providers.

Dr. Norcini has published extensively, lectured and taught in more than 40 countries, and is on the editorial boards of several peer-reviewed journals in health professions education. He is an honorary Fellow of the Academy of Medical Education and has received numerous awards including NBME’s Hubbard Award and the Karolinska Prize for Research in Medical Education.

Glenn Regehr, PhD

Glenn Regehr, PhD is professor, Department of Surgery, associate director (research), Centre for Health Education Scholarship, University of British Columbia. Dr. Regehr obtained his PhD in cognitive science from McMaster University in 1993. During his career in the field of health professions education, Dr. Regehr has been heavily involved in the development of, and held leadership positions within, three HPE research units across Canada: the University of Toronto Wilson Centre, the University of Ottawa Academy of Innovation in Medical Education, and the University of British Columbia Centre for Health Education Scholarship. He has co-authored over 200 peer-reviewed papers and chapters on a range of topics, including OSCE measures, authentic clinical assessment, professionalism, professional identity formation, self-assessment, self-regulation, and feedback. In addition to over 20 awards for individual papers and presentations, his career awards include the NBME Hubbard Award (2007), the MCC Award for Outstanding Achievement in the Evaluation of Clinical Competence (2008), and the CAME Ian Hart Award for Distinguished Contribution to Medical Education (2013).
Professor Dame Lesley Southgate

Dame Lesley Southgate is professor of medical education at St George's Hospital Medical School. She is a family doctor and was active in patient care until she became president of the Royal College of General Practitioners in 2000. From 1996-2004 she led the General Medical Council (GMC) president’s program to develop and implement the assessment methods for the GMC performance procedures for the medical profession. She was a member of the Postgraduate Medical Education Training Board (PMETB) until November 2006, where she chaired the Statutory Committee on Assessment and its subcommittee on examinations in postgraduate training until January 2006. She is the principal author of the Board’s paper on principles for assessment, now a requirement for all postgraduate assessment programs in the United Kingdom.

She is known internationally and nationally for her work on assessment of competence and performance of physicians. In 2008 she received NBME’s Hubbard Award for her outstanding contributions to assessment of competence and performance of doctors in the international arena. Dame Lesley was elected a member-at-large at the 2009 NBME Annual Meeting.

International work includes an active connection with the Medical Academy of St. Petersburg, where she is a distinguished international professor, and support for the Egyptian Board of Medical Specialties in the development of the certifying examinations for family medicine. She was lead for curriculum development in an EU program to improve the quality of life for people infected with or affected by HIV/AIDS in Libya. Work was suspended in February 2011, but her connections within Libya are still active. In July 2013 she gave an invited address to a national conference on the reform of Libyan medical education and the regulation of Libyan medical profession.
As part of its centennial celebration, the NBME created a competitive award for medical education consortia in Latin America. The goal of the program is “to enhance the quality of student evaluation in medical school education in Latin America.” Announcement of the program was made in July, 2013 in Quito, Ecuador at the biannual meeting of the Pan-American Federation of Associations of Medical Schools and the World Federation of Medical Education, with simultaneous posting of the details on the NBME website. In its call for proposals, the NBME stated: “Of particular interest are proposals designed to have a broad, sustainable impact in a region by building local capacity to evaluate key learning outcomes and improve program quality at participating schools.” Each of the three awards consisted of $50,000, plus NBME staff support for the two-year projects.

The selection committee consisted of NBME’s Latin American Advisory Group, comprising leaders in medical education from Central and South America, plus members of the NBME Executive Board and staff leadership from its International Programs unit and the Center for Innovation. The winners were announced at the 2014 NBME Annual Meeting. Each project is well under way; each consortium works with NBME staff through its NBME awards program liaison. Brief descriptions of the projects appear below. Leaders from each consortium will speak at the NBME plenary session on May 5, 2015.

**Improvement in Objective Structured Clinical Examination (OSCE)**

**Quality in Order to Optimize Clinical Competency Assessment of Medical Students**

**Consortium Members:**

- Universidad Católica del Norte (Chile)
- Universidad Finis Terrae (Chile)
- Universidad del Desarrollo (Chile)
- Universidad Mayor (Chile)
- Universidad Andrés Bello (Chile)
- Universidad Diego Portales (Chile)
- Universidad de Concepción (Chile)

**Presenter:**

Dra. Giselle Myer  
Professor of Medicine and Medical Education  
Faculty of Medicine  
Universidad Católica del Norte  
Antofagasta, Chile

The objective of this project is to improve the quality of the OSCEs using standardized patients to optimize the clinical competencies assessment of medical students and to create a collaborative network between Chilean universities that allows for the creation of valid and reliable stations to be shared with the participating institutions. It is hoped that this project will be used as a pilot for developing a national licensure examination using OSCEs. The seven participating institutions held a two and a half day case development workshop that was facilitated by staff Gail Furman (NBME/CSEC) and Colette L. Scott (NBME, Assessment Programs) in Santiago, Chile, January 5-9 for participants. The result was the development of cases that are being further refined by the faculty after the workshop. Pilots are planned for April and May, 2015.
Assessment of Clinical Competence with the Objective Structured Clinical Examination (OSCE) in Undergraduate Medical Internship

**Consortium Members:**

- Facultad de Medicina de la Universidad Nacional Autónoma de México
- Escuela de Medicina Ignacio A. Santos del Instituto Tecnológico y de Estudios Superiores de Monterrey (Mexico)
- Facultad de Medicina de la Universidad Autónoma de San Luis Potosí Mexico

**Presenter:**

Dr. Melchor Sánchez  
Professor of Medical Education and Biomedical Informatics  
Faculty of Medicine  
Universidad Nacional Autónoma de México  
Mexico City, Mexico

The objective of this project is to design and validate an instrument for assessing the clinical competence of medical students through the use of an OSCE with standardized patients. This will take place during the 5th year of medical school, at the end of the medical internship in the three schools of medicine in Mexico that comprise the consortium. A two and a half day case development workshop was held with two staff members from the NBME/ECFMG Clinical Skills Evaluation Collaboration, Gail Furman and Amber Montañano; members from all three schools participated. The result was the development of cases that were further refined by the faculty after the workshop. Initial pilots were held March 13 and 14 at Instituto de Estudios Superiores de Monterrey, March 19 and 20 at Universidad Autónoma de San Luis Potosí, and on April 11 at Universidad Nacional Autónoma de Mexico.

Assessment of Aspects Related to Medical Humanism in Three South American Medical Schools

**Consortium Members:**

- Escuela de Ciencias Biomédicas, Universidad Austral (Argentina)
- Escuela de Medicina, Universidad de Concepción (Chile)
- Escuela de Medicina, Universidad Católica de Córdoba (Argentina)

**Presenter:**

Dr. Ángel Centeno  
Professor of Internal Medicine and Medical Education  
School of Biomedical Sciences  
Universidad Austral  
Buenos Aires, Argentina
The objective of this project is to develop a framework for the assessment of professionalism, identify observable behaviors, and incorporate an electronic portfolio to capture the results. Initial meetings of the consortium focused on: 1) the development of a theoretical framework for the project, with the first challenge of agreement on a definition of “professionalism”; 2) the identification of observable behaviors including the challenges of exhibiting compassion and a caring attitude; and 3) the critical role of faculty development in the project. Subsequent meetings, shared via Skype with NBME staff members Brownell Anderson and Miguel Paniagua included approaches to establishing the context in which professionalism is defined and measured and the identification of critical incidents as a measure of professionalism. A portfolio was designed for students to capture information. The next step is to implement the portfolio with students and faculty at each school.
In fall 2013, the NBME announced a call for proposals for its Centennial Prize Competition: Innovation in Future Assessment of Health Professionals. The objective of the competition is to identify innovative ideas that address future assessment needs for individual health professionals, health professions institutions/programs, licensing and certification bodies, and other domains across the continuum of health professions education and practice. Initial submissions called for descriptions, in 250 words or less, of innovative ideas for assessing health professionals in the future and were evaluated on:

- the extent to which the idea addresses a need for assessment of health professionals in the future,
- the potential impact on assessment of health professionals,
- the feasibility of the idea developing into a prototype of a new NBME service, and
- the potential for the presentation of the idea to engage participants during NBME’s May 4-5, 2015 Centennial Meeting.

Seventy-two first-round submissions were received; of these, 27 were invited to submit full proposals. Ultimately, twenty-two full submissions were received and evaluated according to the criteria above.

Competition finalists will present their proposals on May 4 at NBME’s Centennial Meeting. On May 5, NBME will award its grand centennial prize, including a cash award of $5000, a pledge that NBME will include the idea in its new product development process, and an invitation for the winner to participate in the development process as NBME’s Centennial Fellow.

NBME congratulates the four finalist teams, whose biographic information is found on the following pages.

NBME also thanks the individuals who submitted their ideas during the initial and semifinal rounds. Their names are listed on pages 17-20. There were many thoughtful and intriguing ideas submitted, and the NBME encourages these individuals to continue their important work in the field of assessment for health professionals.
The Population Health Assessment Tool
Karen Hauer

Karen Hauer is professor of medicine in the Department of Medicine at the University of California, San Francisco (UCSF). She earned an undergraduate degree in human biology at Stanford University. She then completed medical school, internal medicine residency, and chief residency at UCSF. She is the newly appointed first associate dean for competence assessment and professional standards at UCSF. Prior to that, she served as director of internal medicine clerkships at UCSF and is past president of the Clerkship Directors in Internal Medicine national organization. She has served as the director of the California Consortium for the Assessment of Clinical Competence. She is an active researcher in medical education and a research mentor for fellows, residents, and students, with a focus on new models of clinical learning in the workplace, competency-based medical education, learner assessment, and remediation. This year, she is completing a PhD in medical education through a joint program with UCSF and the University of Utrecht in the Netherlands. She is a practicing general internist in primary care and hospital medicine. She is married and has three children.

Other members of Dr. Hauer’s team include: Christy Boscardin, PhD; H. Carrie Chen, MD, MSED; Chandler Mayfield; Arianne Teherani, PhD; and Patricia O’Sullivan, EdD

Tying Teams Together: The Interprofessional Education Toolkit
Joy Doll and the Creighton Interprofessional Collaborative Innovation Team

Joy Doll, OTD, OTR/L

Dr. Doll is associate professor of occupational therapy at Creighton University. In addition to her passion for IPE, she is vice chair and director of the Post Professional OTD Program. She currently serves as co-chair of the Interprofessional Education Steering Committee at Creighton University.

Other members of Dr. Doll’s team include: Katie Huggett, PhD; Ann Ryan Haddad, PharmD; Jennifer Yee, MA; Ann Laughlin, PhD, RN; Katie Packard, PharmD; Anna Maio, MD; Kim Begley, PharmD; and Martha Todd, PhD, APRN

A Next-Generation Style Video Game-based Interactive Simulation to Quantitatively Assess Non-Cognitive Abilities
Gregory Freund

Dr. Gregory G. Freund received his BA in studio art from Wesleyan University, matriculating to the University of Rochester School of Medicine and Dentistry. At Rochester, he completed a residency in pathology and was a chief resident, a Wilmot Cancer Research Fellow and an Academy of Clinical Laboratory Physicians and Scientists Young Investigator awardee. His first and only position since finishing his medical training is at the University of Illinois at Urbana-Champaign. He is currently the interim associate dean of clinical affairs in the College of Medicine as well as professor and head of pathology, founding medical director of the Carle Foundation Hospital School of Cytotechnology, associate medical director and CLIA laboratory director at Mississippi Valley Regional Blood Center-Urbana and founding director of the Translational Research Resource Center in
the Roy J. Carver Biotechnology Center. While at Rochester, Dr. Freund became fascinated by the emerging field of psychoneuroimmunology, performing formative work that demonstrated the functionality of insulin and IGF-1 receptor signaling systems in immune cells. As an externally sponsored researcher for the past 20 years, Dr. Freund has investigated the biobehavioral complications of inflammation with a special focus on the development of countermeasures to protect against psychiatric disabilities such as anxiety and dysfunctional learning. Some of his recent discoveries were featured in such venues as Reader’s Digest (Aug 2010), AARP: The Magazine (Sep/Oct 2010), Self Magazine (Sep 2010), The Jackson Laboratory News & Events (Mar 2013), The New York Times Magazine (June 2013) and Men’s Fitness Magazine (Feb 2015). Finally, Dr. Freund is a regionally recognized digital artist whose works hang in both private and corporate collections. He is especially interested in procedurally generated art and its potential to make the unconscious/subconscious mind conscious.

**TOPCATS (Trainee-Oriented Patient Communication Assessment System)**

*Myung Sun Choi, Jennifer Hu, Abby Koff, and Devan Patel*

Myung Sun Choi is currently a third-year medical student at the University of Pittsburgh School of Medicine. She was born in South Korea and moved to New Jersey in elementary school. She received her bachelor’s degree in biology from Cornell University and master’s degree in mechanical engineering from Stanford University. While at Stanford, she was involved in a number of multidisciplinary team projects designing and developing medical devices, and cofounded CompactCath, Inc. shortly after graduation. After moving to Pittsburgh, she started exploring app- and web-based ideas for improving healthcare and was a member of the winning team, “PEER - a real-time patient experience review forum,” for the 2013 QIT Health Innovators Fellowship with students from Pitt and Carnegie Mellon. She is grateful and honored to be at the NBME centennial celebration and is excited to present TOPCATS with her talented teammates. In the future, she would like to keep partaking in multidisciplinary team projects for innovative services and products, continuing to receive inspiration and motivation from her patients.

Jennifer Hu is currently a third-year medical student at the University of Pittsburgh School of Medicine. Born to diplomatic parents, she had a nomadic upbringing, spending her developmental years in countries ranging from Kingdom of Tonga to Greece. She returned to the United States to complete her bachelor of science in applied and computational mathematics from the California Institute of Technology. In medical school, her clinical research focuses on predictive modeling of hospital readmission among older emergency department patients. She has spent many hours interviewing elderly patients and observing their interactions with the healthcare system. Jennifer brings her problem-solving skills and multicultural perspective to the TOPCATS team. Her ultimate goal is the delivery of better patient care through the use of technology and digital information systems. When she is not on the wards or doing research, she can be found tutoring, playing the piano, or curled up with a good book and a cup of tea.

Abby Koff is currently a first-year medical student at the University of Pittsburgh School of Medicine. She was born and raised in sunny Southern California, and was raised by her single mother after her father passed away when she was 11. She is the youngest of three with two amazing older brothers, and the first in her family to attend college, let alone medical school. She traveled to Boston to complete her undergraduate degree in neurobiology at Harvard University with a secondary in global health and health policy and a citation in Spanish. While at Harvard she was fortunate enough to live and work in Eastern Africa teaching HIV and AIDS education and awareness to local villagers and gaining firsthand experience in the intricacies of medical systems abroad. After graduating in 2012 she was awarded the Harvard Stowe Fellowship and traveled to England to live, teach, and coach at Stowe School.
She is looking forward to combining her passion for underserved populations, children, and surgery to both find ways to improve the healthcare system and care for patients. When she is not studying she enjoys playing basketball, playing fetch with her dog Chaucer, or enjoying her awesome nephews and niece.

Devan Patel is currently a first-year medical student at the University of Pittsburgh School of Medicine. Born and raised in the suburbs of Chicago, he grew up seeing his immigrant parents’ humble beginnings, struggles and subsequent successes in building their fast food restaurants. With his background in his family businesses, he combined his entrepreneurial spirit with his interest in healthcare, and decided to further his education with a degree in health system management from Loyola University Chicago.

From his experiences, Devan brings a unique perspective to the TOPCATS team. He has studied various aspects of healthcare from marketing to quality control, as well as conducted research for healthcare start-up SwipeSense. His ultimate aim is to develop innovations to improve the healthcare system, while also caring for patients as a future physician. When he isn’t talking about start-ups or studying for school, Devan enjoys mentoring Hindu youth for the BAPS youth activities, loves to play basketball and watch theatre productions, and is a lifelong fan of the Chicago Bulls.
INITIAL SUBMISSIONS

Roshan Atal
Nadia Bajwa
Leeda Bashardost
Gary L. Beck, John Dalrymple, and Lynn Cleary
Gary L. Beck, Beat Steiner, E. Naumbert, and Katherine Margo
Gary L. Beck, Madhu Soni, and D. Ander
Marc Berg
Ann S. Botash (3 submissions)
Myung Sun Choi
Maria B. J. Chun
Eileen CichoskiKelly
Jeffrey Clark
Cynthia S. Cooper
Joy Doll
Michael Enechukwu, Jaskirat Gill, Alexander Dragnich, Jeffrey Geisendorfer, Jun Yu, Brandon Rosenburg, and Kaushal Nanavati
Maria Faraz
Gary Ferenchick
Sara Fletcher
Gregory G. Freund
Yevgeniy Freyvert and Petya Radoeva (2 submissions)
Shiv Gaglani
Hong Gao
Shiphra Ginsburg
Russell Gonnering
David Gordon
Tristan Gorrindo
Josh Haratz
Karen E. Hauer, Cristy Boscardin, Carrie Chen, Gurpreet Dhaliwal, Chandler Mayfield, Arianne Teherani, and Patricia S. O’Sullivan
Paul Ivanchenko
Seth Kaplan, Lillian Su, and Mary Waller
Jaclyn Jensen
B. Price Kerfoot
Edward Krupat
David R. Lambert, Sarah E. Peyre, and Kathy Rideout
Matthew Lineberry and Georges Bordage
Matthew Lineberry, Amy Lin, and Georges Bordage
Joseph F. Majdan
Mangue A. Mangiyi Noel
David P. Melamed
Anna N. Miller
Matthew Mintz
Vinoth E. Nambudiri
Henry Ng
Jason Ojeda
Christie Palladino
Yoon Soo Park and Georges Bordage
Petya Radoeva and Yevgeniy Freyvert (3 submissions)
Senthil Kumar Rajasekaran (2 submissions)
Senthil Kumar Rajasekaran, Nelia Afonoso, Ann Poznanski, and Maurice Kavanagh
Senthil Kumar Rajasekaran, Simon Maxell, David Nierenberg, and Kelly Karpa
Vijay Rajput, Salimah H. Meghani, and Marcus Henning
Shmuel Reis and Hedy S. Wald
Anthony Ricco
Liam Rourke
Zeyad Schwen
Mitzi Scotten
Stuart Slavin and Jessica Whitfield
Heather Stuckey
Thomas K. Swoboda
Jennifer Tran
Thomas Vaidhyan
Michael J. Waxman
Rachel Yudkowsky, Debra Pugh, and Yoon Soo Park
Rachel Yudkowsky and Matthew Lineberry
Rachel Yudkowsky, Yoon Soo Park, Vijay Daniels, and Georges Bordage
The Life-long Intrepid Learner Triad
Ann S. Botash, MD and Trish Booth, MA
SUNY Upstate Medical University

TOPCATS: Trainee-Oriented Patient Communication Assessment System
Myung Sun Choi and Jennifer Hu
University of Pittsburgh School of Medicine

Tying Teams Together: The Interprofessional Education Toolkit
Joy Doll, OTD, OTR/L and the Creighton University Interprofessional Education Collaborative
Creighton University

Innovative Quality Care Assessment Paradigm
Alexander Dragnich, Michael Enechukwu, Jeffrey Geisendorfer, Jaskirat Gill, Kaushal Nanavati, Brandon Rosenburg, and Jun Yu

Workplace-based Assessments Delivered Via Cloud-based Technology
Gary S. Ferenchick, MD
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A Next-Generation Style Video Game-based Interactive Simulation to Quantitatively Assess Non-Cognitive Abilities
Gregory G. Freund, MD* and Mike Kulas
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Diagnostic Reasoning Cases
David Gordon, MD
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The Population Health Assessment Tool
Karen E. Hauer, MD, Christy Boscardin, PhD, H. Carrie Chen, MD, MSeD, Chandler Mayfield, Arianne Teherani, PhD, and Patricia O’Sullivan, EdD
University of California, San Francisco

Identifying the Attributes Predictive of Team-Related Performance in Medical Contexts
Seth Kaplan, PhD,* Lillian Su, MD,** and Mary Waller, PhD†
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Longitudinal Online Progress Testing to Support Advancement Decisions in Competency-based Education
B. Price Kerfoot, MD, EdM
Harvard Medical School and Veterans Affairs Boston Healthcare System
The Decision Certainty Analysis Test
Edward Krupat, PhD
Harvard Medical School

ICARE: Interprofessional Communication and Role Evaluation
David R. Lambert, MD, Sarah E. Peyre, EdD, and Kathy Rideout, EdD, RN
University of Rochester School of Medicine and Dentistry and School of Nursing

An Intelligent Formative Assessment System to Support Continuous Learning and Improvement in Medical Education
Matthew Lineberry, PhD, Georges Bordage, MD, PhD, Yoon-Soo Park, PhD, and Rachel Yudkowsky, MD, MHPE
University of Illinois at Chicago

Automated Scoring Technology to Score Patient Notes in the USMLE Step 2 CS
Yoon Soo Park, PhD, Rachel Yudkowsky, MD, MHPE, Matthew Lineberry, PhD, and Georges Bordage, MD, PhD
University of Illinois at Chicago

Assessing Digital Information Literacy: An Innovative Case-based Approach
Senthil Kumar Rajasekaran, MD
Eastern Virginia Medical School

Modular Approach in Assessing Common Psychiatric Conditions Using Short Video Vignettes
Senthil Kumar Rajasekaran, MD, * Ann Poznanski, MD, PhD, ** Nelia Afonso, MD, † Maurice Kavanagh, †
and Ann Kring, PhD †
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CIRCLE: An Innovative Interprofessional Mini-CEX Assessment Tool for Directly Observed Contextual Competencies for Health Professionals
Vijay Rajput, MD, * Salimah H. Meghani, PhD, MBE, RN, ** and Marcus Henning, PhD †
* Cooper Medical School of Rowan University, ** University of Pennsylvania School of Nursing, † University of Auckland

Neurophysiological Evidence in Determinations of Competence
Liam Rourke, PhD, Alain Brassard, Anthony Singh, PhD, Jacqueline Leighton, PhD, and Penny Smyth, MD
University of Alberta

Interprofessional Team Assessment
Madhu Soni, MD, * and Douglas Ander, MD **
* Rush University Medical Center, ** Emory University School of Medicine

3D Immersive Assessment Simulation
Thomas K. Vaidhyan

Computerized Interactive System for Clinical Skills Assessment
Michael J. Waxman, MD, MBA
A Holistic Assessment of Procedural Skills: The Step 2 Procedural Skills Exam
Rachel Yudkowsky, MD, MHPE,* Debra Pugh,** Yoon Soo Park, PhD,* Matthew Lineberry, PhD,* and Georges Bordage, MD, PhD*
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