2014 Spring Conference Program

Medical Education: Thinking Outside the Box

March 27-29, 2014

Jointly hosted by
Association of American Medical Colleges Central Group on Educational Affairs
Cleveland Clinic Lerner College of Medicine
Case Western Reserve University School of Medicine

CGEA Conference activities will be conducted at the
InterContinental Cleveland
9801 Carnegie Avenue

UPDATED March 19, 2014
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Target Audience
This program will be of interest to educators and administrators participating in undergraduate and graduate medical and professional education and training.

Educational Objectives
Upon completion of this educational activity, participants should be better able to:
1) Discuss the benefits associated with an integrated and more seamless approach to the continuum of health professional education.
2) Design and implement strategies for effectively educating healthcare professionals in alignment with overarching healthcare improvement initiatives.
3) Describe current research and emerging tools and techniques designed to appropriately position and advance the medical education profession.
4) Identify a variety of best practices in the field of medical education and seek to effectively integrate innovative solutions into your medical education setting.
5) Build a network of colleagues available to engage in on-going discussions and idea generation surrounding education issues and challenges.

Program Committee
Nicole Borges, PhD  Mary Anderson, MD
Program Chair  Program Co-Chair
Wright State University  Rush Medical College
Boonshoft School of Medicine

Caren Stalburg, MD, MA  S. Beth Bierer, Ph.D.
Program Committee  MESRE Chair
University of Michigan  Cleveland Clinic Learner College of Medicine
Medical School  of Case Western Reserve University

Nicole Roberts, PhD
CME Chair
Southern Illinois University School of Medicine
Keynote Speaker
Kevin W. Eva, Ph.D., Hon. FAcadMEd

Kevin Eva is Senior Scientist and Acting Director of the Centre for Health Education Scholarship, and Professor and Director of Educational Research and Scholarship in the Department of Medicine, at the University of British Columbia. He completed his PhD in Cognitive Psychology (McMaster University) in 2001 and became Editor-in-Chief for the journal Medical Education in 2008. He is Visiting Professor at the University of Bern (Switzerland) and has consulted broadly around the globe including advisory roles for the National Board of Medical Examiners (US) and National Health Services Education (Scotland). He is founding co-director of the Maastricht-Canada Masters of Health Professional Education program.

Dr. Eva’s current research interests are broadly defined within the context of research into educational practices within the health professions. They include research into (1) The value and limits of subjectivity as a means of assessing performance, (2) The promotion and assessment of non-academic characteristics in professional practice, (3) The context specific nature of performance, (4) The conceptualization, nature, and use of self-assessment, (5) The psychological processes that impact upon one’s responsiveness to feedback, and (6) The nature of clinical expertise.

Recent awards for this work include an Honorary Fellowship from the Academy of Medical Educators (UK), the MILES Award for Mentoring, Innovation, and Leadership in Education Scholarship from the Asia-Pacific Medical Education Conference, the John Ruedy Award for Innovation in Medical Education from the Association of Faculties of Medicine in Canada, the Outstanding Achievement Award from the Medical Council of Canada, and the John P. Hubbard award from the National Board of Medical Examiners (US).
Recent advances in admissions technology: What the MMI has taught us about the selection and assessment of health professionals

Despite the critical importance of maintaining a valid and transparent selection process that serves the values held by all stakeholders involved in medical education (i.e., students, faculty, society), the community continues to struggle with a variety of issues related to available admissions protocols. Some problems derive from inertia induced by inaccurate intuitions pertaining to the nature of admissions protocols and the underlying qualities being measured. Others arise from the lack of reliable and valid admissions protocols to capture the non-academic qualities of candidates. In this presentation Dr. Eva will review some of these issues and present the lessons that have been learned for assessment practices in general from efforts to research an innovative sampling-based approach to health professional student selection known as the Multiple Mini-Interview (MMI).
Central Group on Educational Affairs Disclosure Policy

It is the policy of the Central Group on Educational Affairs to abide by the standards set forth by the Accreditation Council for Continuing Medical Education (ACCME) Standards for Commercial Support of Continuing Medical Education. Even though we are not offering CME (or AMA PRA category 1) credit for this educational activity, we still strive to ensure balance, independence, objectivity, and scientific rigor in all of its activities.

To help achieve that objective, all persons involved in the planning/content development are expected to disclose all relevant financial relationships with pharmaceutical companies, biomedical device manufacturers or distributors, or others whose products or services may be considered related to the subject matter of the educational activity. Disclosure of these relationships will be included in all written activity materials, and mentioned verbally at the activity so that participants may formulate their own judgments in interpreting content and in evaluating recommendations.
Acronyms Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CME</td>
<td>Continuing Medical Education</td>
</tr>
<tr>
<td>GME</td>
<td>Graduate Medical Education</td>
</tr>
<tr>
<td>IME</td>
<td>Innovations in Medical Education</td>
</tr>
<tr>
<td>MESRE</td>
<td>Medical, Education, Scholarship, Research, &amp; Evaluation (was RIME)</td>
</tr>
<tr>
<td>SIG</td>
<td>Special Interest Group</td>
</tr>
<tr>
<td>UGME</td>
<td>Undergraduate Medical Education</td>
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Association of American Medical Colleges Exhibitors

**MedEdPORTAL**
MedEdPORTAL promotes educational scholarship and collaboration by facilitating the open exchange of peer-reviewed health education teaching and assessment resources. MedEdPORTAL is an open education resource and publication service provided by the Association of American Medical Colleges in partnership with the American Dental Education Association. MedEdPORTAL now features approximately 2,000 peer-reviewed educational resources that span the continuum of medical and dental education. The international reach of MedEdPORTAL continues to grow and now includes usage from more than 10,000 health education institutions from over 190 countries. Up to 1,000 MedEdPORTAL publications are accessed each week from users across the globe.

**Medical Academic Performance Services (MedAPS)**
[www.aamc.org/medaps](http://www.aamc.org/medaps)
Medical Academic Performance Services (MedAPS) is a suite of services under development by the Association of American Medical Colleges that will provide LCME-accredited medical schools with the tools necessary to assess, maintain and fulfill accreditation standards and promote continuous quality improvement. The new suite will include the Accreditation Standards Self-Evaluation Tool, a new online resource for AAMC member medical schools to use in preparation for LCME accreditation; Curriculum Inventory, a database of U.S. medical education programs that will provide aggregate reports, charts, and graphs for benchmarking and educational research; and Medical Academic Performance Dashboard, a set of benchmarking tools that will enhance medical quality improvement efforts by providing comparison of their academic program data to aggregate reports on all U.S. medical schools, or a subset of schools based on demographic and/or geographic data. MedAPS services will link to MedEdPORTAL ([www.mededportal.org](http://www.mededportal.org)) and other AAMC resources to provide potential solutions to problems, resources to enhance current efforts, possible collaborators and/or information sources, and related educational research.

To learn more about this exciting new suite of services, and additional initiatives that span the continuum of medical education, visit the MedAPS/MedEdPORTAL exhibit.
Driving Directions to The InterContinental Cleveland

**Toledo, Ohio to InterContinental Cleveland (East)**
Head on I-90 East  
Take exit 172B for E. 22\textsuperscript{nd} Street  
Keep left at the fork, follow signs for E. 22\textsuperscript{nd} street N. Central Ave.  
Turn Left onto E. 22\textsuperscript{nd} Street  
Take the 2\textsuperscript{nd} right onto Carnegie Ave  
Destination will be on the left in 2.8 miles

**Columbus, Ohio to InterContinental Cleveland (South)**
Head on I-71 North (Cleveland Hopkins Airport)  
Continue on I-90 East  
Take exit 172B for E. 22\textsuperscript{nd} Street  
Keep left at the fork, follow signs for E. 22\textsuperscript{nd} street N. Central Ave.  
Turn Left onto E. 22\textsuperscript{nd} Street  
Take the 2\textsuperscript{nd} right onto Carnegie Ave  
Destination will be on the left in 2.8 miles

**Pittsburgh, PA to InterContinental Cleveland (West)**
Head onto I-76 West towards Youngstown, Ohio  
Continue on I-80 West / Ohio Turnpike  
Take exit 187 to merge onto I-480 West/OH-14 West towards Cleveland  
Continue to follow I-480 West  
Take exit 20A-20B for I-77 N/I-77 South toward Cleveland/Akron  
Take exit 20B for Interstate 77 North toward Cleveland  
Merge onto I-77 North  
Take exit 162B for E 22nd St  
Turn left onto E 22nd St  
Take the 2\textsuperscript{nd} right onto Carnegie Ave  
Destination will be on the left in 2.8 miles

**Erie, PA to InterContinental Cleveland (North)**
Head onto I-90 West towards Cleveland  
Take exit 177 for Martin Luther King Junior Drive  
Turn Left onto Martin Luther King Junior Drive  
Turn Right onto E. 105\textsuperscript{th} Street  
Turn Right onto Carnegie Ave  
Destination will be on the Right in 0.2 miles

**Transportation Options:**
The hotel is located 15.3 miles from the Cleveland Hopkins International Airport. Taxi fare from the airport to the hotel is approximately $37.00-$43.00. Thomas Limo is the InterContinental Cleveland’s Preferred Shuttle Service and they can be contacted at (330)733-5372.
Thursday, March 27, 2014

7:00 am – 5:30 pm  REGISTRATION
Phillips Break Area
2nd Floor

9:00 am – 12:00 pm  PRE-MEETING WORKSHOP
Room 201
Medical Education Research Certificate (MERC) Workshop:
Measuring Educational Outcomes with Reliability and Validity
Larry Gruppen, PhD, University of Michigan Medical School

This workshop introduces participants to the principles of score reliability and validity, using a combination of didactics and review of medical education research projects. The workshop is divided into two parts with group exercises designed to reinforce understanding of the main principles. After participating in this workshop, learners will be able to:

• Identify three types of reliability (inter-rater, test-retest, and internal consistency);
• Match types of reliability with appropriate statistical measures;
• Describe the relationship between reliability and validity;
• Describe multiple forms of evidence for validity;
• Select an approach to reliability and validity assessment for a particular study.

9:00 am – 12:00 pm  AAMC Workshops
Room 204

9:00 – 10:30 am  Curriculum Inventory Implementer’s Workshop
Terri Cameron, Director of Curriculum Programs, AAMC
Walter Fitz-William, Senior Program Operations Specialist, AAMC
Robby Reynolds, Director, Medical Education Online Programs, AAMC

The Curriculum Inventory (CI) is one of the tools in AAMC’s Medical Academic Performance Services (MedAPS). It is a repository of curriculum data from US and Canadian medical and osteopathic schools that gathers data from school curriculum management systems to avoid duplicate data entry. Data is collected on an annual basis and is used in conjunction with Annual LCME Questionnaire Part II data to create Curriculum Inventory Reports, and to pre-populate ASSET for schools preparing for accreditation. Curriculum Inventory Reports provide graphical benchmarking reports regarding curriculum structure, content, pedagogy, and competencies. The Curriculum Inventory Workshop will provide details of the data elements for upload to the Curriculum Inventory, how those elements are organized into an xml file based on the MedBiquitous Curriculum Inventory data exchange standard, how competencies are referenced in the file, and how to document challenging curriculum content such as clerkships, electives, selectives, tracks, regional medical campuses, and small group learning. ([www.aamc.org/cir](http://www.aamc.org/cir))
10:30 am – 12:00 pm  **ASSET**

*Walter Fitz-William, Senior Program Operations Specialist, AAMC*
*Tori Cameron, Director of Curriculum Programs, AAMC*
*Robby Reynolds, Director, Medical Education Online Programs, AAMC*

The Accreditation Standards Self-Evaluation Tool (ASSET) is one of the tools in AAMC’s Medical Academic Performance Services (MedAPS). ASSET assists medical schools in accreditation preparation by providing an online workflow that can be tailored to meet each school’s needs, with much of the quantitative data pre-populated from AAMC and LCME sources, including the Annual LCME Questionnaires, the Student Record System, FAMOUS (the AAMC Faculty Database), and the Curriculum Inventory. By providing a centralized online tool with workflow options, pre-populated data, and a repository to collect referenced documents, ASSET allows schools to focus on analysis of data and development of the qualitative responses to accreditation questions. The ASSET Workshop will provide an overview of the system, a tutorial on working with the system, and a discussion of how schools can use ASSET to assist with the LCME accreditation cycle, as well as school-based accreditation standard compliance reviews, and continuous quality improvement. ([www.aamc.org/asset](http://www.aamc.org/asset))

12:00 – 1:00 pm  **LUNCH (on your own)**

1:00 – 4:00 pm  **PRE-MEETING WORKSHOP**

*Room 201*

**Medical Education Research Certificate (MERC) Workshop:**
**Scholarly Writing: Publishing Medical Education Research**
*Brian Mavis, PhD, Michigan State University College of Human Medicine*

In this session, the skills of scholarly writing will be explored through the lens of analyzing a manuscript that was accepted for publication. The participants will examine review criteria that are used by healthcare education journals and apply them to a sample manuscript. In discussing scholarly writing, the participants will make a decision about the type of feedback they would give to the authors of the sample paper. At the end of this session, participants will be able to:

- Identify the components of a scholarly publication;
- Discuss how to frame a problem statement;
- Identify an effective research question;
- Discuss whether the design/method is appropriate to the question;
- Discuss whether the authors have applied the best data collection methods to the appropriate sample;
- Understand the Results section and how to present results in a clear manner.
1:00 - 5:00 pm
Room 204
LEADERSHIP EDUCATION AND DEVELOPMENT (LEAD)
(closed session for LEAD Fellows only)
Linda Perkowski, PhD, Central Michigan University College of Medicine
Chris Burns, PhD, Central Michigan University College of Medicine

The Leadership Education And Development (LEAD) certificate program is an intensive 2-program created to address leadership development for early to mid-career educators and professionals in academic medicine. Designed to foster practical knowledge from recognized theoretical models and best practices, it is administered through the AAMC. The program is by invitation only.

5:00 pm
Official Conference Activities Completed for the Day
Please see the “Cleveland Visitors Guide”,
http://www.positivelycleveland.com/visit/visitors-center/

5:30 – 7:30 pm
Room 201
 EXECUTIVE COUNCIL MEETING

6:30 – 8:30 pm
Room 204
LEADERSHIP EDUCATION AND DEVELOPMENT (LEAD)
(closed session for LEAD Fellows only)
Janet Riddle, MD, University of Illinois at Chicago College of Medicine
Carol Kamin, EdD, University of Illinois at Chicago College of Medicine
Friday, March 28, 2014

7:00 am – 5:30 pm  REGISTRATION
Phillips Break Area
2nd Floor

7:00 – 7:30 am  POSTER SET UP
Phillips Break Area
Poster presenters should hang their posters before 7:30 am.

7:00 – 8:00 am  BREAKFAST (free time to view posters and exhibits)
Ballroom C

7:00 – 8:00 am  Orientation to the Central Group on Educational Affairs and
the Association of American Medical Colleges
Six Continents
Faculty Development Special Interest Group

If you have not attended AAMC and/or CGEA meetings, this is an opportunity
to meet some other new members, ask questions about the meetings, and
learn a few helpful hints.

8:00 – 9:00 am  KEYNOTE ADDRESS
Ballroom C
“Recent Advances in Admissions Technology: What the MMI has Taught
Us about the Selection and Assessment of Health Professionals”
Kevin Eva, PhD
Senior Scientist in the Centre for Health Education Scholarship, Professor and
Director of Educational Research and Scholarship in the Department of
Medicine at the University of British Columbia.

9:00 – 9:15 am  BREAK

9:15 – 10:45 am  CONCURRENT SESSIONS

Six Continents
Panel
Interprofessional Simulation: Measuring Professional Development and
Creating Cultural Change through Effective Design of Curriculum and
Assessment
Andrew Bland, MD, MBA, University of Illinois College of Medicine at Peoria
Gerald Wickham, EdD, University of Illinois College of Medicine at Peoria
Ann Dunlap, PhD, CRNA, Jump Simulation Center
Lisa Barker, MD, University of Illinois College of Medicine at Peoria

Room 203
Workshop
How to Write a Competitive CGEA Collaborative Grant
S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU
Colleen Colbert, PhD, Cleveland Clinic

Room 202
Workshop
Professional Lapses among Medical Students: How Best to Identify and
Remediate?
Deborah Danoff, MD, University of Ottawa
Richard Frankel, PhD, Indiana University School of Medicine
Deborah Ziring, MD, Drexel University College of Medicine
Room 204

Workshop
Improving Resident and Faculty Questioning during Bedside Teaching
Tara Petersen, MD, Medical College of Wisconsin
Janet Lindemann, MD, University of South Dakota Sanford School of Medicine
Karen Marcdante, MD, Medical College of Wisconsin

Room 201

Workshop
Getting QI started early: A Workshop for Residents and Educators in the Curriculum and Development of QI Projects
Amy Zack, MD, MetroHealth Medical Center

Room 207

MESRE Oral Abstract Presentations Session: Instructional Approaches
(Presentations are allotted 15 minutes)
Moderator: Nicole Roberts, Ph.D., Southern Illinois University School of Medicine

Development and Pilot of an Undergraduate Medical Education Consultation Curriculum
Keme Carter, MD, University of Chicago
Andrew Golden, University of Chicago Pritzker School of Medicine
Sarah Donlan, MD, NorthShore University Health System
Sara Hock, MD, University of Chicago
Shannon Martin, MD, University of Chicago
Jeanne Farnan, MD, MHPE, University of Chicago
Vineet Arora, MD, MAPP, University of Chicago

* Funded by a grant from the Pritzker School of Medicine Academy of Distinguished Medical Educators.

Hey Doc, Pay Attention to Me: Teaching Patient-Centered EMR Use
Wei Wei Lee, MD, MPH, University of Chicago
Lolita Alkureishi, MD, University of Chicago
Jeanne Farnan, MD, MHPE, University of Chicago
Vineet Arora, MD, MAPP, University of Chicago

* Funded by a grant from the Picker foundation, University of Chicago Academy of Distinguished Medical Educators, University of Chicago Bucksbaum Institute of Clinical Excellence

Use of Modified Peer Instruction in a Introductory Pathobiology and Pharmacology Course
Mary Jo Trout, PharmD, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine
Paul Koles, MD, Wright State University Boonshoft School of Medicine

Does Participation in Team-Based Learning Affect Medical Students’ Longer-Term Learning?
Hicham Ismail, MS4, Wright State University Boonshoft School of Medicine
Paul Koles, MD, Wright State University Boonshoft School of Medicine
Adrian Corbett, MD, Wright State University Boonshoft School of Medicine
Khalid Elased, MD, Wright State University Boonshoft School of Medicine
Adrienne Stolfi, MSPH, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine
Dean Parmelee, MD, Wright State University Boonshoft School of Medicine

*Recipient of a CGEA Student Travel Scholarship (funded by CGEA)
Procedures Performed by Medical Students in Ambulatory Settings During the First Year of Medical School
Sorabh Khandelwal, MD, The Ohio State University
Ann Dietrich, MD, The Ohio State University
John Davis, PhD, MD, The Ohio State University
Doug Post, PhD, The Ohio State University
Cynthia Ledford, MD, The Ohio State University
Judy Westman, MD, The Ohio State University
John Mahan, MD, The Ohio State University
Diana Bahner, The Ohio State University

10:45 – 11:00 am  BREAK

11:00 – 11:30 am  AAMC Presentation

Room 207  Introduction to Teaching for Quality
Mary Dolansky Louis Stokes Cleveland Medical Center

Provides an overview of the report, competencies for faculty and recommendations. Will provide some examples of topics and curricula for QI/PS across the continuum. Time for participants to ask questions and offer suggestions for the new program.

Bank of America- A Conference Center  Core Entrustable Professional Activities (EPSs) for Entering Residency: Spring Meeting Project Update
Bob Englander, MD, MPH, Senior Director, Competency-based Learning and Assessment, AAMC

A little over a year ago the AAMC convened a panel of experts to delineate the Core Entrustable Professional Activities (EPAs) that any MD entering residency should be able to do on day one without direct supervision. EPAs are activities that professionals in a given stage in their career engage in on a day-to-day basis. EPAs are observable and measurable, have a defined outcome, and require critical competencies on the part of the learner to reach entrustment. The core EPAs were mapped to their competencies and milestones were created to describe the novice and competent learner for the competencies that mapped to the EPAs. At two stages in the process, we engaged a Reactor Panel with diverse perspectives for feedback. This session will introduce these Core EPAs for Entering Residency, their descriptions, critical competencies, and behavioral vignettes.

11:30 am – 1:00 pm  LUNCH, WELCOME FROM THE DEANS, BUSINESS MEETING AND MAGIC SHOW

Ballroom C  WELCOME FROM THE DEANS
James B. Young, MD, Executive Dean of Cleveland Clinic Learner College of Medicine of Case Western Reserve University
Patricia A. Thomas, MD, Vice Dean of Medical Education, Case Western University School of Medicine

LUNCH AND BUSINESS MEETING
Debra Klamen, MD, MHPE, Southern Illinois University School of Medicine
MAGIC SHOW
Ricardo T. Rosenkranz, MD, Northwestern University Feinberg School of Medicine

1:00 – 2:30 pm

CONCURRENT SESSIONS

Room 203

Medical Education Resources Exchange (MERE) Session: Academic and Clinical Practice Partnerships to Accelerate Interprofessional Quality Improvement Education
Mamta Singh, MD MS, Louis Stokes Veterans Administration Medical Center
Mary A. Dolansky, RN, PhD, Louis Stokes Veterans Administration Medical Center
Pete Spanos, BA, Louis Stokes Veterans Administration Medical Center
Brook Watts, MD, MS, Louis Stokes Veterans Administration Medical Center
Sarah Augustine, MD, Louis Stokes Veterans Administration Medical Center
Amy Hirs, PharD, Louis Stokes Veterans Administration Medical Center
Gloria Taylor, BSN, CDE, Louis Stokes Veterans Administration Medical Center

*Funded by the VA Office of Academic Affiliations, Louis Stokes Veterans Administration Medical Center

Six Continents

Panel
Associate Deans For Learner Assessment: Sharing Stories of Strategies, Successes and Challenges for System-Wide Assessment
Brian Mavis, PhD, Michigan State University
Kelly Caverzagie, MD, University of Nebraska
Cynthia Ledford, MD, Ohio State University
Dianne Wagner, MD, Michigan State University

Room 202

Workshop
Enhancing the Validity of Surveys Used in Program Evaluations
Colleen Colbert, PhD, Cleveland Clinic

Room 204

Workshop
A Guide to Successfully Using Portfolios in a Competency-based Curriculum
Megan McNamara, MD, MS, Case Western Reserve University School of Medicine
Kathy Cole-Kelly, MS, MSW, Case Western Reserve University School of Medicine
Jennifer Lennon, BA, Case Western Reserve University School of Medicine
Susan Padrino, MD, Case Western Reserve University School of Medicine
Mamta Singh, MD, MS, Case Western Reserve University School of Medicine
Amy Wilson-Delfosse, PhD, Case Western Reserve University School of Medicine

Room 201

Workshop
Relationship-centered Communication for Patient and Provider Engagement: The REDE Model© of Healthcare Communication
Adrienne Boissy, MD, MA, Cleveland Clinic
Tim Gilligan, MD, Cleveland Clinic
Josh Miller, DO, Cleveland Clinic
Katie Neuendorf, MD, Cleveland Clinic
Amy Windover, PhD, Cleveland Clinic
MESRE Oral Abstract Presentations Session: Scholarly Concentrations
(Presentations are allotted 15 minutes)
Moderator: Janet Riddle, M.D., University of Illinois Chicago

Using Social Cognitive Career Theory as a Framework to Evaluate a Research-based Scholarly Concentration Program in Undergraduate Medical Education
S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU
Richard A. Prayson, MD, Cleveland Clinic
Elaine F. Dannefer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU

Predictors of Success in Scholarly Concentrations Projects
Candace Zeigler, MD, Sanford School of Medicine of the University of South Dakota
Matt Bien, MD, Sanford School of Medicine at the University of South Dakota
David W. Zeigler, MD, PhD, Sanford School of Medicine of the University of South Dakota
Edward Simanton, PhD, Sanford School of Medicine of the University of South Dakota
Gary L. Beck, PhD, Nebraska Medical Center

Specialty Selection and Scholarship Pursuits in Medical School: Chicken or Egg?
Rachel Wolfson, MD, University of Chicago
Sujata Mehta, MA, University of Chicago
Vineet Arora, MD, MA, University of Chicago

Characteristics of Clinical Teachers Valued by Pre-Clinical Medical Students
Karen Szauter, MD, University of Texas Medical Branch
Oma Morey, PhD, University of Texas Medical Branch

Developing Faculty to Support Preceptors and Produce Scholarship: Teaching Early Ambulatory Medical Students (TEAMS)
Jeffrey Morzinski, PhD, Medical College of Wisconsin
Linda Meurer, MD, Medical College of Wisconsin
Julie Mitchell, MD, Medical College of Wisconsin
Karen Marcadante, MD, Medical College of Wisconsin
Deborah Simpson, PhD, Aurora Health Care
Tess Chandler, Medical College of Wisconsin

*Funded by a grant from the Health Resources and Services Administration “Faculty Development in Primary Care” project.

2:30 – 2:45 pm
BREAK

2:45 – 3:30 pm
CONCURRENT SESSIONS: Small Group Discussions

Getting it Right: Developing Interprofessional Education (IPE) that Meets Workforce Needs
Kathryn Huggett, PhD, Creighton University School of Medicine
Majka Woods, PhD, University of Minnesota Medical School
Aleece Caron, PhD, MetroHealth Medical Center
Professional Identity Formation: The Role of Simulation, Reflection, Coaching and Early Clinical Experience  
Sheryl Pfeil, MD, The Ohio State University  
Carmine Alex Greico, MD, The Ohio State University  
John Davis, MD, PhD, The Ohio State University

Mental Health of Medical Students: It’s Not Just an Issue for Student Affairs  
Stuart Slavin, MD, MEd, Saint Louis University School of Medicine  
Gregory Smith, PhD, Saint Louis University School of Medicine

Multiple Vertical Curricula: 10 years of Experience Orchestrating Individual Curricula and Developing Central Organization  
Theresa Kristopaitis, MD, Loyola University Stritch School of Medicine

Cultivating Mentor-Student Relationships in Scholarly Concentration Programs  
Rachel Wolfson, MD, University of Chicago  
Mary Dereski, PhD, Oakland University William Beaumont School of Medicine  
Candace Zeigler, MD, University of South Dakota

Vertical Integration of the Physical Exam across the Four Years of Medical School  
Toshiko Uchida, MD, Northwestern University Feinberg School of Medicine  
Jeanne Farnan, MD, MHPE, The University of Chicago Pritzker School of Medicine  
Heather Heiman, MD, Northwestern University Feinberg School of Medicine  
Sheryl Pfeil, MD, The Ohio State University College of Medicine

Remediating the Struggling Resident: Assessing and Addressing Issues of Professionalism  
Katherine Harris, MD, University of Iowa Hospitals and Clinics  
Marcy Rosenbaum, PhD, University of Iowa Hospitals and Clinics

Expanding a Longitudinal Integrated Clerkship Model to All Campuses  
Matt Bien, MD, University of South Dakota  
Janet Lindemann, MD, MBA, University of South Dakota  
Lori Hansen, MD, University of South Dakota

Early Integration of Public Health into Medical Education: The Case Western Reserve University School of Medicine Experience  
Scott Frank, MD, MS, Case Western Reserve University School of Medicine  
Heidi Gullet, MD, MPH, Case Western Reserve University School of Medicine  
Doug Einstadter, MD, Case Western Reserve University School of Medicine

Using the Magical Arts as a Tool in Medical Education: Medical Humanities Curricula Beyond the Trick and Behind the Curtain  
Ricardo Rosenkranz, MD, Northwestern University Feinberg School of Medicine  
Lawrence Hass, PhD, Northwestern University Feinberg School of Medicine
2:45 – 4:15 pm  MESRE Oral Abstract Presentations Session: Multiple Viewpoints
(Presentations are allotted 15 minutes)
Moderator: Larry Gruppen, Ph.D., University of Michigan Medical School

Room 207

Standardized Patient’s Consideration of Students as a Future Healthcare Provider as Predicted by Interpersonal and Communication Skills in Third-Year OSCEs
Robert Treat, PhD, Medical College of Wisconsin
Dawn Bragg, PhD, Medical College of Wisconsin
Doug Bower, MD, Medical College of Wisconsin
Martin Muntz, MD, FACP, Medical College of Wisconsin
Ann Helms, MD, Medical College of Wisconsin
Kris Saudek, MD, Medical College of Wisconsin
Brian Lewis, MD, Medical College of Wisconsin
Joshua Noe, MD, Medical College of Wisconsin

A Pilot Study Exploring Medical Students’ Experiences with Mistreatment and Neglect
Megan McNamara, MD, MS, Case Western Reserve University School of Medicine
Kathy Cole-Kelly, MS, MSW, Case Western Reserve University School of Medicine
Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine
Alex Miranda, MD Candidate, Case Western Reserve University School of Medicine

Midwest U.S. Medical Students’ Attitudes Toward, and Knowledge of LGBT Health Issues
Jeffrey Zabinski, MSSA, MA, MS4, Wright State University Boonshoft School of Medicine
Sabrina M. Neeley, PhD, MPH, Wright State University Boonshoft School of Medicine
Brenda Roman, MD, Wright State University Boonshoft School of Medicine
Jim Medder, MD, MPH, University of Nebraska College of Medicine
Gary Beck, PhD, University of Nebraska College of Medicine
Jeffrey Emrich, MS, Carver College of Medicine, University of Iowa
Dawn Bragg, PhD, Medical College of Wisconsin

*Recipient of CGEA Collaborative Grant and recipient of a Student Travel Scholarship (funded by CGEA Collaborative Grant)

Medical School Anatomy Lab Body Donors as “Educators” of High School Students Pertaining to Health Behaviors and Preventable Disease
Erich Stauder, BS, Medical College of Wisconsin
Todd Hoagland, PhD, Medical College of Wisconsin

*Recipient of a CGEA Student Travel Scholarship (funded by CGEA)

Outreach to Vulnerable and Underserved Populations to Enhance Medical Students’ Service Learning
Misa Mi, PhD, MLIS, Oakland University William Beaumont School of Medicine
Jill Stefaniak, PhD, Old Dominion University
Nelia Afonso, MD, William Beaumont Health System

4:15 - 4:30 pm  BREAK
4:30 – 5:30 pm  
**Bank of America- A Conference Center**

“SPEED DATING”  
Are you curious about the leaders of the CGEA but too shy to introduce yourself? Do you want to meet more of those attending the conference? This is the session for you!

Bring your business cards to share with colleagues – new and those more seasoned with the CGEA. You will have the opportunity to meet at least 8 peers in a rapid, speed dating format!

5:30 – 7:30 pm  
**Phillips Break Area and Six Continents**

**Poster Session and Reception**  
Peer-Reviewed Research and Innovations in Medical Education  
See Appendix A for a list of titles and authors for IME and MESRE posters
Saturday, March 29, 2014

7:00 am – 3:00 pm  REGISTRATION
Phillips Break Area
2nd Floor

7:00 – 8:00 am  BREAKFAST
Ballroom C

7:00 – 8:00 am  SECTION MEETINGS
Ballroom C
Continuing Medical Education (CME)
Nicole Roberts, PhD, Southern Illinois University School of Medicine

Ballroom C
Graduate Medical Education (GME)
Aleece Caron, PhD, MetroHealth Medical Center

Ballroom C
Undergraduate Medical Education (UGME)
Janet Lindemann, MD, MBA, University of South Dakota Sanford School of Medicine

8:00 – 8:15 am  BREAK

8:15 – 9:45 am  CONCURRENT SESSIONS

Room 201
Workshop
Helping Early Clinical Learners Add Value in a Patient Centered Medical Home (PCMH)
Roohi Kharofa, MD, Medical College of Wisconsin
Julie Mitchell, MD, Medical College of Wisconsin
Karen Marcdante, MD, Medical College of Wisconsin

With students from Class of 2016, Medical College of Wisconsin
Olivia Kim, Kelly Klotz, Matthew Mohorek, Erich Stauder, Gretchen Wagner, Christabel Yamoah

*Funded by a Health Resources and Services Administration Grant, number D55HP23197

Six Continents
Panel
"Readiness for Residency" - Lessons Learned and Next Steps!
Mary C. McHugh, MD, Loyola University Chicago Stritch School of Medicine
Viva Jo Siddall, MS, MS, RRT, RCP, Loyola University Chicago Stritch School of Medicine
Amy Hoyt, MS, Loyola University Chicago Stritch School of Medicine
Aaron Michelfelder, MD, Loyola University Chicago Stritch School of Medicine
William C. McGaghie, PhD, Loyola University Chicago Stritch School of Medicine
Room 204
Workshop
Teaching Better EHR Notewriting - It's a Matter of TRUST
Heather Heiman, MD, Northwestern University Feinberg School of Medicine
Jennifer Bierman, MD, Northwestern University Feinberg School of Medicine
Kathryn Kinner, MD, Northwestern University Feinberg School of Medicine
Charlotta Weaver, MD, Northwestern University Feinberg School of Medicine
Laura Fanucchi, MD, MPH, University of Kentucky College of Medicine

Room 203
Workshop
Skills Building in Business Case Development
James Campbell, MD, MS, MetroHealth Medical Center
Amy Zack, MD, MetroHealth Medical Center
David Wank, MAT, MetroHealth Medical Center

Room 207
Workshop
Breaking Away from the iPatient to Care for the Real Patient
Wei Wei Lee, MD, University of Chicago
Jeanne Farnan, MD MHPE, University of Chicago

* Funded by a grant from the Picker foundation, University of Chicago
Academy of Distinguished Medical Educators, University of Chicago
Bucksbaum Institute of Clinical Excellence

Bank of America - A Conference Center
MESRE Oral Abstract Presentations Session: Clinical Education/Assessment
(Presentations are allotted 15 minutes)
Moderator: Toshi Uchida, M.D., Northwestern University Feinberg School of Medicine

Second Year Medical Student Course Performance Correlated to Step 1 Examination
Meenaskshy Aiyer, MD, University of Illinois College of Medicine Peoria
Huaping Wang, PhD, OSF St. Francis Hospital
Yoon Soo Park, MS, PhD, University of Illinois College of Medicine Chicago
Cindy Kirwan, BA, MA, University of Illinois College of Medicine Peoria
David Pinson, DVM, PhD, University of Illinois College of Medicine Peoria

Utilizing Bloom’s Taxonomy in the Analysis of Education on Bedside Rounds
Tara Petersen, MD, Medical College of Wisconsin

Capturing Written Comments with a Cloud-based Assessment Tool: An Exploratory Study
Gary Ferenchick, MD, Michigan State University
David Solomon, PhD, Michigan State University
Churlson Han, MD, Michigan State University

* Disclosure – The software program was developed by the lead author and may have commercial value.
Lower Reflection Scores are Associated with Professionalism Lapses in Undergraduate Medical Education
Leslie Hoffman, PhD Candidate, Indiana University School of Medicine
Ronald L. Shew, PhD, Indiana University School of Medicine
Gary R. Pike, PhD, Indiana University - Purdue University - Indianapolis
Richard M. Frankel, PhD, Indiana University School of Medicine

Locus of Control in Defining the Problem Resident: A Qualitative Study of Emergency Medicine Program Director Perceptions
Nicole Roberts, PhD, Southern Illinois University School of Medicine
Sally Santen, MD, PhD, University of Michigan Medical School
Taku Taira, MD, Keck School of Medicine University of Southern California

9:45 – 10:45 am
POSTER SESSION
This poster session is an additional opportunity to interact with poster presenters.
**Presenters must remove their posters at the end of this session**

10:45 – 11:30 am
AAMC PRESENTATIONS

Room 207
PIVIO Update
Joshua Jacobs, MD, Senior Director, AAMC
Manage your Records, Master your Career Using Pivio - A New Service from AAMC and NBME: An update and demonstration of the new lifelong learning and career planning tool by AAMC and NBME called Pivio. The Pivio system will store and transfer data necessary for medical students, residents, and physicians across their careers. The tool will be a secure “lock box” that will enable users to share data with CVOs and others at the individual's control. The session will focus on the intended purpose of the Pivio system specific to residents, provide a demonstration of the system, and obtain attendee feedback on features and future system considerations of this new and innovative tool.

MedAPS/MedEdPORTAL Update
Robby Reynolds, Director, Medical Education Online Programs, AAMC
Terri Cameron, Director of Curriculum Programs, AAMC
AAMC’s development of the Medical Academic Performance Services (MedAPS) suite of services (Curriculum Inventory and Reports, Accreditation Standards Self-Evaluation Tool, and ASSET Dashboard) is rapidly moving toward implementation, and MedEdPORTAL has exciting new features. This session will provide an update on the current status of each of these initiatives and present an opportunity for participants to provide input for these and future projects and demonstrate how these tools will provide new, robust options that will help medical schools enhance their efforts to instill an environment of continuous quality improvement across their missions and across the continuum of medical education. (www.aamc.org/medaps; www.mededportal.org)

Student Survey
The Medical Student Surveys Evolve: The Transformation of the GQ
Brian Mavis, PhD, Michigan State University
Janet Lindemann, MD, MBA
Sue Bodilly, PhD
Marie Caufield, PhD

This session will highlight findings from analyses of the 2013 student surveys with a particular emphasis on revisions to the Graduation Questionnaire (GQ). An updated Matriculating Student Questionnaire (MSQ) was piloted in 2013 with an increased focus on the personal characteristics, interests, and goals of entering students. For the first time in 2013, all second-year medical students were invited to participate in an anonymous questionnaire, the Medical Student Life Survey (MSLS), which focused on the relation among medical school learning climate, personal characteristics, and student well-being. This survey also included questions on gender identity and sexual orientation. Questions from the MSLS will serve as the foundation for a new second-year survey that will launch in the fall of 2014. Most importantly, the complete transformation of the Graduation Questionnaire (GQ) has begun. The 2014 GQ was trimmed down, allowing new questions to be piloted on topics such as medical student competencies, entrustable professional activities, and the learning climate in anticipation of a completely revised GQ in 2016.

11:30 - 1:30 pm  BOX LUNCH AND SPECIAL INTEREST GROUP (SIG) MEETINGS
(SIG meetings will be held at NA Wing of Lerner Research Institute. See map and directions on page 39. Box lunches will be available at NA Wing of Lerner Research Institute).

NA5-08 is an open room for lunch and informal meetings

11:30 – 12:30 pm  SPECIAL INTEREST GROUP (SIG) MEETINGS

NA Wing Lerner Research Institute
NA5-15  Academic Development
Convener, TBD

NA Wing Lerner Research Institute
NA5-24  Directors of Clinical Skills Course (DOCS)
Toshi Uchida, MD, Northwestern University Feinberg School of Medicine

NA Wing Lerner Research Institute
NA5-03  Technology in Medical Education
Heeyoung Han, PhD
Southern Illinois University School of Medicine

NA Wing Lerner Research Institute
NA5-25A  Scholarly Concentrations
Candace Zeigler, MD, Sanford School of Medicine of University of South Dakota
David Zeigler, MD, PhD, Sanford School of Medicine of University of South Dakota

NA Wing Lerner Research Institute
NA5-21  Education Leadership
Jeff Pettit, PhD, University of Iowa Carver College of Medicine
### Student Lunch

All students are welcome to attend to network and discuss student participation in medical education

**12:30 – 1:30 pm** SPECIAL INTEREST GROUP (SIG) MEETINGS

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<th>NA Wing Lerner Research Institute</th>
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<td>NA5-15</td>
<td>Brenda Roman, MD, Wright State University Boonshoft School of Medicine</td>
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<td>Majka B. Woods Ph.D., University of Minnesota - Twin Cities School of Medicine</td>
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<td>Aleece Caron, PhD</td>
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<td>MetroHealth System</td>
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<td>Anna Maio, MD, Creighton University School of Medicine</td>
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**1:30 – 1:45 pm** BREAK

**1:45 – 3:15 pm** CONCURRENT SESSIONS

**Six Continents**

Panel

Affirming Professionalism for Physicians Across the Developmental Cycle

Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine

Kathleen Franco, MD, Cleveland Clinic Lerner College of Medicine

Tim Gilligan, MD, Cleveland Clinic

Njoke Thomas, MPH, Weatherhead School of Management, CWRU

Susan Stagno, MD, University Hospitals of Cleveland/CWRU SOM

**Room 207**

Panel

Growth in Team Based Learning (TBL) as a Pathway to Innovation: Using Kotter's Change Model in a Curricular Environment

Meenakshy Aiyer, MD, University of Illinois College of Medicine at Peoria

Andrew Bland, MD, University of Illinois College of Medicine at Peoria

Gerald Wickham, EdD, University of Illinois College of Medicine at Peoria

Roger W. Geiss, MD, University of Illinois College of Medicine at Peoria

**Room 201**

Workshop

Teaching Professionalism in Social Media - Leveraging the AAMC Digital Literacy Toolkit

Neil Mehta, MBBS, MS, Cleveland Clinic Lerner College of Medicine of
Room 203

Medical Education Scholarship, Research and Evaluation (MESRE): Consultation Validity Evidence for an EHR Progress Note Assessment Tool
Heather Heiman, MD, Northwestern University Feinberg School of Medicine
Jennifer Bierman, MD, Northwestern University Feinberg School of Medicine
Kathryn Kinner, MD, Northwestern University Feinberg School of Medicine
Charlotta Weaver, MD, Northwestern University Feinberg School of Medicine
Laura Fanucchi, MD, MPH, University of Kentucky College of Medicine

*Funded by an Augusta Webster, MD Grant for Educational Innovation at the Feinberg School of Medicine, Northwestern University

Room 204

Workshop
Let's Teach and Work Together! Incorporating Interprofessional Education and Patient Safety/QI Into Your Curriculum
Aaron Michelfelder, MD, Loyola University Chicago Stritch School of Medicine
Carla Dyer, MD, University of Missouri School of Medicine
Fran Vlasses, PhD, RN, Loyola University Chicago School of Nursing
Gretchen Gregory, MSN, RN, University of Missouri School of Nursing
Michael Koller, MD, Loyola University Chicago School of Medicine
William McGaghie, PhD, Loyola University Chicago School of Medicine

Bank of America-A Conference Center

MESRE Oral Abstract Presentations Session: Clinical Education/Other
(Presentations are allotted 15 minutes)
Moderator: Cecile Foshee, Ph.D., Cleveland Clinic

To Mentor or Not to Mentor?
Mary Dereski, PhD, Oakland University William Beaumont School of Medicine

Establishing a Conceptual Framework for Handoffs Utilizing Communication Theory
Matthew Mohorek, BS, Medical College of Wisconsin
Travis Webb, MD, MHPE, Medical College of Wisconsin

Resident Handover: A Need for Structured Curriculum and Quality Outcome Studies
Justen Aprile, MD, Cleveland Clinic
Shankar Baskar, MD, Cleveland Clinic
Ben Reed, MD, Cleveland Clinic
Sangeeta Krishna, MD, Cleveland Clinic
Assessment of Medical Students' Proficiency in Dermatology: Are Medical Students Adequately Prepared to Diagnose and Treat Common Dermatologic Conditions?
Catherine Ulman, BA, MS4, Wright State University Boonshoft School of Medicine
Bruce Binder, MD, PhD, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine

The Potential of Community-Based Training in Promoting Generalist Specialization
Joel Goodin, PhD, Florida State University

1:45 - 3:45 pm
NA Wing of Lerner Research Institute Alumni Library NA3-57
LEADERSHIP EDUCATION AND DEVELOPMENT (LEAD) (closed session for LEAD Fellows only)
Janet Riddle, MD, University of Illinois at Chicago College of Medicine
Carol Kamin, EdD, University of Illinois at Chicago College of Medicine

CONFERENCE ADJOURNS
Appendix A
(Posters may be hung beginning at 7:00 AM on Friday morning and must be up by 7:30 AM on Friday morning. Posters must be taken down at the end of the poster session Saturday morning.)

Medical Education Scholarship, Research, & Evaluation Posters

1. Aspiring Health Professionals’ Career Goals and Healthcare Reform Orientations: A Qualitative Contextualization
   Joel Goodin, PhD, Florida State University

2. Curriculum for Student Run Free Clinics at CGEA Schools
   Ashika Bains, MS, Wayne State University School of Medicine
   Jennifer Mendez, PhD, Wayne State University School of Medicine
   Janice L. Farlow, PhD Candidate, Indiana University School of Medicine
   Stephen Kirchhoff, MHA, Indiana University School of Medicine
   Ruth Margalit, MD, University of Nebraska
   Katherine Cauley, PhD, Wright State University
   *Recipient of CGEA Collaborative Grant

3. Learning Strategies Used by Medical Students in a Competency-Based Environment
   Cecile Foshee, PhD, Cleveland Clinic
   S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU

4. Family Empowerment Actions During Patient and Family Centered Rounds
   Christabel Yamoa, BS, Medical College of Wisconsin
   *Funded by a grant from the Elsa B. and Roger D. Cohen Fellowship.

5. Identifying Essential Elements of Effective Interprofessional Communication: An Evaluation of a Resident-led Team Huddle on an Inpatient Medicine Unit
   Lisa Royse, MEd, University of Missouri
   Kimberly Hoffman, PhD, University of Missouri
   Nathaniel Nolan, Year 2 Medical Student (M2), University of Missouri
   *Funded by a grant from the Donald W. Reynolds Foundation, and in keeping with the goal of the University of Missouri’s Reynolds Foundation-funded program, Learning to Provide Better Care in Teams: The Next Steps in Strengthening Geriatrics Medical Education at the University of Missouri School of Medicine.

6. Medical Student EMR Satisfaction Survey: Responses from MS3 and MS4 Students
   Valerie Hearns, MD, University of South Dakota Sanford School of Medicine

7. A Baseline Assessment of Obesity Counseling Skills and Attitudes of First Year Medical Students
   Victoria Lucia, PhD, Oakland University William Beaumont School of Medicine

8. A Comparison of Attitudes Towards Influenza Vaccination in First-year Nursing and Medical Students
   Maurice Kavanagh, MEd, Oakland University William Beaumont School of Medicine
   Kim Holka, MSN, MSA, RN, APHN-BC, CNE, Oakland University School of Nursing
   Stephanie Swanberg, MSI, Oakland University William Beaumont School of Medicine
   Nelia Afonso, MD, Oakland University William Beaumont School of Medicine
9. **When do students make their career specialty decision and does clerkship format matter?**
   Janet Lindemann, MD, MBA, University of South Dakota Sanford School of Medicine
   Lori Hansen, MD, University of South Dakota Sanford School of Medicine
   Edward Simanton, PhD, University of South Dakota Sanford School of Medicine

10. **A Review of the Current Use of iPads in Graduate and Undergraduate Medical Education**
    Patrick Dooling, BS, The Ohio State University College of Medicine
    John A. Davis, PhD, MD, The Ohio State University College of Medicine

11. **Faculty Perceptions of Reflection in PBL Pre-Clerkship Medical Education**
    Melissa Griggs, PhD, University of Missouri-Columbia
    Joe Donaldson, PhD, University of Missouri-Columbia
    Kimberly Hoffman, PhD, University of Missouri-Columbia
12. Assessment of a New Curriculum to Teach Authorship Criteria to Medical Students

Rachel K Wolfson, MD, University of Chicago
Vineet Arora, MD, MA, University of Chicago

13. Competency-based Education for Medical Educators: Implications and Implementation

Larry Gruppen, PhD, University of Michigan Medical School
John Burkhardt, MD MA, University of Michigan Medical School
J. Thomas Fitzgerald, PhD, University of Michigan Medical School
Hilary Haftel, MD MHPE, University of Michigan Medical School
Steve Kasten, MD MHPE, University of Michigan Medical School
Monica Lypson, MD MHPE, University of Michigan Medical School
Patricia Mullan, PhD, University of Michigan Medical School
Sally Santen, MD PhD, University of Michigan Medical School

14. A Novel Use of Simulation: Palliative Care Training

Michael Smith, MD, MBA, MetroHealth Medical Center
Pamela Ritchey, MD, Cleveland Clinic
Thomas Noeller, MD, MetroHealth Medical Center

15. A Systems-Based Practice Curriculum for Pediatric Residents

Mike Stiffler, MD, Michigan State University

16. Is There a Right Way to Study for Medical Schools Exams?: How Medical Students’ Personal and Academic Habits Affect Their Exam Performance

Catherine Ulman, BA, MS4, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine

17. Impact of LGBT Safe Space training on School Climate in Medical Education

Florence Doo, MA, Oakland University William Beaumont School of Medicine
Kristine M. Diaz, PsyD, Oakland University William Beaumont School of Medicine
Kristen L. Eckstrand, PhD, Vanderbilt University School of Medicine
Grace Wojcik, MA, Oakland University

18. The Professional Learning Plan: Using the Science of Continuous Quality Improvement to Develop a Reflective Practice and Self-directed Learning

Steven Ricanati, MD, Case Western Reserve University School of Medicine
Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine
Mamta K. Singh, MD, MS, Case Western Reserve University School of Medicine

19. Developing Civically Engaged Physicians Through Nonprofit Board Governance Training: The Indiana University School of Medicine Community Leadership Mentor Program

Stephen Kirchhoff, MHA, Indiana University School of Medicine/ Office of Medical Service Learning

20. Use of Standardized Patients to Introduce PTSD Diagnostic Guidelines to Early Medical Learners

Camilla Curren, MD, The Ohio State University College of Medicine
Jane M. Goleman, MD, Nationwide Children's Hospital
Kimberly Tartaglia, MD, The Ohio State University College of Medicine
21. Learning about LEARN (Listen-Explain-Acknowledge-Recommend-Negotiate): Creating a Curriculum to Teach Culturally Sensitive Approaches in Primary Care  
Ronda Mourad, MD, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine  
Laura Clementz, MA, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine  
Mary Dolansky, RN, PhD, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine  
Renee H. Lawrence, PhD, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine

22. Longitudinal Chief Resident Leadership Certificate Program  
Jeffrey Pettit, PhD, Carver College of Medicine, University of Iowa  
Mark Wilson, MD, MPH, University of Iowa Hospitals & Clinics

23. Can a First Year Medical Student Drive a Quality Project?  
Kelly Klotz, M2, Medical College of Wisconsin  
Julie L. Mitchell, MD, MS, Medical College of Wisconsin

24. Collaborative Clinical Skills: Embedding Interprofessional Team Skills Education into the Year 1 Physical Diagnosis Curriculum.  
Ellen Luebbers, MD, Case Western Reserve University School of Medicine  
Gayle Petty, DNP, RN, CWRU Frances Payne Bolton School of Nursing

*Funded by the Josiah Macy Jr. Foundation and is a part of the Interprofessional Learning Exchange and Development (ILEAD) project at CWRU. The screenings at the schools are supported by the Elisabeth Severence Foundation.

25. Promoting the Applying Learning Phase of Evaluative Inquiry: The IUSM Schematic for Program Evaluation  
Tony Ribera, PhD, Indiana University School of Medicine  
Alison Banta, Indiana University School of Medicine

26. Impacting Medical Students' Team-based Competencies through Geriatrics Education  
Diane Brown, MS, Medical College of Wisconsin  
Gretchen Wagner, Medical Student (M2), Medical College of Wisconsin  
Olivia Mac, Medical Student (M2), Medical College of Wisconsin  
Kathryne Barbieri, Medical Student (M3), Medical College of Wisconsin  
Yana Thaker, Medical Student (M4), Medical College of Wisconsin  
Nick Dreger, Medical Student (M3), Medical College of Wisconsin  
Deborah Simpson, PhD, Aurora HealthCare

*Funded by a grant from the Donald W. Reynolds Foundation and the Wisconsin Geriatrics Education Center (HRSA grant)

27. Creating Interactive Medical Student Courses for Large Groups Can be Challenging and Rewarding  
Karen Marcdante, MD, Medical College of Wisconsin  
Gary Cohen, MD, Medical College of Wisconsin  
Kurt Pfeiffer, MD, Medical College of Wisconsin  
Bert Forster, PhD, Medical College of Wisconsin

28. Mentoring at Professional Meetings: The Pairing with Colleagues Program  
Marcy Rosenbaum, PhD, University of Iowa Carver College of Medicine  
Daniel Johnsen, BS, University of Iowa Carver College of Medicine
29. **Scholarly Productivity of Medical Students Enrolled in a Clinician Educator Scholarly Pathway Program**
Karen Marcdante, MD, Medical College of Wisconsin
Patricia Lye, MD, Medical College of Wisconsin
Candice Johnstone, MD, Medical College of Wisconsin
Meaghan Hayes, Medical College of Wisconsin
Kathryn Barbieri, Medical College of Wisconsin
Trevor Bluemel, Medical College of Wisconsin

30. **Unified Care Curriculum: Integration of Team-based Patient Aligned Care**
Laura Clementz, MA, Louis Stokes Cleveland Department of Veterans Affairs
Megan McNamara, MD, Case Western Reserve University School of Medicine, Louis Stokes Cleveland Department of Veteran Affairs
Anne Rusterholtz, NP, Louis Stokes Cleveland Department of Veteran Affairs
Simran Singh, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine
Todd Smith, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine
Mamta Singh, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine

*Funded through a grant from the VA Office of Academic Affiliations, Cleveland VAMC.*

31. **The Proactive Care Dimension: An Interprofessional Approach to Physician and Nurse Practitioner Education**
Kristen Zimbardi, FNP-BC, MSN, RN, Louis Stokes Cleveland Department of Veterans Affairs Medical Center
Jerry Strauss, PhD, Louis Stokes Cleveland Department of Veterans Affairs Medical Center
Michelle Davidson, MEd, Louis Stokes Cleveland Department of Veterans Affairs Medical Center
Renee Lawrence, PhD, Louis Stokes Cleveland Department of Veterans Affairs Medical Center
Mamta Singh, MD, Louis Stokes Cleveland Department of Veterans Affairs Medical Center

32. **Early Clinical Experience, Common Patient Concerns and Competencies: Evaluation of a Curriculum Pilot Test**
Rebecca Henry, PhD, Michigan State University
Aron Sousa, MD, Michigan State University
Jonathan Gold, MD, Michigan State University
Francesca Dwamena, MD, Michigan State University
Brian Mavis, PhD, Michigan State University

33. **Implementation of a Novel Global Health Lecture Series to Teach International Health in an Academic Medical Setting**
Marcella Luercio, BS, Cleveland Clinic Lerner College of Medicine of CWRU
Danielle F. Eytan, BS, Cleveland Clinic Lerner College of Medicine of CWRU
Jade Fettig, BA, Cleveland Clinic Lerner College of Medicine of CWRU
Natalie S. Hong, BA, Cleveland Clinic Lerner College of Medicine of CWRU
Sangeeta Krishna, MD, Cleveland Clinic
34. Value-Added Tasks for Early Clinical Learners (ECL) on a Continuity Rotation in the Patient Centered Medical Home
Jennifer Mackinnon, MD, Medical College of Wisconsin/Dept of General Internal Medicine
Martin Muntz, MD, Medical College of Wisconsin
Julie Mitchell, MD, Medical College of Wisconsin
Deborah Simpson, PhD, Aurora- UW Medical Group
Jessica Kuester, MD, Medical College of Wisconsin
Mary Ann Gilligan, MD, Medical College of Wisconsin
Cynthia Kay, MD, Medical College of Wisconsin
Rebecca Bernstein, MD, Medical College of Wisconsin

*Funded by a grant from the Health Resources and Services Administration, grant number D55HP23197

35. "Flipping" a Medical Education Fellowship Program: Pilot Project of Instructional Videos (Screencasts) to Enhance Faculty Development Workshops
Janet Riddle, MD, University of Illinois Chicago
Philip Bertulfo, University of Illinois Chicago

36. Becoming a Better PBL Facilitator: iPad App Shows Promise
Elias Kikano, BA, Second Year Medical MD Student, Case Western Reserve University
Amy Wilson-Delfosse, PhD, Case Western Reserve University School of Medicine

37. Using the PPPC for Brief, Clinically Relevant, Formative Feedback for Medical Trainees: A Single Institution Experience
Lisa Arfons, MD, CWRU School of Medicine and The Louis Stokes Cleveland VAMC
Polly Mazanec, PhD, CWRU Bolton School of Nursing
David Latini, PhD, Baylor College of Medicine and The Department of Veterans Affairs OAA

38. Advanced Care Planning: From Knowledge to Implementation Curriculum Package
Mary Corrigan, MD, MetroHealth Medical Center

39. Integration of Students' Perceptions of the Electronic Health Record into a Relationship-Centered Communication Skills Curriculum
Daniel A. London, BA, Cleveland Clinic Lerner College of Medicine of CWRU
Amy Windover, PhD, Cleveland Clinic Lerner College of Medicine of CWRU
J. Harry Isaacson, MD, Cleveland Clinic Lerner College of Medicine of CWRU
Lily Pien, MD, Cleveland Clinic Lerner College of Medicine of CWRU

40. A Health Care InterProfessional Blood Glucose Laboratory Patient Centered Learning Experience
Virginia E. Uhley, PhD, RDN, Oakland University William Beaumont School of Medicine
Barbara Main, RD, William Beaumont Hospital
Lordeen K. Card, MS, RD, CDE, William Beaumont Hospital
Richard Sabina, PhD, Oakland University William Beaumont School of Medicine

41. End of Year 2 OSCE Integration Within a Portfolio-Driven Reflective Practice Cycle
Susan Padrino, MD, Case Western Reserve University School of Medicine
Kathy Cole-Kelly, MS, MSW, Case Western Reserve University School of Medicine
Deidre Gruning, BS, Case Western Reserve University School of Medicine
42. Multi-Faceted Approach to Mistreatment and Improving the Learning Environment
   Rajesh Mangrulkar, MD, University of Michigan Medical School
   Sara Weir, MA, University of Michigan Medical School
   Tamara Gay, MD, University of Michigan Medical School
   Joel Purkiss, PhD, University of Michigan Medical School
   Sally A. Santen, MD, PhD, University of Michigan Medical School

43. Developing Teaching Skills of Clinical Preceptors through a Self-Directed Certificate Program
   Tess Chandler, Medical College of Wisconsin
   Jeffrey A. Morzinski, PhD, Medical College of Wisconsin
   Craig C. Porter, MD, Medical College of Wisconsin
   Sarah DiPadova, Medical College of Wisconsin

   *Funded by a grant from the Health Resources and Services Administration, grant number D 55 HP 23197.

44. Quantifying Academic Productivity during Fellowship Training with the Pulmonary Academic Scoring System: PASS.
   Daniel Monroy, MD (Fellow), MetroHealth Medical Center
   Ziad Shaman, MD, MetroHealth Medical Center

45. Improving the Timeliness of Clerkship Grade Submission
   Robert Larson, MA, Northeast Ohio Medical University
   Margarita Kokinova, PhD, Northeast Ohio Medical University
   Jan Divoky, Northeast Ohio Medical University

46. Real Time Real Patient: A Training Model for Bridging Patient-centered Care and Reflective Practice
   Pete Spanos, BA, Louis Stokes Cleveland VA Medical Center
   Mamta Singh, MD, MS, Louis Stokes Cleveland VA Medical Center
   Sarah Augustine, MD, Louis Stokes Cleveland VA Medical Center
   Elizabeth Painter, PhD, Louis Stokes Cleveland VA Medical Center
   Gerald Strauss, PhD, Louis Stokes Cleveland VA Medical Center
   Renee Lawrence, PhD, Louis Stokes Cleveland VA Medical Center

47. emrU: The Electronic Medical Record as a Tool for Delivering Curricular Content
   David Asprey, BA, BS, MA, PhD, University of Iowa
   Amy Dowden, MD, University of Iowa
   Nicholas May, University of Iowa
   Douglas Van Daele, MD, University of Iowa
   Mary Spreen, MA, University of Iowa
   Valerie Heffernan, BA, University of Iowa
   Body Knosp, MS, University of Iowa

48. Evaluating the Implementation of a Toolkit used in an Inter-professional Education (IPE) Program
   Tracy Wunderlich, MA, Oakland University William Beaumont School of Medicine
   Jean Szura, PhD, Oakland University William Beaumont School of Medicine
   Lauren Pidsosny, Oakland University William Beaumont School of Medicine
   Beth Anne Sutton, BA, Oakland University William Beaumont School of Medicine
   Rose Wedemeyer, MA, Oakland University William Beaumont School of Medicine
   Nelia Afonso, MD, Oakland University William Beaumont School of Medicine
49. Promoting Faculty Goal Setting in the Center of Faculty Advancement, Mentoring and Engagement (FAME) in the Ohio State University College of Medicine (OSUCOM): Developing Your Professional Mission Statement Workshops as Part of New Faculty School.
   John Mahan, MD, The Ohio State University College of Medicine
   William E Smoyer, MD, The Ohio State University College of Medicine
   Heather Brod, MA, The Ohio State University College of Medicine
   Aubre M Green, BA, The Ohio State University College of Medicine
   Philip Binkley, MD, The Ohio State University College of Medicine

50. The Chronic Illness Project: Evaluating the impact of service learning on medical student - education and the efficacy of community-based health classes
   Heidi Fjeldstad, BA, Washington University School of Medicine
   Will Ross, MD, MPH, Washington University School of Medicine

51. Leveraging Online Faculty Development in Support of Curricular Change: Faculty Development for Medical Educators (FD4ME) in the Ohio State University (OSU) College of Medicine.
   John Mahan, MD, The Ohio State University College of Medicine
   Linda Mauger, The Ohio State University College of Medicine
   Cynthia Ledford, MD, The Ohio State University College of Medicine
   Larry Hurtubise, MT, Ohio University
   John Davis, MD, PhD, The Ohio State University College of Medicine
   Daniel Clinchot, MD, The Ohio State University College of Medicine

52. Using the CI Process to Improve a Curriculum in Systems-Based Practice
   Shobhina Chheda, MD, University of Wisconsin School of Medicine and Public Health
   Roberta Rusch, MPH, University of Wisconsin School of Medicine and Public Health
   Laura Dast, BA, University of Wisconsin School of Medicine and Public Health
   Christine Seibert, MD, University of Wisconsin School of Medicine and Public Health

*Funded by a grant from the Wisconsin Partnership Program and the UW School of Medicine and Public Health

53. A Quality Improvement/Patient Safety Curriculum for Medical Students at the University of Missouri-Kansas City School of Medicine (UMKCSOM)
   Jennifer Bequette, MD, University of Missouri-Kansas City
   Stefanie Ellison, MD, UMKC
   Louise Arnold, PhD, UMKC
   Jennifer Quaintance, PhD, UMKC

54. Teaching Preclinical Evidence Based Medicine in a Flipped Classroom
   Rahul Patwari, MD, Rush Medical College
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The InterContinental Cleveland Floor Plans

Lobby Level

Second Floor
Directions to SIG Meetings

- Go to the third floor of the InterContinental Hotel.
- Exit hotel onto Skyway and walk as directed to enter the NA wing of the Lerner Research Institute.
- Take steps or elevator (directly across from Alumni Library) to 5th Floor.
- Walk through glass doors on 5th floor to access SIG meeting rooms.

Note: Please use the Skyway to enter the Lerner Research Institute in order to avoid security access issues.
Abstracts
Friday, March 28, 2014
Concurrent Sessions 9:15-10:45

Panel
Interprofessional Simulation: Measuring Professional Development and Creating Cultural Change through Effective Design of Curriculum and Assessment
Andrew Bland, MD, MBA, University of Illinois College of Medicine at Peoria
Gerald Wickham, EdD, University of Illinois College of Medicine at Peoria
Ann Dunlap, PhD, CRNA, Jump Simulation Center
Lisa Barker, MD, University of Illinois College of Medicine at Peoria

Interprofessional training requires engagement of multiple stakeholders from a wide variety of educational and professional backgrounds. Panelists will describe a program that integrates interprofessional development, change management, and stakeholder empowerment to drive development of curriculum that is tied to measureable outcomes. By systematically ensuring attention to downstream outcomes, simulation programs can increase and measure the impact of simulation-based education on clinical practice. The group will discuss the challenges to developing, implementing and researching outcomes on IPE simulations.

Workshop
How to Write a Competitive CGEA Collaborative Grant
S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU
Colleen Colbert, PhD, Cleveland Clinic

Each year, the CGEA awards a total of $5,000 to support educational research carried out by new or experienced investigators affiliated with a CGEA medical school. The call for proposals has been posted (http://cgea.net/resrsecollpropsl.htm) with a submission deadline of June 1, 2014. This workshop is designed for those interested in seeking CGEA seed money to launch an educational research project. The workshop objectives include

• describe the requirements of the CGEA mini-grant program,
• discuss the characteristics of a competitive CGEA grant proposal, and
• start process to develop a fundable CGEA grant proposal.

Participants will receive grant writing resources/tips.

Workshop
Professional Lapses among Medical Students: How Best to Identify and RemEDIATE?
Deborah Danoff, MD, University of Ottawa
Richard Frankel, PhD, Indiana University School of Medicine
Deborah Ziring, MD, Drexel University College of Medicine

Professionalism is a key element to assure high quality medical care. A number of studies have demonstrated that physicians with identified professionalism lapses in medical school have a higher incidence of disciplinary action in practice. The identification of professionalism lapses and remediation of these is an expectation in undergraduate medical education (UGME) and a requirement for LCME accreditation. Much has been written regarding explicitly teaching and assessing professionalism. However, there is a paucity of information regarding current practices for remediating professionalism lapses. A think tank sponsored by Alpha Omega Alpha Honor Medical Society in 2011 focused on the issue of interventions and remediation strategies for medical professionalism with the recommendation for next steps to begin with gathering data on existing practices and identification of best practices (1). In 2012, Drexel University School of Medicine undertook a survey of all LCME accredited medical schools regarding their policies and procedures for remediation of unprofessional medical students. Preliminary results indicate a wide range of current practices. A number of schools have well established programs for identification and remediation of students. However, for the majority of schools it appears that their
processes are "in evolution". Schools are very interested in learning from other institutions experiences. This interactive session will provide all participants with real life examples and facilitate discussion of specific approaches to evaluation and remediation of medical student with professionalism lapses. Participants will address the following questions: 1) Do medical schools have a common understanding of medical student professionalism lapses? 2) How can we best assist these medical students? 3) What resources do medical schools need to deal with medical students with professionalism lapses? Using real life examples, participants will explore specific approaches to evaluation and remediation. This small group activity will be complemented by presentations and discussion on "what we learned from a national survey on remediation of professionalism lapses" and "changing an institution's culture-impacts on professionalism". This session will be of interest to all those involved in assuring quality in medical education and health care.


Workshop Improving Resident and Faculty Questioning during Bedside Teaching
Tara Petersen, MD, Medical College of Wisconsin
Janet Lindemann, MD, University of South Dakota Sanford School of Medicine
Karen Marcdante, MD, Medical College of Wisconsin

Rationale: Just in time teaching of medical students and residents in the context of ongoing patient care (bedside teaching) is a common method in medical education. It is used both in an attempt to enhance retention of knowledge and concepts for the learners and to elicit higher levels of thinking as learners master the application of knowledge to medical care. A well designed session of bedside teaching may help integrate theory (pathophysiology and evidence based medicine) with the realities of practice. Often, these sessions rely on pedagogical methods as the teacher queries the learner about specific bits of knowledge or practice. The use of questions that are considered higher level in Bloom's taxonomy (application, synthesis and evaluation) can move the session from simple question and answer to a dialogue that allows the learner to demonstrate higher order thinking needed to create care plans and manage disease processes. Such use of higher levels of questioning, thus, is felt to promote more in depth learning and retention. This workshop is designed for faculty and residents who teach as well as those who administer "Resident as Teachers" curriculum. After a review of the characteristics of the six levels of questions applicable to Bloom's taxonomy, participants will demonstrate their understanding through a review and response to common clinical vignettes. To further apply their new questioning skills, participants will deliberately practice questioning skills in real time while receiving feedback on how to further improve questioning techniques.

Objectives: At the end of this session participants will be able to 1) Identify the level of questions often asked in bedside teaching according to Bloom's taxonomy. 2) Create questions in response to clinical teaching vignettes at various levels of Bloom's taxonomy. 3) Develop an action plan for how to increase the level of questioning in teaching by residents and faculty.

Methods: This session will use multiple teaching methods including a brief didactic presentation of data from a current observational study of bedside teaching, review and response to common clinical vignettes to identify the level of questioning being used and small group work to identify appropriate higher level questions. At the end of the session, participants will commit to at least one situation during which they will use higher level questioning upon their return home.

Workshop Getting QI started early: A Workshop for Residents and Educators in the Curriculum and Development of QI Projects
Amy Zack, MD, MetroHealth Medical Center

Starting QI early: A workshop for residents and educators in the curriculum and development of QI projects. QI focused research continues to grow in focus and importance in clinical medicine. Many specialties require QI-type projects for the maintenance of board certification, as well many institutions are
placing increased importance on the process of assessment and revision of current clinical practice. This is both in the interest of developing improved clinical care strategies as well as improving overall efficiency and cost-effective care. This workshop will focus on the beginning stages of brainstorming QI project development, the development of goals through the AIM statement process. Additionally we will discuss more briefly the entire process of the QI project as well as forming a business case for the project. This provides a framework for understanding why a project is important to the institution and to potential funders, and how to communicate this information. The strategies used in this workshop will be easily adaptable to working with residents in a didactic situation and will help both educators and residents understand how to proceed with integrating QI development into curriculum.

MESRE Oral Abstract Presentations Session

Development and Pilot of an Undergraduate Medical Education Consultation Curriculum
Keme Carter, MD, University of Chicago
Andrew Golden, University of Chicago Pritzker School of Medicine
Sarah Donlan, MD, NorthShore University Health System
Sara Hock, MD, University of Chicago
Shannon Martin, MD, University of Chicago
Jeanne Farnan, MD, MHPE, University of Chicago
Vineet Arora, MD, MAPP, University of Chicago

Background: Medical errors in patient settings can be attributed to breakdowns in communication; in some studies, as many as 91% of medical mishaps are attributed to communication errors (1-5). There must be a formal approach to requesting consultations, rather than what are traditionally known as "curbside consultations," to prevent communication errors from occurring (6). A model developed by Kessler et al, "The 5 Cs Model to Consultations," has been proposed to describe a standardized consultation from the emergency department and validated in a cohort of emergency medicine residents (7,8). One area lacking in Kessler's research is the implementation of this model into educational curricula (4). The specific aim of this project is to develop and pilot a consultation communication curriculum for undergraduate medical education using simulation technology at the University of Chicago Pritzker School of Medicine in the emergency medicine clerkship. We hypothesized students completing the consultation curriculum will have greater communication efficacy than those not completing the curriculum.

Methods: Kessler's 5 Cs Model Checklist for Assessing Physician Consultations and the Global Rating Scale (GRS) for Assessing Physician Consultations (9) were completed by attending physicians for each consultation in simulated cases and used to measure the efficacy of the curriculum in the cohort of fourth-year medical students (MS4s). The model checklist included 13 components to be included in an effective consultation and the GRS utilized a five point Likert scale from "Not effective" to "Extremely effective" for seven items, measuring communication efficacy. Changes in the average checklist completion and GRS values pre- and post-curriculum implementation were analyzed using one-tailed, unpaired Student's t-tests.

Results: The combined average score of the criteria measured in the GRS increased significantly following the implementation of the consultations educational curriculum (p < 0.01). Additionally, consultations performed after the implementation of the curriculum scored significantly higher in six of the seven individual criteria on the GRS (p < 0.05). The educational curriculum also increased the 5 Cs checklist completion of three of five criteria, along with the total checklist completion as a whole (p < 0.05).

Conclusions: The implementation of a formal educational curriculum in demonstrating a standardized approach to calling consultations significantly increased the thoroughness and perceived efficacy of consultation communication in MS4s. This is the first study examining a standardized educational curriculum for calling consultations based on a previously validated model.

Hey Doc, Pay Attention to Me: Teaching Patient-Centered EMR use
Wei Wei Lee, MD, MPH, University of Chicago
Lolita Alkureishi, MD, University of Chicago
Jeanne Farnan, MD, MHPE, University of Chicago
Vineet Arora, MD, MAPP, University of Chicago

Background: The ubiquitous presence of technology has altered all of our personal interactions and this includes clinical encounters between patients and doctors. Preliminary studies found that Electronic Medical Record (EMR) use in the exam room can be detrimental to the patient-doctor relationship and impede communication. Despite rapid EMR adoption, few curricula that address patient-centered use of the EMR exist.

Methods: We developed a lecture and Observed Structured Clinical Experience (OSCE) for second year medical students (MS2) on how to use the EMR to enhance patient-doctor communication. The lecture addressed: 1) communication barriers associated with EMR use; 2) specific behaviors and skills that impede communication highlighted in a teaching video; and 3) solutions and best practices for patient-centered EMR use. Students then participated in an OSCE for skills practice and formative feedback. We assessed students' knowledge, attitude and skills using a post-OSCE survey with Likert items.

Results: The lecture and OSCE were incorporated into a required Clinical Skills course for MS2 students (n=88). We analyzed 80 post-OSCE surveys (80/88, 91%). 96% (77/80) of students agreed (3 on 5 point scale) that the patient-centered EMR use curriculum was "important to their current level of training." 36% (29/80) rated their knowledge as average and 55% (44/80) rated their knowledge as good or excellent. When asked to rate their skill level, 41% (33/80) reported they were advanced beginners, 34% (27/80) were competent, 10% (8/80) were proficient and zero were experts. These results may reflect the lack of clinical experience as MS2 students and emphasize the importance of further training. Interestingly, 76% (57/80) thought the training should occur during the MS2 year and 71% (57/80) thought they should also be trained as MS3s. Importantly, 94% (75/80) felt it was important (≥3 on 5 point scale) to practice these skills with standardized patients prior to interacting with a real patients and 85% (68/80) agreed or strongly agreed that education and training on patient-centered EMR use should be required for all medical students.'

Conclusions: Implementing a patient-centered EMR curriculum is innovative, timely and addresses an existing gap in medical education. Patient-centered EMR training has the potential to enhance patient-provider communication.

* Funded by a grant from the Picker foundation, University of Chicago Academy of Distinguished Medical Educators, University of Chicago Bucksbaum Institute of Clinical Excellence
Use of Modified Peer Instruction in an Introductory Pathobiology and Pharmacology Course
Mary Jo Trout, PharmD, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine
Paul Koles, MD, Wright State University Boonshoft School of Medicine

Background: Peer Instruction (Mazur, 1991) involves a mini-lecture followed by a question that is individually answered, results are tallied; students discuss with their peers (peer instruction) and then answer the question again with results recorded. The final step is discussion of correct answer. Second-year students at our medical school take a 4-week introductory Pathobiology and Pharmacology (PB&T) course. This year the format was significantly changed to promote the "flipped classroom" concept and incorporate Peer Instruction.

Research Question: Did attending modified peer instruction sessions improve exam performance?

Methods: All lectures and handouts were available on line to second-year students (N = 106). We modified the Peer Instruction to eliminate the mini-lecture and based the Peer Instruction questions on the online lectures. Modified Peer Instruction (MPI) Sessions for Pharmacology were held prior to each weekly high stakes exam. MPI sessions were not mandatory nor were they graded. Each session was two hours long and covered 12-16 exam quality multiple-choice questions. The purpose of these questions was to assist the student in learning and applying basic pharmacology concepts. Each question was displayed and students were given one minute to answer using an audience response system. If less than 80% of the class chose the correct answer, the students discussed with their neighbor for 3 minutes and then re-voted. After the re-vote, students were randomly called upon to explain to the class the correct answer. Faculty gave further explanation, if necessary. After completion of each MPI session, the questions and correct answer were posted for review by the entire class.

Results: Week 1 session attendees (70/ 66%) showed a 2% improvement on week 1 exam (p = 0.196) compared to non-attendees. Week 2 session attendees (46/43%) showed statistically significant improvement of 7% on week 2 exam (p= 0.004) compared to non-attendees. Week 3 session attendees (32/30%) showed a 4% improvement on week 3 exam (p = 0.084) compared to non-attendees. Week 4 session attendees (28/26%) showed a statistically significant 7% improvement on week 4 exam (p = 0.002) compared to non-attendees. Attendance at ≥ 1 session showed statistically significant improvement of 9% on final exam for attendees versus non-attendees (p = < 0.001).

Conclusion: Attendance at one or more modified Peer Instruction (MPI) Pharmacology Session resulted in a 9% improvement in final exam score for the pharmacology section.

Does Participation in Team-Based Learning Affect Medical Students' Longer-Term Learning?
Hicham Ismail, MS4, Wright State University Boonshoft School of Medicine
Paul Koles, MD, Wright State University Boonshoft School of Medicine
Adrian Corbett, MD, Wright State University Boonshoft School of Medicine
Khalid Elased, MD, Wright State University Boonshoft School of Medicine
Adrienne Stolfi, MSPH, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine
Dean Parmelee, MD, Wright State University Boonshoft School of Medicine

Background: Several previous studies have evaluated students' short-term learning outcomes associated with team-based learning (TBL). The proposed study examines whether longer-term learning is affected by participation in TBL. It specifically answers the research question: When tested 2 months after the conclusion of participation in a TBL module, will second-year medical students in a systems-based curriculum demonstrate a greater improvement in score (pre-test vs. post-test) for multiple-choice questions conceptually related to TBL modules?

Methods: With institutional board approval, 51 second-year medical students from three successive cohorts at one medical school took a single exam administered as pre-test and post-test. The exam included 100 multiple-choice questions assessing 9 domains: physiology (n=34), pathology (n=34), and pharmacology (n=32) of cardiovascular (n=40), respiratory (n=30), and renal (n=30) systems. Seven TBL instructional modules occurred during a 10-week block of integrated courses in cardiovascular, respiratory, and renal systems. The exam included 50 questions conceptually related (TR) to TBL modules and 50 questions conceptually unrelated (TU) to TBL modules. The pre-test was administered on the first day of
the 10-week block; the identical post-test was administered 8 weeks after the end of this 10-week block. The magnitude in change of pre-test vs. post-test scores was compared for TR vs. TU questions. **Results:** There was no significant difference in pre-test TR vs. TU scores. There was a significant improvement in scores from pre-test to post-test for both TR (36.4% to 56.2%, \( p < 0.001 \)) and TU (35.9% to 54.9%, \( p < 0.001 \)) questions. The magnitude of improvement of TR scores (19.8%) was not significantly different from the improvement in TU scores (19.0%). Significant differences in improvement were observed for TR vs. TU questions in subgroups of cardiovascular (\( p = 0.013 \)), respiratory (\( p = 0.024 \)), and renal (\( p = 0.001 \)) questions.

**Conclusions:** Similar improvements in scores for TR and TU questions suggest that participation in 7 TBL modules over 10 weeks does not independently affect longer-term learning. Significant differences in scores for TR vs. TU questions for subgroups of cardiovascular, respiratory, and renal questions were noted. This may be explained by differences in difficulty of TR vs. TU questions (cardiovascular, renal) and effects associated with participation in TBL (respiratory). Improvement in scores on TR vs. TU questions for subgroups of physiology, pathology, and pharmacology questions was not significantly different. Findings of this study suggest that longer-term learning is not significantly affected by participation in TBL.

**Procedures Performed by Medical Students in Ambulatory Settings During the First Year of Medical School**

*Sorabh Khandelwal, MD, The Ohio State University*

*Ann Dietrich, MD, The Ohio State University*

*John Davis, PhD, MD, The Ohio State University*

*Doug Post, PhD, The Ohio State University*

*Cynthia Ledford, MD, The Ohio State University*

*Judy Westman, MD, The Ohio State University*

*John Mahan, MD, The Ohio State University*

*Diana Bahner, The Ohio State University*

**Background:** Medical school curricula across the country have embraced the idea of early clinical exposure for medical students. This early exposure has potential benefits of making the early years of medical school more meaningful to the student. In these clinical practices, students can practice their history-taking, physical examination, and oral communication skills. These practices are also a great environment for students to practice and perform basic procedures/skills that are important for physician development.

**Methods:** We implemented an office based procedural curriculum that taught students twelve different skills/procedures that we felt could be performed by first year medical students (obtaining peak flow, application of nasal cannula, instructing on MDI use, performing cerumen removal, obtaining fingerstick blood glucose measurement, obtaining visual acuity, performing urine collection, pulse oximeter application, performing a venipuncture, obtaining an EKG, performing IM injections, and obtaining vital signs) in outpatient practices. 184 students were asked to record data on procedures performed in their longitudinal practices. 184 students were asked to record data on procedures performed in their longitudinal practices. Students are scheduled with their preceptors for 4-hour sessions every other month for 17 months beginning in year one.

**Results:** Ninety-nine students were in primary care offices and 85 were in subspecialty practices. The procedures most often performed were obtaining vital signs (73%), performing IM injections (35%), obtaining an EKG (35%), performing a venipuncture (28%) and pulse oximeter application (26%). The least performed procedures / skills were application of nasal cannula (1%), instructing patients on MDI use (3%), performing cerumen removal (11%), and obtaining a fingerstick blood glucose measurement (11%).

**Conclusions:** Our data suggest that only a few procedures/skills were performed by a significant percentage of medical students in their longitudinal practices. The data can lead to more focused teaching and assessment of certain procedures / skills prior to the start of the clinical experiences. The data also provide evidence for the need to provide additional practice opportunities for procedures such as obtaining vital signs, which are key component of the physical examination.
Medical Education Resources Exchange (MERE) Session: Academic and Clinical Practice Partnerships to Accelerate Interprofessional Quality Improvement Education

Mamta Singh, MD MS, Louis Stokes Veterans Administration Medical Center
Mary A. Dolansky, RN, PhD, Louis Stokes Veterans Administration Medical Center
Pete Spanos, BA, Louis Stokes Veterans Administration Medical Center
Brook Watts, MD, MS, Louis Stokes Veterans Administration Medical Center
Sarah Augustine, MD, Louis Stokes Veterans Administration Medical Center
Amy Hirsch, PharD, Louis Stokes Veterans Administration Medical Center
Gloria Taylor, BSN, CDE, Louis Stokes Veterans Administration Medical Center

Quality improvement is a necessary skill set for all physicians and nurses and is a recommended competency for both professional disciplines (Association of American Medical Colleges and Quality and Safety Education for Nurses). All too often learning the principles of quality improvement is done in clinical silos and without meaningful interprofessional experiential learning. At the Louis Stokes Cleveland VA Center of Excellence (COE) in Primary Care we provide a unique learning environment that is optimal for teaching quality improvement to health professions trainees. The VA COE uses an academic-medical home model to educate the next generation in the knowledge and skills necessary to deliver team based care. As Don Berwick states “healthcare professionals improve their work while they do their work”. The VA COE provides a robust quality improvement curriculum that empowers interprofessional teams and engages learners in "real life” quality improvement initiatives. We will describe our academic-medical home, quality improvement curriculum, and the evaluation strategies used to assess the success of the program.

Objectives: Participants will 1) Describe three factors related to successful academic clinical practice partnerships; 2) State the principles of interprofessional collaboration; 3) List the components of the quality improvement curriculum.

Presentation 1: Description of the current healthcare professional education models that do not adequately address the skills needed to efficiently improve care delivery in the ambulatory healthcare setting.
Presentation 2: Dr. Dolansky will discuss the team work and interprofessional collaboration required for QI projects.
Presentation 3: Mr. Spanos will discuss the details of both the didactic and experiential component of the quality improvement curriculum and the Lean Six Sigma Yellow training session.
Presentation 4: Dr. Watts will discuss the VA registry. The registry is the tool for the Residents and Clinic staff to perform panel management.
Presentation 5: Dr. Augustine will discuss the quality improvement project to reduce inappropriate use of Emergency Department services.
Presentation 6: Dr. Hirsh will present the evaluation strategy of our curriculum consists of continuous process evaluation of the curriculum, pre and post testing of the QiKat, and publication and presentation success.
Presentation 7: Ms. Taylor will discuss the panel management curriculum. This curriculum includes an over view of the evidence supporting ambulatory care panel management using registries, how to use the registries, and actual experiences managing a panel for hypertension, hyperlipidemia, and hemoglobin A1c.

*Funded by the VA Office of Academic Affiliations, Louis Stokes Veterans Administration Medical Center

Panel
Associate Deans For Learner Assessment: Sharing Stories of Strategies, Successes and Challenges for System-Wide Assessment
Brian Mavis, PhD, Michigan State University
Kelly Caverzagie, MD, University of Nebraska
Cynthia Ledford, MD, Ohio State University
Dianne Wagner, MD, Michigan State University
Medical schools have increased their investment in resources to support learner assessment. This increase is the result of many forces including the advent of new assessment options, increased accountability to multiple stakeholders, and numerous accreditation standards designed to assure consistent and high quality educational outcomes. In response, some medical schools have designated an individual with responsibility to oversee and coordinate the development and implementation of learner assessments strategically across the curriculum. These positions have responsibility for enhancing the stewardship and effectiveness of assessment resources. Positions of this type are relatively new for undergraduate medical education, and therefore there are few existing models for schools considering this approach or individuals engaged in these efforts. This session brings together three individuals engaged in these activities to discuss their experiences, insights and aspirations. The purpose of this session is to explore how individuals with broad responsibility for learner assessment have approached their roles, as well as the perceived advantages and opportunities associated with models of centralized oversight. Participants will be able to a) Define alternative models for centralized assessment oversight; b) Compare approaches used at different institutions to enhance learner assessment systems; c) Describe the features of successful institutional interventions designed to enhance learner assessment systems; d) Describe the challenges encountered at each institution and differentiate the common and unique features among the three schools represented; e) Analyze institutional opportunities associated with implementation of a position with oversight for learner assessment. Each presenter will have 15 minutes to discuss: (a) their role and their place within the medical school organization; (b) approaches used at their institutions to achieve specific goals; c) examples of successful strategies and the outcomes achieved; and d) ongoing challenges that need to be addressed and the barriers to success to date. After this presentation, the audience will be invited to participate in a discussion of strategies, opportunities and challenges.

Workshop
Enhancing the Validity of Surveys Used in Program Evaluations
Colleen Colbert, PhD, Cleveland Clinic

Rationale: Surveys are frequently used during program evaluations at academic and healthcare institutions and utilized within educational research studies. Surveys are often considered to be an easy way to assess the efficacy of programmatic innovations, acquire data on stakeholders’ perspectives, and examine whether organizational goals and objectives have been met. Yet, surveys (in person and questionnaires) are only as good as the questions used to build them. Common mistakes in item construction and sampling can potentially compromise the validity of survey results. This 90-minute workshop will allow participants to: discuss the role of surveys within program evaluations, critique items from a variety of surveys, and create survey items. The workshop will utilize large and small group activities. Participants will gain a better understanding of methods they can use to improve the validity of surveys used in program evaluations and research studies at their own institutions. This introductory workshop is designed to complement the MERC offering on survey development.

Objectives: After participating in this workshop, participants will be able to 1) Discuss the advantages and disadvantages of using surveys within program evaluations and educational research; 2) Identify potential problems in item construction and discuss their effects on validity; 3) Describe ways to improve the validity of survey results through pretesting methods; 4) Revise survey items to increase clarity and respondent comprehension

Methods: After an interactive presentation utilizing audience participation, the large group will break up into small groups (teams) to critique and revise survey items. Teams of 3 will create survey items based upon program evaluation topics. Each team will pair up with another team to critique each other's survey items and provide feedback. The team will then present their items and feedback to the large group for critique.

Session format: 25 min Interactive presentation; 20 min Small groups (teams of 3 critique and revise survey items provided by facilitator); 10 min Large group – Debrief. Discuss problems with items; 30 min Small groups. Teams create sample survey items based upon program evaluation topics. Teams critique each other's survey items and provide feedback; 5 min Large group – Debrief. Lessons learned.

Deliverable: Participants will gain experience utilizing a survey evaluation tool designed to enhance item construction and validity.

Experience: Dr. Colbert is Director of Faculty Development at Cleveland Clinic and Adjunct Associate Professor at Texas A&M HSC COM. She is involved in faculty development, medical education research,
mentoring and has experience in program evaluation and survey development. She has also published in the area of survey design and research.

Workshop
A Guide to Successfully Using Portfolios in a Competency-based Curriculum
Megan McNamara, MD, MS, Case Western Reserve University School of Medicine
Kathy Cole-Kelly, MS, MSW, Case Western Reserve University School of Medicine
Jennifer Lennon, BA, Case Western Reserve University School of Medicine
Susan Padrino, MD, Case Western Reserve University School of Medicine
Mamta Singh, MD, MS, Case Western Reserve University School of Medicine
Amy Wilson-Delfosse, PhD, Case Western Reserve University School of Medicine

This interactive session will provide health care educators with a step-wise approach to implementing or improving a portfolio system, an essential tool for assessing student progress in a competency-based curriculum. The session will begin with an introduction to the history and purpose of medical education portfolios and an overview of the content and logistical considerations required in implementing a portfolio program. Participants will then work in small groups to begin the process of reviewing their own curricula and competencies. Participants will consider their school's curricular activities that can be used as evidence in a portfolio, and will participate in a reflective practice exercise to develop a new piece of evidence that will document a milestone. Best practices, including faculty development, student training, and technical requirements, will be shared by presenters and participants.

Workshop
Relationship-centered Communication for Patient and Provider Engagement: The REDE Model® of Healthcare Communication
Adrienne Boissy, MD, MA, Cleveland Clinic
Tim Gilligan, MD, Cleveland Clinic
Josh Miller, DO, Cleveland Clinic
Katie Neuendorf, MD, Cleveland Clinic
Amy Windover, PhD, Cleveland Clinic
Sumita Khatri, MD, MS, Cleveland Clinic

Decades of research support the impact of effective communication on caregiver engagement and satisfaction, as well as patient compliance, safety, and outcomes. With increasing demands on caregivers to do more with less, see more patients and provide better outcomes, providers need to find ways that foster resilience amongst themselves. Lifelong learning and continuous professional education in this regard is a realm beyond our individual specialties. Add to these factors the increased accountability that shifts from hospitals to individual providers in the pay for performance era. Underscoring the importance of communication, publicly-reported patient satisfaction scores are raising the bar; many physicians may have felt that their patient-communication was acceptable or even highly effective, and still may be faced with the challenge of learning ways to improve them. The Cleveland Clinic established the Center for Excellence in Healthcare Communication (CEHC) with joint support from the Office of Professional Staff Affairs and Office of Patient Experience. The CEHC came after ~3 years of systematically reviewing literature, national communication programs, and internal resources. To date, the Center has trained ~1200 staff physicians in communication skills and has also developed and trained a group of 40 staff facilitators for the various CEHC programs. As a large healthcare system employing approximately 3800 physicians with a substantial regional and international presence, the challenge for the Cleveland Clinic health system was to improve communication skills in a meaningful, evidenced-based, consistent manner. Ultimately, a foundational course called the Foundations of Healthcare Communication (FHC) was created as an intensive, skills-based experience for staff physicians. The FHC course is built upon the REDE® Model of Healthcare Communication, a conceptual framework for teaching effective relationship-centered communication skills. This model harnesses the therapeutic power of personal connection for both the provider and the patient. The 3 phases of REDE® include Relationship Establishment, Development, and
Engagement. This workshop will introduce the REDE Model and demonstrate the application of effective communication skills to optimize a unique and personal connection, shown to facilitate resilience and engagement among patients and providers. It will use a learner-centered, skills practice-based methodology to foster reflective competence among participants.

**MESRE Oral Abstract Presentations Session**

**Using Social Cognitive Career Theory as a Framework to Evaluate a Research-based Scholarly Concentration Program in Undergraduate Medical Education**

S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU
Richard A. Prayson, MD, Cleveland Clinic
Elaine F. Dannefer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU

**Background:** Evaluations of scholarly concentrations programs often lack coherent theoretical frameworks and instead rely on trainee satisfaction ratings or trainee-generated publications as proxies of program effectiveness or learner competence. Social Cognitive Career Theory (SCCT) asserts that self-efficacy (beliefs about ability to perform tasks in specific domains) and outcome expectations (perceptions of vocational rewards and drawbacks) function as critical factors that influence career decisions and performance. This project presents results of a program evaluation, shaped by SCCT, to examine outcomes of a research-focused scholarly concentration program.

**Methods:** This evaluation included the following medical student data: 1) demographics; 2) required thesis topic category; 3) number of publications; 4) NRMP-reported specialty; 5) self-assessments using 46-item Clinical Research Appraisal Inventory-Short Version (CRAI-SF); 6) career interests; 7) and overall program satisfaction. CRAI-SF items were averaged to form six scale scores. Nonparametric tests were used to compare CRAI-SF scores of matriculates and graduates to determine if self-efficacy differed by trainee level and examine relationships between graduates' CRAI-SF scores and gender, degree type (MD only and MD plus graduate degree), thesis topic, and clinical specialty. Effect sizes were computed to evaluate magnitude of statistical comparisons. Correlation coefficients were used to examine relationships between CRAI-SF scale scores and graduates' research/career interests, publications, and satisfaction.

**Results:** Participants included 239 of 248 students who consented. Of these, all submitted web-based questionnaire with CRAI-SF items at matriculation (n=128) or graduation (n=111). Graduates rated their research self-efficacy significantly higher than matriculates on all six CRAI-SF scales (Organize Study, Collaborate with Others, Conceptualize Study, Study Design/Analysis, Ethical Research Conduct, Report Study), with moderate effect sizes (> .50) obtained for the latter four scales. Cronbach's alpha for CRAI-SF sores had acceptable internal consistency for all students (.89-.97). Men and women students did not have significantly different CRAI-SF scores at matriculation or graduation. Significant relationships were not observed between CRAI-SF scores and graduates' thesis topics or medical specialty. Ethical Research Conduct was the only CRAI-SF scale significantly higher for graduates who obtained master degrees during medical school (n=36, p=.02). Spearman correlation coefficients revealed that graduates' interest in clinical research correlated positively with CRAI-SF scores. A small, yet statistically significant correlation of .20 occurred between the Report Study scale and students' co-authored (Median=2, Range=0-13) and total number of publications (Median=2, Range=0-26).

**Discussion:** This study provides evidence supporting the use of SCCT to inform the evaluation of a research-based scholarly concentration program in undergraduate medical education.

**Predictors of Success in Scholarly Concentrations Projects**

Candace Zeigler, MD, Sanford School of Medicine of the University of South Dakota
Matt Bien, MD, Sanford School of Medicine at the University of South Dakota
David W. Zeigler, MD, PhD, Sanford School of Medicine of the University of South Dakota
Edward Simantov, PhD, Sanford School of Medicine of the University of South Dakota
Gary L. Beck, PhD, Nebraska Medical Center

**Background:** Medical Schools across the United States have developed programs that promote the pursuit of scholarship beyond the traditional medical school curriculum. Most of these Scholarly
Concentrations (SC) programs require students to produce a final scholarly product. The definition of successful project outcomes has been reviewed in the literature.1 This study explores early student, mentor, and demographic variables that might predict a successful outcome.

**Methods:** The authors reviewed records of students who graduated from 2011-2014 (n=42) in order to determine which SC students had successful projects. Success was defined as a scholarly product published in a peer reviewed journal or presented as a poster or abstract at a regional, national or international scientific meeting. The authors compared multiple variables that might impact project outcome: score on a project application rubric (instrument based on Glassik’s criteria for scholarship), age at matriculation (traditional vs non-traditional student), student and mentor gender, marital status, mentor research experience, project change in the first two years, competing summer activities, and campus for clerkship year. Academic measures such as MCAT score, GPA at matriculation, GPA at end of first year of medical school, and USMLE Step 1 Score were also included. ANOVA and Chi-Square were used to determine the significance of the variables as predictors of a successful project.

**Results:** Preliminary data show a significant correlation between the means of the score on the project application rubric comparing successful to unsuccessful projects (p < 0.001). Students who score 19/25 or greater have a high likelihood of success whereas students who score 18/25 or below are less likely to succeed. Younger student age at matriculation also seemed to correlate with project success (p = 0.046). There was no significant correlation between student GPA at the time of matriculation, GPA at the end of the first year, USMLE Step 1 Scores, marital status, gender, or competing summer activities between a successful or unsuccessful project.

**Conclusions:** The preliminary data show that the project application rubric used in our program predicts successful student project outcome. In contrast, competing summer activities and academic performance do not seem to have a significant correlation with project success. This information will be used to target those students who need further mentoring to more fully define and develop their projects.


**Specialty Selection and Scholarship Pursuits in Medical School: Chicken or Egg?**

*Rachel Wolfson, MD, University of Chicago*
*Sujata Mehta, MA, University of Chicago*
*Vineet Arora, MD, MA, University of Chicago*

**Purpose:** US students often pursue scholarly activities during medical school. Many schools have either optional or mandatory Scholarly Concentration (SC) programs. Current literature has not been able to discern whether students chose SC areas to enhance residency applications in a field of interest, or if the SC experience led students to a particular field. A required SC program began at the University of Chicago in 2009. We describe the impact of this program on specialty selection of its first graduates.

**Methods:** First year students completed intake surveys reporting their specialty interests. Second year students selected and worked with an SC mentor and had the option to continue this work during the fourth year or choose a different project. Fourth year students declared their residency specialty through a required survey and completed an exit survey. We examined the concordance between intake survey specialty interests, SC mentor specialty, and ultimate choice of specialty, as well as reported impact of SC mentors on professional development and specialty selection. Data is presented using descriptive statistics.

**Results:** Sixty students completed the four-year SC program, of which 57 chose SC mentors in clinical departments. 40 students (70%) selected a specialty indicated as an area of interest on the early first year intake survey. Only 20 students (35%) chose a specialty concordant with that of their SC mentor. This was unchanged for students choosing competitive specialties (6/17, 35% concordance with mentor specialty). While only 41% of graduates reported that their SC mentor was important for their specialty selection, 77% reported that their SC mentor was important to their professional development. 75% of students anticipate using skills acquired during the SC program in their future careers.

**Conclusions:** Career interests are formed early in the course of medical training, with most students entering a specialty already under consideration upon entering medical school. While some students may choose SC topics and mentors to enhance residency applications in a particular field, our early experience suggests that the majority at our institution do not. Despite this, most of our students report that their SC
A mentor played an important role in their professional development, and that the skills learned will be useful in their careers.

Characteristics of Clinical Teachers Valued by Pre-Clinical Medical Students
Karen Szauter, MD, University of Texas Medical Branch
Oma Morey, PhD, University of Texas Medical Branch

Background: Studies examining characteristics of effective clinical teachers typically utilize data gathered from clerkship students or residents. Desirable attributes—broadly grouped as personal, physician, and teacher characteristics—provide guidance for faculty development in clinical teaching. Recent emphasis on clinical experiences as an important curricular component of pre-clinical medical student training lead us to question whether early learners focus on a unique set of characteristics to define clinical preceptor effectiveness.

Methods: Permission to analyze feedback provided by students participating in the General Internal Medicine Statewide Preceptorship Program (GIMSPP) was obtained from the governing board of the Texas Chapter of the American College of Physicians. Local IRB approval was obtained. The GIMSPP matches 1st and 2nd year medical students with internists throughout Texas for 3-4 week clinical preceptorships. End of rotation evaluations include open-ended prompts requesting students to provide descriptions of their preceptor’s 1) strengths and 2) areas for improvement (up to three for each). The final evaluation query invites any "additional comments" on the GIMSPP experience. All identifying information was omitted from the database to guarantee student and preceptor anonymity. We performed a qualitative content analysis on students' comments. General themes, with subgrouping of comments within each theme, were identified.

Results: Evaluations from 720 students participating in the program between 2006 and 2012 were analyzed. 2,010 comments focused on preceptor strengths, areas for improvement included 412 comments. Similar themes emerged from both types. Positive attributes (including percent of total comments) were grouped broadly into teaching skills (31%; e.g.: providing feedback, enthusiasm for teaching, excellence in demonstrations and explanations), personal characteristics (40%; e.g.: patience, integrity, friendliness) patient care (13%; e.g.: role modeling excellence), knowledge (14%), and the learning environment (1%). Negative comments were distributed between teaching skills (73%), character (13%), patient care (5%) and learning environment (9%); many of the "areas for improvement" focused on the students' desire for more autonomy, skills practice with patients, or perceived time limitations for teaching. Of the 407 general comments, 291 (71%) included statements directly related to the preceptor, of which 97% were praise.

Discussion: Pre-clinical student comments regarding clinical preceptors map to themes similar to those noted from more advanced learners. Many criticisms of the preceptors reflected students' desire for more autonomy, skills practice with patients, or factors directly related to the learning environment. Early identification of expectations of both learner and preceptor may be helpful to further optimize and guide these early clinical experiences.

Developing Faculty to Support Preceptors and Produce Scholarship: Teaching Early Ambulatory Medical Students (TEAMS)
Jeffrey Morzinski, PhD, Medical College of Wisconsin
Linda Meurer, MD, Medical College of Wisconsin
Julie Mitchell, MD, Medical College of Wisconsin
Karen Marcdante, MD, Medical College of Wisconsin
Deborah Simpson, PhD, Aurora Health Care
Tess Chandler, Medical College of Wisconsin

Background: Including Purpose and Significance; Our medical school is transforming its curriculum: since 2012, all 1st and 2nd year students complete a year-long clinic-based experience. Our preceptors were unprepared for early clinical learners (ECLs), who often require additional preparation and supervision. In 2011, we initiated a cross-disciplinary primary care faculty development program called TEAMS (Teaching Early Ambulatory Medical Students). Our goals were to 1) prepare educators to design
training initiatives that advance community preceptors’ ability to teach ECLs and 2) develop educators through educational scholarship. This presentation reports the TEAMS program design and early outcomes.

**Methods:** We recruited 15 physician-faculty members from pediatrics, family medicine and internal medicine who met in structured faculty development sessions one full afternoon monthly, nine times per year, for two years. Sessions culminated in trainee-developed and delivered instructional materials to support community preceptors teaching ECLs. We "trained our trainers" using methods such as readings, mini-lectures, demonstrations, peer teaching and peer coaching. For our scholarship goal, we highlighted accomplishments and dissemination opportunities, used writing blitzes and critiqued pre-submission abstracts. Program evaluation included measures in four categories: reaction (end-of-session satisfaction ratings: 1=poor, 7=excellent), learning (26-item pre-post-program, self-ratings in eight categories, e.g., instructional design skills, develop preceptors to teach ECLs: 1=no ability, 6=high ability); behavior change (the number of curricular products implemented, such as infographics, video training clips, tech pearls, workshops) and impact (inventory of scholarly products in peer reviewed educational forums).

**Results:** Reaction, trainee satisfaction with instruction 6.1 (mean); Learning, pre-post program self-ratings of ability change scores (six-point scale), highest +2.1 in "develop preceptors to teach ECLs", lowest +1.6 in "scholarly writing". Overall pre-post-program average gain +1.8. Behavior change (implemented TEAMS curricular products) total 18, including five trainee-delivered preceptor workshops and six online teaching tools. Impact inventory showed 23 TEAMS-specific scholarly products delivered or accepted to peer-reviewed academic forums, including posters (8), workshops (7) and lecture/discussions (8).

**Conclusions:** The TEAMS faculty development program is successfully developing educators, demonstrated by their gains in ability, their development and implementation of instructional products for preceptors. Peer-reviewed scholarship indicates solid, early educator development. We found that new faculty and those with leadership roles germane to our theme were most engaged in product development. Further study will examine trainee rates of academic promotion, educational leadership roles, and sustained preceptor satisfaction as teachers of ECLs.

*Funded by a grant from the Health Resources and Services Administration "Faculty Development in Primary Care" project*

**Concurrent Sessions 2:45-3:30: Small Group Discussions**

**Getting it Right: Developing Interprofessional Education (IPE) that Meets Workforce Needs**

*James Campbell, MD, MetroHealth Medical Center*

**Aleece Caron, PhD, University of Minnesota Medical School**

**Majka Woods, PhD, University of Minnesota Medical School**

**Kathryn Huggett, PhD, Creighton University School of Medicine**

**Brian T. Sick, MD, University of Minnesota Medical School**

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**Getting it Right: Developing Interprofessional Education (IPE) that Meets Workforce Needs**

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Medical schools, like other health professions schools, are developing curricula and training experiences to prepare students for interprofessional collaborative practice. Although progress in implementation of IPE has varied across institutions, the 2013 addition of a new Liaison Committee on Medical Education (LCME) standard for IPE outcomes, ED-29, has accelerated the pace of development at medical schools. Despite the calls for IPE and well-intentioned responses of medical schools, there is a slim evidence base to support the effectiveness of IPE. Due to the logistical complexity of coordinating IPE, it is time-consuming and sometimes resource-intensive. Schools are challenged to find cost-effective strategies that offer relevant and engaging content to the appropriate groupings of learners. At the same time, there are now multiple reports that healthcare organizations find new graduates unprepared for aspects of interprofessional practice (e.g., care coordination), even after completing the highest levels of educational training such as medical residency. The purpose of this small group discussion is to identify the gaps between interprofessional education and workforce needs and discuss strategies to close these gaps. We will first hear from educators who have experience in developing IPE and then hear the perspective of clinicians and educators working in a large healthcare organization. After identifying and discussing gaps, the participants will discuss effective strategies to prepare learners for interprofessional practice, and especially current areas of underpreparation.
Professional Identity Formation: The Role of Simulation, Reflection, Coaching and Early Clinical Experience
Sheryl Pfeil, MD, The Ohio State University
Carmine Alex Grieco, MD, The Ohio State University
John Davis, MD, PhD, The Ohio State University

The development of professional identity (PI), how a physician thinks of himself or herself as a physician, is a critical component of medical education. In fact, Cooke and Irby, in their 2010 Carnegie Foundation review of medical education, list professional identity formation as one of the four goals for medical education reform, stating that, "Professional identity formation - the development of professional values, actions, and aspirations - should be the backbone of medical education." [1] Professional identity, the way individuals conceive of themselves as doctors, is distinct from professionalism which refers to exhibiting behaviors befitting the profession. A variety of factors, both intrinsic and extrinsic, impact the transition of PI during medical education. Exploration, socialization, feedback and personal reflection all contribute to the development of professional values and aspirations, allowing the student to internalize the role of a medical professional. The process of developing professional identity begins very early and involves reaching an understanding of the expectations of the role and developing a perceived competence in that role. Various factors such as role ambiguity, uncertain expectations, and low self-confidence can impede an individual's ability to identify with the professional role. Recognizing that PI begins early in the educational process allows us to actively acknowledge and support this transformation by creating educational opportunities and providing feedback that deliberately foster the development of PI. Interacting with simulated patients allows students to actively "try on" their professional roles at a time when their medical knowledge is still limited. An ongoing process of self-reflection, combined with coaching and feedback, helps students integrate their experiences and personal selves with their career role as they develop professional values and aspirations [2]. Early clinical experiences that are presented in a curricular-integrated and graduated fashion can allow the student to enter the medical community, to develop relationships with role models, and to experience their role in the interprofessional context of health care. This scaffolded and multifaceted approach provides examples of ways in which we can recognize, guide and nurture the crucial development of PI. During this session, the speakers will share their expertise and challenge the audience members to think creatively about their own curricula. The discussants will address the challenges to the development of PI, the role of narrative self-inquiry and the dynamic nature of PI.

Mental Health of Medical Students: It’s Not Just an Issue for Student Affairs
Stuart Slavin, MD, MEd, Saint Louis University School of Medicine
Gregory Smith, PhD, Saint Louis University School of Medicine

Medical student mental health remains a significant problem in US medical schools with high rates of depression, anxiety, burnout, and suicidal ideation seen. In many ways, the traditional separation of the offices of Curriculum and Student Affairs has served medical education well, however, this artificial divide may have contributed to the ongoing problems of poor mental health in medical students. Curriculum deans may see mental health problems and student wellness as the primary purview of Student Affairs and may not view it as a significant focus of their own responsibilities. At Saint Louis University (SLU), the deans of curriculum and student affairs have worked closely together in recent years employing a number of interventions in the pre-clinical years to try to improve student well-being. Interventions including changes in grading policies, reduction in required contact hours, development of longitudinal electives and theme-based learning communities, changes in "toxic" courses, and institution of a required mindfulness and resilience curriculum have combined to produce substantially improved mental health outcomes in our students. Depression and anxiety rates in first and second year students have been reduced by more than 50% and at the same time, educational outcomes have improved. This small group discussion will begin with a brief presentation of the program and mental health outcomes at SLU. The majority of the time will be spent engaging the audience in a discussion addressing the following questions: 1) What further interventions might be effective in improving mental health of medical students particularly in the third and
fourth year?  2) What are the barriers to change and how can they be overcome ? 3) What are potential faculty development needs?

**Multiple Vertical Curricula: 10 years of Experience Orchestrating Individual Curricula and Developing Central Organization**  
*Theresa Kristopaitis, MD, Loyola University Stritch School of Medicine*

To respond to societal and accreditation needs, a series of vertical curricula -Radiology, End of Life, Disaster Preparedness, Prevention/Screening and Nutrition - were individually developed and implemented over a 10-year period at the Loyola University Stritch School of Medicine. The content of a “vertical curriculum” is integrated within existing required courses and clinical clerkships across 3-years. To emphasize the importance of the individual vertical curricula to students, to organize cumulative assessment of student outcomes, and to facilitate inclusion of achievement of competency in the student transcript, "Topics in Clinical Medicine” (TCM), a central home for the multiple vertical curricula was developed. This session will provide an overview of each unique curricula, of TCM and of the successes and challenges experienced.

**Cultivating Mentor-Student Relationships in Scholarly Concentration Programs**  
*Rachel Wolfson, MD, University of Chicago*  
*Mary Dereski, PhD, Oakland University William Beaumont School of Medicine*  
*Candace Zeigler, MD, University of South Dakota*

**Rationale:** Many US medical schools have either optional or mandatory Scholarly Concentration (SC) programs. Students in SC programs require individualized mentorship to insure success of their scholarly efforts, and students’ overall scholarly experience can be greatly impacted by their mentor. Challenges arise in cultivating these mentor-student relationships. First, mentors interested and experienced in engaging with students in this manner must be identified. Students select a mentor based on scholarly interest and interpersonal fit. Mentors may have varying needs for support and training regarding institutional expectations. Students also may need training regarding appropriate interaction with their mentors. Lastly, evaluation of mentors is an important way to identify and retain outstanding mentors in the program, assist others in gaining skills, and understand the impact of SC mentorship on student experience and career choices.

**Session Objectives:** 1) Present the experiences of three SC programs regarding the mentor-student relationship. 2) Encourage discussion among participants. 3) Generate a resource outlining practices of all participants’ institutions to promote growth and development of mentorship across SC programs. 4) Identify opportunities for future collaboration on these topics.

**Methods and Session Format:** The three presenters’ SC programs differ in size, years in operation, and whether student participation is mandatory or optional. Mentorship identification, training and support practices also differ between programs. In order to compare and contrast different SC program approaches to cultivating the mentor-student relationship, the presenters will utilize a grid to introduce each of 6 topics regarding their program’s experience (20 minutes). The remainder of the time allotted (25 minutes) will be used for conversation around these issues. In order to promote participation and generate a supporting document to track all participants’ practices in these areas, we will use live entry of participants’ responses and comments into a document projected in the room. We anticipate that this format will encourage active participation in the discussion, and will prompt exchange of ideas as participants assess which practices could supplement their current approach. Furthermore, those seeking to develop new SC programs will be able to use this as a valuable resource. At the end of the session, the document created in real-time will be shared via email with all participants.

**Concurrent Sessions 3:30-4:15: Small Group Discussions**

**Vertical Integration of the Physical Exam across the Four Years of Medical School**  
*Toshiko Uchida, MD, Northwestern University Feinberg School of Medicine*
Jeanne Farnan, MD, MHPE, The University of Chicago Pritzker School of Medicine
Heather Heiman, MD, Northwestern University Feinberg School of Medicine
Sheryl Pfeil, MD, The Ohio State University College of Medicine

This small group discussion is sponsored by the Directors of Clinical Skills Courses (DOCS). The goal of this session is to share current models of teaching the physical exam and to brainstorm the development of a rigorous physical exam curriculum across all four years of medical school. Traditionally, the physical exam has been taught in the first and/or second pre-clerkship years of the curriculum. Subsequently through the hidden curriculum, the physical exam is devalued during the clerkship years, and any attention to physical diagnosis often occurs in a haphazard manner based on the interest of the faculty and the availability of patients. Furthermore, the physical exam is often taught in a head-to-toe fashion which some have argued promotes the rote memorization of exam maneuvers without the incorporation of clinical reasoning into the process. In response, newer approaches to teaching the physical exam have been developed including the hypothesis-driven physical exam, the scheme-based problem solving method, and a newly-developed technique known as "core-plus-clusters." Each of these approaches aims to incorporate clinical reasoning into the teaching of the physical exam. Many schools are also interest in teaching the evidence-based physical exam as well. We have proposed a developmental approach to the physical exam which could begin with the head-to-toe exam early in medical school before students have learned any pathophysiology and then move on to a method which incorporates clinical reasoning such as the "core-plus-clusters" approach as students learn disease processes and then move into the clerkship years. Such a curriculum could also include teaching of the evidence-based physical exam as developmentally appropriate. During this small group discussion we will ask participants to share their current teaching techniques and their aspirations for their own physical exam curricula. We will consider challenges to implementing an ideal physical exam curriculum and use the power of the group to brainstorm solutions.

Remediating the Struggling Resident: Assessing and Addressing Issues of Professionalism
Katherine Harris, MD, University of Iowa Hospitals and Clinics
Marcy Rosenbaum, PhD, University of Iowa Hospitals and Clinics

Remediating struggling residents is a difficult task for all involved. There are many areas in which residents struggle and one of the most difficult areas to address is professionalism. We created a workshop to address this issue and have converted this workshop into a small group discussion for presentation at CGEA. We will engage participants in discussions regarding their own examples of professionalism lapses in learners and then present a case to delineate guidelines for developing remediation plans. This "nuts and bolts" approach will help with the identification of residents in need, the actual writing of a remediation plan, and the evaluation of the remediation plan. This discussion will allow participants to discuss their experiences, learn from one another, and take away practical tips on the remediation of professionalism issues.

Expanding a Longitudinal Integrated Clerkship Model to All Campuses
Matt Bien, MD, University of South Dakota
Janet Lindemann, MD, MBA, University of South Dakota
Lori Hansen, MD, University of South Dakota

Rationale: Changes in the practice of medicine, a shift toward fragmentation, and new understanding of learning theory prompted the Carnegie Foundation to call for reform in how we educate physicians. The Longitudinal Integrated Clerkship (LIC) model inherently addresses many of the concerns raised in this report. Consequently, schools across the nation and abroad are adopting or expanding longitudinal clerkships at their institutions. The University of South Dakota has a well-established and successful LIC in its Yankton Ambulatory Program. Despite that success on one campus, expansion of the LIC to all campuses at this institution posed many anticipated and unanticipated challenges. Presenters will reflect on the process, outline potential barriers to wide-scale implementation, and summarize possible solutions. Objectives: Following this session, participants will be better able to 1) Identify which specific Longitudinal Integrated Clerkship (LIC) model best fits their institutional needs. 2) Anticipate potential challenges to
Implementation of a campus-wide LIC. 3) Identify strategies to address these challenges. 4) Outline logistical and administrative steps toward LIC implementation.

**Methods and Session Format:** This session will focus on four main topics with two opportunities for Q&A - "Introduction and Overview (5 min)". "Laying the Groundwork for Change (5 min)". "LIC Schedule Options and Curricular Content (5 min)". "Q&A #1 (10 min)". "Costs and Administration (5 min)". "Program Evaluation (5 min)". "Q&A #2 (10 min)".

**Experience:** Matt Bien, MD is an Associate Professor in Internal Medicine and Pediatrics and Educational Director in the Office of Medical Education at Sanford School of Medicine of the University of South Dakota. Janet Lindemann, MD MBA is a Professor in Family Medicine and the Dean of Medical Student Education at Sanford School of Medicine of the University of South Dakota. Lori Hansen, MD is a Professor in Internal Medicine and Pulmonary Medicine at Sanford School of Medicine of the University of South Dakota and serves as Dean of Students for the Yankton Campus.

**Early Integration of Public Health into Medical Education: The Case Western Reserve University School of Medicine Experience**

*Scott Frank, MD, MS, Case Western Reserve University School of Medicine*

*Heidi Gullet, MD, MPH, Case Western Reserve University School of Medicine*

*Doug Einstadter, MD, Case Western Reserve University School of Medicine*

**Purpose:** The purpose of this small group discussion is to introduce the CWRU Block 1 curriculum, review the student response to this approach, and then discuss similarities and contrast to the experience of small group discussion participants at other institutions.

**Background:** Recent publications have emphasized the driving need for greater integration of public health into medical education. A recent Institute of Medicine report stated, "Ensuring that members of society are healthy and reaching their full potential requires the prevention of disease and injury; the promotion of health and well-being; the assurance of conditions in which people can be healthy; and the provision of timely, effective, and coordinated health care. A wide array of actors across the United States including those in both primary care and public health contribute to one or more of these elements, but their work is often carried out in relative isolation.

**Methods:** A 10 year-old curriculum revision at Case Western Reserve University School of Medicine has placed Public and Population Health as the first educational experience of our students' medical education careers. "Block 1" is a 5 week curricular block that initiates the student's life-long learning in medicine and health and sets a foundation for building careers of scholarship, clinical expertise, compassionate healthcare, civic professionalism, and leadership. This is accomplished through teaching the basic sciences of population health; through involvement of patients in the educational process; through introducing students to community based field experience; and through Inquiry Group focus on cases illustrating health care in the context of the health system that confronts physicians today. Population health teaching includes epidemiology; biostatistics; health informatics; health systems and policy; social and behavioral health; quality improvement; preventive medicine; and environmental health. Bioethics represents an overarching thread woven into population health efforts. Innovations include early introduction of public health into the curriculum; a strong epidemiology curriculum; problem based learning on prevention and public health related cases (well adult care, individual and population management of diabetes, prevention and management of sexually transmitted infections in adolescents, and wrong site surgery); team based learning about the US Health System; a pandemic influenza tabletop exercise; a health promotion step-challenge (students and IQ groups compete to achieve the most steps during the block); community based field experiences (visiting community health centers; community based chronic disease management groups; and community based social workers); and book club discussions.

**Using the Magical Arts as a Tool in Medical Education: Medical Humanities Curricula Beyond the Trick and Behind the Curtain**

*Ricardo Rosenkranz, MD, Northwestern University Feinberg School of Medicine*

*Lawrence Hass, PhD, Northwestern University Feinberg School of Medicine*
Medical educators debate the merits of including humanities in the undergraduate curriculum. While the hard evidence of long-term benefits in professional development is hard to come by, there are positive results that are witnessed by educators who create these programs. At the Northwestern University Feinberg School of Medicine we have created a 10-hour course within the context of humanities seminars entitled Magic and Medicine. This course has been taught for 5 years and over 120 students have experienced the course. Using the lens of performing magic, the course explores the physician-patient relationship as well as the notion that the practice of medicine includes elements of performance art. In addition, the course examines the structure of belief as it relates to healing and explores the roles that traditional healers play in the therapeutic process. Students experience high-level performances in the magical arts that are then deconstructed with the performer to understand best practices and find an applied principle to medicine. Finally, utilizing progressive educational format, medical students are required to perform a magical effect publicly. This exercise allows the students to apply newly learned performance concepts and find personal meaning to their applicability in the medical profession. Based on course evaluations, the overwhelming majority of medical students find this seminar useful or very useful to their medical education (98%) and applicable or very applicable to future medical practices (99%). In this small group discussion we will detail the Magic and Medicine seminar content. We will present student satisfaction data, and dig deeper in course design. In addition we will forward our philosophical approach to the role that “applied humanities” can play in medical education. We will also discuss how the Magical Arts have been used in higher education elsewhere, as well. In addition, we will demonstrate how the performance of a magical effect may be used to further the professional development of medical students. Finally, we hope to create a group discussion around the design and future development of seminars such as these. Educators seeking to include this type of educational experience for their students might find this session beneficial.

MESRE Oral Abstract Presentations Session

Standardized Patient's Consideration of Students as a Future Healthcare Provider as Predicted by Interpersonal and Communication Skills in Third-Year OSCEs

Robert Treat, PhD, Medical College of Wisconsin
Dawn Bragg, PhD, Medical College of Wisconsin
Doug Bower, MD, Medical College of Wisconsin
Martin Muntz, MD, FACP, Medical College of Wisconsin
Ann Helms, MD, Medical College of Wisconsin
Kris Saudek, MD, Medical College of Wisconsin
Brian Lewis, MD, Medical College of Wisconsin
Joshua Noe, MD, Medical College of Wisconsin

Background: Observable associations between standardized patient (SP) checklist item scores of third-year medical students in objective structured clinical examinations (OSCEs) and SP written comments resulted in the development of new OSCE performance items across all cases in the academic year. The items included asking the SP if they would like to see the student as a future healthcare provider (FHCP) and additional interpersonal and communication (ICS) skills regarding empathy, credibility, organization, and poise. The purpose of this study is to demonstrate progressive student development by analyzing the statistical relationships between FHCP and ICS scores and time, multivariate logistic regression analysis to predict FHCP scores from ICS scores, and 3) inter-item reliability analysis to indicate which cases produce internally-consistent data. Statistical analyses were generated with SPSS 21.0.

Methods: The data set were dichotomously-scaled (yes/no) checklists from 19 M-3 OSCE cases drawn from seven required M-3 clerkships for N=192 students during the 2012/13 academic year. Individual checklist items were summed and converted to percentage scores for each case. Overall OSCE ICS percentage scores were averaged from four or more individual ICS item scores, while the FHCP item was a dichotomously-scaled item. Three statistical techniques were used: 1) Pearson chi-square tests, phi-coefficients, and point-biserial correlations to establish relationships between FHCP and ICS scores and time, 2) multivariate logistic regression analysis to predict FHCP scores from ICS scores, and 3) inter-item reliability analysis to indicate which cases produce internally-consistent data. Statistical analyses were generated with SPSS 21.0.

Results: Statistically significant (p<.050) differences in frequency distributions of ICS and FHCP scores across time were reported via chi-square analysis with frequency increases in positive responses for all
items. Significant phi-coefficients between individual ICS and FHCP checklist item scores ranged from 0.2-0.6, while the point-biserial correlation was r=0.6 between overall ICS and the FHCP item. The regression of FHCP scores onto individual ICS scores (p=.001, Nagelkerke R² =0.41) yielded two significant regression models when split by time (fall/spring). The inter-item reliability for each case ranged from alpha=0.50-0.82.

**Conclusions:** Students demonstrated improvements in FHCP and ICS skills scores over time. A predictive relationship between FHCP and ICS was also established across the year. The benefit of identifying useful measures of professionalism early is to capture students who may have difficulty with this during their career and intervene early. It is critical to catch these students early because data shows that unprofessional behavior demonstrated in medical school is likely to be repeated later in one's career. Future areas of study include having the SP share more information about why they would not like to see the student as a FHCP.

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**A Pilot Study Exploring Medical Students’ Experiences with Mistreatment and Neglect**

*Megan McNamara, MD, MS, Case Western Reserve University School of Medicine*  
*Kathy Cole-Kelly, MS, MSW, Case Western Reserve University School of Medicine*  
*Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine*  
*Alex Miranda, MD Candidate, Case Western Reserve University School of Medicine*

**Background:** Approximately 15% of medical students report experiencing overt mistreatment, which can be associated with significant negative consequences. Exploratory focus group interviews with students at Case Western Reserve University (CWRU) indicated that there is also a more covert type of mistreatment, termed "neglect." According to focus group participants, neglect is as detrimental as overt mistreatment and significantly more common. The purpose of this pilot survey study was to explore the concept of medical student neglect more fully through students' written descriptions, as well as to contrast these experiences with overt mistreatment.

**Methods:** All current CWRU students (n=721) were invited to participate in an anonymous, web-based survey regarding their experiences with mistreatment and neglect during their medical education. Participants were first provided with the AAMC definition of mistreatment and asked if they had personally experienced or observed mistreatment. Subjects were then provided with a definition of neglect (derived from the focus group interviews), and were similarly asked if they had experienced or observed neglect. Respondents were asked to provide written examples of their experiences. Descriptive statistics were used to summarize response frequencies, and a framework approach was used to analyze qualitative responses.

**Results:** One hundred and two students completed the online questionnaire, for a response rate of 14%. Among respondents, ten students (9.8%) stated that they had experienced mistreatment and fourteen students (13.7%) had witnessed mistreatment based on gender, race, or sexual orientation. Twenty-nine students (28%) had personally experienced neglect, and twenty (19.6%) had witnessed another student being neglected. Four students reported the mistreatment or neglect to others. Types of neglect included being actively ignored, treated as a burden, deliberately excluded, and set up for failure. Comments included that neglect happens "all the time during third year," that "we (medical students) are commonly not included," and that "others" have treated my presence as a burden and quite obviously excluded me from participating in discussions." One student stated that "I have never been yelled at, but I would have preferred it comparing to showing up every day and made to feel useless and unwanted."

**Conclusions:** Medical students at CWRU experience both mistreatment and neglect during their medical education. Neglect may be more common than overt mistreatment and significantly interferes with the learning process. Given the limited response rate, additional study is necessary to assess the prevalence of neglect, and to explore the consequences of neglect for the individual student.

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**Midwest U.S. Medical Students’ Attitudes Toward, and Knowledge of LGBT Health Issues**

*Jeffrey Zabinski, MSSA, MA, MS4, Wright State University Boonshoft School of Medicine*  
*Sabrina M. Neeley, PhD, MPH, Wright State University Boonshoft School of Medicine*  
*Brenda Roman, MD, Wright State University Boonshoft School of Medicine*  
*Jim Medder, MD, MPH, University of Nebraska College of Medicine*
In recent years, greater understanding of health care disparities in lesbian, gay, bisexual and transgender (LGBT) populations has become a priority in medical education. To address this priority, a study was developed to 1) identify medical students’ attitudes toward LGBT patients and healthcare professionals; and 2) determine medical students' level of knowledge of LGBT health care issues. The study is regionally targeted to the Midwest to address a student population who may have fewer personal exposures to LGBT issues due to geography and regional population dynamics. Medical students at four institutions (n=762) completed an anonymous online survey in 2013, assessing attitudes toward LGBT patients and healthcare professionals, as well as knowledge of LGBT health care issues. Significant differences in responses based on gender, ethnicity, and the students’ own sexual orientation were identified. Thematic analysis of the comments uncovered a need for more training on counseling patients on sexual practices and behaviors, gender-sensitive interviewing, mental health concerns, and social and community barriers to care and quality of life. This confirms areas of need for more clinical educational experiences regarding LGBT health risks and health issues. Descriptive analysis, however, showed that medical students from these institutions in general are comfortable with the LGBT population and do not appear to hold as many stereotyped perceptions as hypothesized. More than half say they regularly encounter LGBT individuals in their daily lives and say these experiences have positively altered their own beliefs about sexuality and gender identity. Lastly, the data showed that there is a more pronounced gap in knowledge and awareness of transgender health issues than for lesbian, gay, and bisexual health issues. To address the identified gaps, development of evidence-based educational materials—such as patient cases and OSCEs—will benefit institutions seeking resources to improve outcomes in the identified points of weakness.

Medical School Anatomy Lab Body Donors as "Educators" of High School Students Pertaining to Health Behaviors and Preventable Disease

Erich Stauder, BS, Medical College of Wisconsin
Todd Hoagland, PhD, Medical College of Wisconsin

Background: Respect for medical school body donors can be demonstrated by maximizing their educational value. After fulfilling their primary role in educating medical students (MS) during typical anatomy classes, these donors can continue to educate. To accomplish this, MS can present high yield demonstrations of diseased and healthy organs with a goal of impacting the health behaviors of impressionable high school students (HSS). This also benefits MS who deliver the prepared curriculum and answer questions, solidifying their understanding of anatomy and its relationship to general pathology. This project seeks to increase HSS health education about preventable chronic disease and maximize the educational benefit of each body donor through a MS-led curriculum.

Methods: High school students were recruited to participate in a ½ day session. Following a tour of the medical school and an introduction to the anatomy lab by medical school faculty, each group of 2-3 HSS rotated through three stations. The stations included the Thorax, Abdomen, and Extremities. Each station was staffed by one experienced MS following the developed curriculum. HSS were asked to complete a confidential survey and optional review of their experience using open ended written questions. A qualitative analysis of the HSS responses using standard methodology was subsequently conducted to identify themes. MS tutors completed a brief survey about their experience.

Results: All 32 HSS who participated in the curriculum completed a voluntary review of their experience, and all 32 responses were positive. Analysis for themes identified four short term outcomes and three long term outcomes. The short term outcomes included "better understanding" (69% of respondents), "very positive experience" (63%), "amazing opportunity" (9%), and "questions answered" (25%). The long term outcomes included "influence future/career" (44%), "influenced health perception/choices" (50%), and "shared learning with others" (84%). All MS tutors agreed that their participation was fun, helped improve teaching skills, and 8 of 9 agreed that it reinforced their anatomical knowledge.

Conclusions: This program demonstrates a novel way to optimize the educational value of each body donor. The program influenced perceptions of health behaviors and encouraged HSS to share knowledge. It may also impact recruitment into the health care professions. The continued educational impact of body...
Outreach to Vulnerable and Underserved Populations to Enhance Medical Students’ Service Learning

Misa Mi, PhD, MLIS, Oakland University William Beaumont School of Medicine
Jill Stefaniak, PhD, Old Dominion University
Nelia Afonso, MD, William Beaumont Health System

Introduction: The Oakland University William Beaumont School of Medicine (OUWB), a new medical school in Rochester, Michigan, has established a partnership with South Oakland Shelter (SOS) to develop service-learning experiences that engage medical students with homeless people and inspire students to work in partnership with the community. These experiences not only help students develop an awareness of healthcare needs of a more vulnerable patient population but also provide them with an opportunity to integrate their knowledge and skills with real life experiences early in their medical training.

Objective: A community-based participatory research project was conducted prior to the development of experiential service learning projects. It assisted in identifying health information needs of homeless people (SOS clients) and their barriers to accessing quality consumer health information resources. The needs and challenges of the stakeholders - SOS staff and medical students - in accessing health information were also assessed.

Methods: An online needs assessment survey was administered to SOS staff and medical students. The survey with SOS clients was conducted as a structured interview in consideration of varying health literacy levels.

Results: A total of 22 clients were recruited to participate in the survey during a 5-week period in 2013. Two-third of SOS staff and 33% of medical students completed their individual surveys. More than half of SOS clients had unmet information needs and ranked “health care provider” as the most useful resource while “the Internet” was the easiest to access. The resources deemed to be most helpful to SOS staff in assisting and serving their clients were information regarding free or low-cost care and prescriptions and information about common clinical problems which SOS clients experienced. Medical students perceived a number of challenges in serving the vulnerable population and indicated a need for resources to help educate the specific population.

Conclusions: The community needs assessment yielded valuable information which is assisting the school in developing targeted service learning projects and enhancing the involvement of students, staff, and faculty from multiple disciplines in reaching out to and serving vulnerable and underserved populations in the community. The service learning activities that are being developed and implemented contribute to the institutional goal of developing medical students into “holistic physicians,” who are caring, socially engaged, and compassionate.

Saturday, March 29, 2014
Concurrent Sessions 8:15 – 9:45 am

Workshop
Helping Early Clinical Learners Add Value in a Patient Centered Medical Home (PCMH)
Roohi Kharofa, MD, Medical College of Wisconsin
Julie Mitchell, MD, Medical College of Wisconsin
Karen Marcdante, MD, Medical College of Wisconsin

With students from Class of 2016, Medical College of Wisconsin
Olivia Kim, Kelly Klotz, Matthew Mohorek, Erich Stauder, Gretchen Wagner, Christabel Yamoah

Rationale: Early clinical experiences are being incorporated into medical school curriculums nationwide, with recent data showing that 110 U.S. medical schools use clinical preceptorships to enhance early
clinical learners’ (ECLs) skills. Primary care receptor recruitment for these ECLs, both first and second year students, has been challenging. Barriers include preceptors' inexperience with teaching ECLs, time constraints of busy physicians, and assumptions that ECLs hinder workflow and patient care. At the same time, principles of the Patient Centered Medical Home (PCMH) such as team-based care, patient self-management and between-visit care and during transitions increase the number of tasks primary physicians oversee. Many of these tasks may well be accomplished by an ECL as a team member, providing value to the preceptor. To address the growing needs of the primary care ECL preceptor, we will present a method to increase clinical preceptor confidence and interest in working with ECLs while enhancing preceptor ability in identifying value-added tasks for ECLs in the PCMH.

**Objectives:** By the end of this workshop, participants will be able to 1) Explicitly comment on something a student did to promote the patient centered medical home (PCMH). 2) Suggest at least one task that the student can complete that adds value to patient care. 3) Provide at least one constructive feedback comment about how the student can improve future clinical performance.

**Methods:** Following a brief introduction, problem description and review of principles of PCMH, participants will form small groups and interact with standardized students using several clinical vignettes. Following this role-play, feedback from the student and from the workshop participants will be provided, focused on the 3 objectives. Small groups will brainstorm additional opportunities for specific tasks that medical students could complete, adding value to their involvement in the clinical setting. A large group discussion will allow sharing of ideas, identification of resources needed to help incorporate ECLs. At the end of the session, each participant will identify at least one task that s/he will begin asking ECLs to perform to add value upon their return home.

*Funded by a Health Resources and Services Administration Grant, number D55HP23197*

**Panel**

"Readiness for Residency" - Lessons Learned and Next Steps!

Mary C. McHugh, MD, Loyola University Chicago Stritch School of Medicine

Viva Jo Siddall, MS, MS, RRT, RCP, Loyola University Chicago Stritch School of Medicine

Amy Hoyt, MS, Loyola University Chicago Stritch School of Medicine

Aaron Michelfelder, MD, Loyola University Chicago Stritch School of Medicine

William C. McGaghie, PhD, Loyola University Chicago Stritch School of Medicine

Loyola University Chicago Stritch School of Medicine (LUSSOM) "Readiness for Residency" began as a program to certify the "fitness" of our graduates for patient care. Specific clinical skills were identified through a literature review and input from our residency program directors, as relevant for a new "undifferentiated" resident to demonstrate competence and mapped into our required 4th year clerkships (Emergency Medicine, Subinternships in the ICU and Ward). Instruction and formative assessment would occur through Simulation Based Medical Education (SBME) following the principles of mastery learning with deliberate practice. It would include high and low fidelity medical simulations, standardized patients, inter-professional teamwork exercises, and rigorous feedback mechanisms to inform students about progress toward mastery of clinical skills. All assessment methods will be calibrated regularly as a continuous quality improvement (CQI) endeavor to insure reliable data needed for accurate student feedback and rigorous research. The program is now completing its piloting of clinical skills assigned to Emergency Medicine and the remaining skills are under various stages of development or implementation. This learning environment is optimized and takes place in our Center for Simulation Education, not on hospital or clinic floors. This strengthens the standardization and rigor of both education and evaluation. (By contrast, in clinical settings the proper focus is first on patients while medical student education may need to take a back seat.) These active and novel teaching and assessment methods are radical departures from the passive, "apprenticeship model" of traditional clinical education in the fourth year of medical school. These new approaches to student assessment include an emphasis on formative evaluation (assessment for learning), needed to give students focused feedback for skill improvement and serves patient safety by the development of a highly skilled workforce. Patient-centered team care will be addressed by several of our competency skill modules that include calling a consult, interprofessional communication, advanced directives and documenting DNR. Students will also gain a solid understanding of the health care system and financing by mastering clinical competencies that are expected within the repertoire of a new "undifferentiated" medical resident.
Residents and medical students must be able to write clear, responsible notes in the electronic health record (EHR) in order to express their clinical reasoning and communicate with colleagues and supervisors. Yet many physicians bemoan the poor quality of EHR-generated progress notes. Efficiency tools such as copy-paste and templates often result in notes filled with disjointed, irrelevant, redundant, and even false information. Through focus groups and a literature review, we determined that progress notes in the EHR must be truthful, reasoned, updated and succinct. We have developed a simple rubric to assess the quality of EHR-generated progress notes. This rubric is unique in that it does not require the evaluator to know the patient in depth. In this workshop, participants will critique a set of progress notes, then use our rubric to assess an inpatient progress note. In addition to our own perspectives as educators, we will consider the perspectives of patients, hospital and physician billing managers, hospital attorneys as they approach progress notes. We will present our experience using the rubric to provide individual feedback to medical students and residents, then ask participants to help us consider next steps, including using the assessment as an educational milestone for early residents.

**Workshop**

**Skills Building in Business Case Development**

James Campbell, MD, MS, MetroHealth Medical Center  
Amy Zack, MD, MetroHealth Medical Center  
David Wank, MAT, MetroHealth Medical Center

**Introduction:** James Campbell, MD, MS is the Principal Investigator on the HRSA-funded Faculty Development Program for Primary Care grant, and Amy Zack, MD is a participant in her second year of the Faculty Development for Primary Care Program. Globally the balance of clinical productivity with research and teaching has the potential to erode the academic mission. Dr. Campbell and Dr. Zack have found that a solid business case is the key to preserving academics despite clinical productivity demands. A comprehensive business case should not narrowly focus on revenue but also take into account the total value to be gained by participating in a faculty development program.

**Objective:** The overall goal of this workshop is for participants to walk away with a new paradigm for building a business case. Participants will be mentored through the development of a framework for their own business case and will be provided with a forum for feedback from presenters and other participants.

**Pre-workshop questionnaire:** Participants should come to the workshop prepared with ideas concerning these questions: “What is the essence of my academic activity?” “Who will benefit from the results of my academic activity?” “How much does my academic activity cost?” “Why would my institution support my academic activity?” “When can I discuss my academic activity with my boss?”

**Learning Objectives:** The participant will be able to 1) Identify and apply the key elements of a business case for faculty development; 2) Differentiate between true "value" and revenue; 3) Compose a compelling business case "story" as opposed to just presenting data; 4) Prepare a stakeholder analysis. *Participants are encouraged but not required to bring their own laptop computer.*
Second Year Medical Student Course Performance Correlated to Step 1 Examination
Meenaskshy Aiyer, MD, University of Illinois College of Medicine Peoria
Huaping Wang, PhD, OSF St. Francis Hospital
Yoon Soo Park, MS, PhD, University of Illinois College of Medicine Chicago
Cindy Kirwan, BA, MA, University of Illinois College of Medicine Peoria
David Pinson, DVM, PhD, University of Illinois College of Medicine Peoria

Background: The USMLE Step 1 examination is a prerequisite for entering the third year clerkships and is also an important milestone criterion used in evaluating students for potential residency positions selected in the fourth year. The overall goal of this work is to identify the strongest indicators of USMLE step 1 performance in our curriculum and to define and assist the minimally competent medical students to improve performance in both the courses and the USMLE. The hypothesis for this component of the project is that performance on specific courses in the second year curriculum correlate to performance on the USMLE step 1 examination.

Methods: We evaluated the performance of 353 students on 19 courses in the second year curriculum over 7 years of data (2006-2013). Student scores on each course for each year were mathematically standardized so all students in all years were based on the same grade scale. Disattenuated correlation was used to associate performance on end-of-course examinations to the USMLE step 1 scores (the dependent variable). Adjusted correlations were ranked from the strongest to the weakest based on the adjusted correlation coefficients.

Results: For the seven years of data, 316 students (89.5%) passed and 37 students (10.5%) failed the USMLE step 1 examination. Five courses in our curriculum strongly correlated to performance on the USMLE step 1 examination with coefficients of 0.8 or more. General pathology and general pathology-infection-immunity provided the strongest correlation to step 1 scores at r=0.85 and 0.84, respectively. The other courses included cardiovascular-renal-respiratory (r=0.81), gastrointestinal-hematology-endocrinology (r=0.80), and pharmacology (r=0.80). The course showing the weakest correlation was psychiatry (r=0.56). Three courses were missing reliability scores for their examinations and disattenuated correlation coefficients could not be calculated (epidemiology, introduction to clinical medicine-epidemiology-ethics, introduction to clinical medicine), but their Pearson correlation coefficients were less than 0.5.

Conclusions: These data indicate that correlations exist between performance on end-of-course examinations and USMLE step 1 performance. End-of-course examination performance for these five courses may reliably predict the odds of step 1 success or failure. Examination performance data coupled with the large group. We will then review best practices and discuss teaching modalities to address this issue (i.e. OSCE and direct observation). We will introduce the e-CEX (e-Clinical Evaluation Exercise) tool we developed to rate the trainee's performance on patient-centered EMR use. Lastly, we will share our tips for implementing an "Improving Patient-Centered use of Technology (iPaCT)" curriculum. All participants will receive a toolkit to implement the iPACT curriculum at their home institutions.

* Funded by a grant from the Picker foundation, University of Chicago Academy of Distinguished Medical Educators, University of Chicago Bucksbaum Institute of Clinical Excellence
Utilizing Bloom’s Taxonomy in the Analysis of Education on Bedside Rounds
Tara Petersen, MD, Medical College of Wisconsin

Purpose: The Cognitive Domain of Bloom's Taxonomy has provided teachers with guidance when organizing learning objectives as they relate to knowledge, the development of intellectual skills and promotion of cognitive mastery. Advancement along the six major categories within the Cognitive Domain provides a hierarchical model that can be applied to questioning. In the medical education environment, bedside rounds often provide a forum for preceptors to assess a medical trainee's knowledge, comprehension and ability to synthesize and apply information. To accomplish this assessment, preceptors often ask questions of the trainee. Though many opinions exist surrounding the content and quality of this method, a formal study analyzing the educational framework of questioning on bedside rounds has not yet been performed. The purpose of our study is to: 1) determine the educational content of morning bedside rounds through analysis utilizing Bloom's Taxonomy; 2) determine the medical teams’ perceptions surrounding assessment of a trainee's level of understanding.

Methods: A prospective observational time study of morning bedside rounds was conducted utilizing a novel computerized tablet application. Educational time was categorized and further quantified based on Bloom's Taxonomy. Subsequent administration of a weekly survey was performed to further elucidate perceptions surrounding the quantity, quality and content of teaching on rounds.

Results: Ten-percent of rounds (19 minutes +/- 11 min) was spent teaching. Forty-two-percent of teaching time (8 minutes +/- 5 min) was spent asking probing questions of the learner. The majority of probing questions were directed at eliciting the trainee's basic fund of knowledge (44%) rather than their ability to synthesize (1%) and evaluate (5%) data and information. Survey responses regarding which category of Bloom's Cognitive Domain is most often elicited on rounds varied according to one's role on the medical team. Residents and attendings felt questioning focused mostly on determining a trainee level of comprehension; whereas, fellows felt the application of knowledge was most commonly elicited.

Conclusions: Nearly half of the time spent teaching on rounds utilized probing questions as an educational method. The majority of that time was spent eliciting a learner's basic fund of knowledge rather than addressing the "higher levels" along the Cognitive Domain of Bloom's Taxonomy. This creates missed opportunities for preceptors to fully assess and further educate the medical trainee. Additionally, utilization of an organizational framework, such as Bloom's Taxonomy, by bedside preceptors could improve the quality, and possibly efficiency, of education on rounds.

Capturing Written Comments with a Cloud-based Assessment Tool: An Exploratory Study
Gary Ferenchick, MD, Michigan State University
David Solomon, PhD, Michigan State University
Churlson Han, MD, Michigan State University

Background: Feedback is essential in the professional development of students. The value of effective feedback is in part directly linked to its frequency, specificity, and its relationship to directly observed student behaviors. We developed, implemented and assessed a Cloud-based clinical evaluation application (i.e. Just In Time Medicine or JIT) for internet-enabled devices including smart phones, which displays customized competency checklists for 17 CDIM training problems for evaluators to use when implementing work-place based assessments of students' clinical skills in authentic clinical settings. JIT includes discretionary sections for evaluators to provide narrative written comments pertaining to 1) "one area the student did well" and 2) "one area the student can improve upon". Aim: The purpose of this exploratory study was to calculate the percentage of assessments that included any written comments (i.e. comment enhanced CEXs); and to calculate the percentage of comments which were specific (vs. general) pertaining to students' clinical performance.

Methods: Between July 1, 2012 and April 30, 2013 one-hundred seventy students were required to obtain ten CEX evaluations using JIT. All evaluator comments were electronically captured in a permanent Cloud-based record, and were subsequently coded as either providing general feedback (e.g. "good job"), "keep..."
practicing” etc.) or providing task specific feedback (e.g. "broaden differential diagnosis" "hold digits on side to check proprioception", etc.). Evaluators received no specific training on written comments.

**Results:** A total of 1771 CEX assessments were completed among the one-hundred seventy students. Of these 170 students, at least one comment-enhanced assessment occurred in 146 (85.8%). The range of comment-enhanced CEX assessments per student was 0 - 10, with an average of 4.7. The total number of captured comments was 1427; 179 included only "well done" comments, 6 included only "needs improvement" comments, and 1242 included comments for both. The percentage of comments that were coded as providing general feedback was 60.8%, whereas 39.2% were coded as providing task specific feedback.

**Conclusions:** When directly observing and assessing learner performance in authentic clinical settings, we have determined that written comments accompany a high percentage of CEX evaluations using Cloud-based technology delivered via mobile devices. This technology holds promise for capturing narrative comments and feedback directly aligned with criterion-based performance standards.

* Disclosure – The software program was developed by the lead author and may have commercial value.

**Lower Reflection Scores are Associated with Professionalism Lapses in Undergraduate Medical Education**

Leslie Hoffman, PhD Candidate, Indiana University School of Medicine
Ronald L. Shew, PhD, Indiana University School of Medicine
Gary R. Pike, PhD, Indiana University - Purdue University - Indianapolis
Richard M. Frankel, PhD, Indiana University School of Medicine

**Background:** Professionalism is an essential attribute of medical practice. Research has shown that medical students who engage in unprofessional behaviors during medical school are more likely to be sanctioned by state medical boards once in practice. One challenge for medical educators is to identify attributes of students who may be at risk for professional lapses and help them in their professional formation. Many schools have incorporated reflective writing to foster professionalism in medical students. This study examined the reflective ability of students who have, and have not, been disciplined for unprofessional behavior during their medical school training. We hypothesized that students who had lower reflection scores would be more likely to have had lapses in professionalism that brought them before a disciplinary committee.

**Methods:** A case-control study was conducted using all students from Indiana University School of Medicine (IUSM) who had been disciplined for unprofessional behavior between 2006 -2013 (n=70). The control group (n=229) was randomly selected from all other IUSM students. Third year students’ internal medicine clerkship narratives were evaluated using a validated rubric to assign a reflection score. Mean reflection scores were compared using t-tests. Logistic regression analysis was used to determine the impact of reflection scores on the likelihood of having been disciplined for professionalism lapses during medical school.

**Results:** Students in the case group had significantly lower reflection scores than those in the control group (cases = 2.021, controls = 2.395; p < 0.05). Logistic regression analysis indicated that a student's reflection score had a modest, but significant impact on the likelihood of professionalism deficiencies. Students with lower reflection scores were more likely to have appeared before a disciplinary committee for professionalism lapses (odds ratio = 0.682; p < 0.01).

**Conclusions:** These findings support the notion that reflection is a significant component of professionalism. Reflection encourages students to learn from their clinical experiences and provides a framework for examining attitudes and behaviors related to these experiences. Students who demonstrated lower levels of reflection were more likely to have been disciplined for professionalism lapses during medical school, which suggests that reflective writings could be used as a tool to assess risks to professionalism and develop intervention strategies to change attitudes and behavior. Students with lower reflection scores may need to be more closely monitored and provided with additional mentoring and support to ensure that they develop appropriate professional attitudes and values.

**Locus of Control in Defining the Problem Resident: A Qualitative Study of Emergency Medicine Program Director Perceptions**
Background: Program directors struggle with the "problem resident," though the definition of problem resident is unclear. But without a clear definition of what constitutes a problem resident, it is impossible to proceed on addressing the problem.

Objectives: The main objective of this study is to define the problem resident from the viewpoint of program directors.

Methods: This was a qualitative study using interviews of 19 Emergency Medicine program directors (PDs). We performed semi-structured interviews with a convenience sample, asking them to describe specific residents who they defined as a "problem resident." Grounded theory analysis supported by Atlas.ti allowed us to perceive common themes among program directors’ discussions. This study received IRB approval from State University of New York, Stony Brook.

Results: As a group, the program directors described a continuum of how they defined the problem resident. The continuum ranged between two absolute loci of control for improving the problem: a locus focused on the resident's responsibility and a locus focused on the program's responsibility. When the locus was at the program end of the continuum, the themes focused on whether the problem was "fixable" or "not fixable." One PD said "I don't really think there is such a thing as a problem resident. There are problem programs and problem faculty and there are problem program directors that don't insure that their residents are in a safe and protected environment so they can flourish." On the other end of the continuum, some PDs noted control of the problem resident was entirely the resident's, with one program director saying "any resident that needs more of my time and effort than all of the other residents" is a problem resident. These program directors divorced the significance of the influence of the program from the definition of a problem resident. Likewise the remediation was primarily under the control of the resident. Many of the PDs defined the problem resident on the spectrum between the two extremes. Descriptions of problem residents included a mixture of resident behaviors such as dishonesty, skills such as poor clinical or communication skills, and knowledge, combined with program expectations that did not match the characteristics and skills of the resident.

Conclusion: Residency program directors define the problem resident on a continuum based on the locus of control for improving the problem. The locus of control may lie with either the residency program or with the resident.

Concurrent Sessions 1:45 – 3:15

Panel
Affirming Professionalism for Physicians Across the Developmental Cycle
Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine
Kathleen Franco, MD, Cleveland Clinic Lerner College of Medicine
Tim Gilligan, MD, Cleveland Clinic
Njoke Thomas, MPH, Weatherhead School of Management, CWRU
Susan Stagno, MD, University Hospitals of Cleveland/CWRU SOM

We will present a transdisciplinary panel of educators and clinicians to consider the question of how best to support exemplary professionalism among our physician learners at the UME, GME and CME levels. Medical education scholars have firmly established the role of informal and hidden curriculum in shaping the professional identities of learners. We, as a community of educators, are moving toward consensus that professionalism is not a trait, but, rather, is a dynamic state that is demonstrated by observable behaviors. The singular role of context and systems in which our students learn makes the informal curriculum, i.e. organizational culture, paramount in importance. All physicians, including student physicians, can begin to modify their professional behavior and enact their values when we, as an organizational culture in health care, believe that professionalism is demonstrated by our actions. Labeling an individual as being "professional" (or not) ignores the complex challenges and opportunities that clinical work provides. Further, models that use positive approaches to build leadership skills have shown success in a variety of settings, including health care and medical education. The panel will consider questions
such as: How does the culture of the medical profession (i.e., the notion that physicians are trained to be expert problem solvers) both challenge and support taking a positive approach to professional development? Can learners bring a positive approach with them to new clinical settings? (i.e., lead from the bottom). How might we integrate elements of a positive approach to leadership development into medical education? After attending the panel discussion, participants will be able to 1) describe a variety of positive approaches that support professional excellence in clinical and learning settings; 2) elucidate ways why taking a strengths-based, positive approach (as opposed a traditional approach that seeks to minimize problems or behavioral lapses in professionalism) supports the healthcare educational environment as a whole; and 3) implement positive tools/techniques for professional development in their home institutions.

Panel
Growth in Team Based Learning (TBL) as a Pathway to Innovation: Using Kotter's Change Model in a Curricular Environment
Meenakshy Aiyer, MD, University of Illinois College of Medicine at Peoria
Andrew Bland, MD, University of Illinois College of Medicine at Peoria
Gerald Wickham, EdD, University of Illinois College of Medicine at Peoria
Roger W. Geiss, MD, University of Illinois College of Medicine at Peoria

Accreditation bodies state that medical education programs should include opportunities for active and self-directed learning with a goal to create lifelong learners and positively impact healthcare. With increasing challenges related to meeting clinical productivity, resident duty hour regulations, and fiscal constraints, institutions are struggling to bring about changes within their institution to meet some of these demands. We describe our journey to meet some of these goals as well as strategies used to overcome some of our barriers. Objectives: At the end of this panel discussion, the participants will be able to a) Discuss opportunities available to implement Team Based Learning (TBL) across the medical education continuum from UGME to CME; b) Employ Kotter’s change model was used to implement changes to the curricula at the participant’s institution; c) Describe strategies to evaluate the educational outcomes and patient care outcomes after TBL implementation. Methods and Session Format. The session will consist of three presentations, each 15 minutes long. The first presentation will focus on the rationale and implementation of TBL as an educational methodology. The second presentation will focus on challenges to, and opportunities for implementing TBL in UGME along with lessons learned. The third speaker will focus on opportunities to implement TBL in GME and strategies to link the learning opportunities with patient care outcomes. This speaker will also focus on preliminary data and feedback from the residents after participating in this activity. The panel discussion will then wrap up with a brief presentation (10 minutes) on the various faculty development strategies used within the institution including group feedback, coaching and traditional faculty development. The moderator will then facilitate discussions between the panelists and the audience. Structured questions will be utilized initially to highlight the collaborations with other institutions and discuss opportunities for future research and inter-institutional collaborations.

Workshop
Teaching Professionalism in Social Media - Leveraging the AAMC Digital Literacy Toolkit
Neil Mehta, MBBS, MS, Cleveland Clinic Lerner College of Medicine of CWRU
J. Harry Isaacson, MD, Cleveland Clinic Lerner College of Medicine of CWRU

Social media (SM) holds tremendous potential for medical education and for personal learning. Unfortunately SM comes with a risk for professional misconduct which can severely damage a person’s career and also hurt the image of the profession. Inappropriate use of SM can lead to inadvertent disclosure of a patient’s protected health information. A number of medical students have used SM during school and college and need to relearn appropriate use of SM as they enter the medical profession. Medical educators, unfamiliar with the nuances of various SM sites/tools like blogs, Twitter and Facebook find it difficult to relate to their students’ use of these tools. They may thus not be able to guide them in appropriate use of SM or be comfortable discussing issues of professionalism in SM. A number of professional organizations including the AMA have issued guidelines on professionalism in SM but like all
guidelines need to be applied on a case-by-case basis. Medical educators need to be sufficiently familiar with the gray areas in these guidelines to help their students interpret these appropriately. Participants will be able to experience first-hand a workshop that they can take back to their institutions and use with their own students. The workshop will offer a brief overview of SM sites and tools and current guidelines on professionalism in SM. Using the AAMC Digital Literacy Toolkit with real life case scenarios guiding questions and facilitator notes, participants will work in small groups to discuss how to approach each case. They will then present each group’s consensus to the large group. They will be able to conduct similar workshops at their own institution and also train fellow faculty members in the use of the toolkit.

Medical Education Scholarship, Research and Evaluation (MESRE): Consultation Validity Evidence for an EHR Progress Note Assessment Tool
Heather Heiman, MD, Northwestern University Feinberg School of Medicine
Jennifer Bieman, MD, Northwestern University Feinberg School of Medicine
Kathryn Kinner, MD, Northwestern University Feinberg School of Medicine
Charlotta Weaver, MD, Northwestern University Feinberg School of Medicine
Laura Fanucchi, MD, MPH, University of Kentucky College of Medicine

Across the country, clinician-educators are dismayed by the poor quality of progress notes in electronic health records. Attending focus groups at our institution have expressed concern that trainees’ progress notes have become lengthy "information dumps" deficient in clinical reasoning, frequently copied forward from prior days so that they are outdated and internally inconsistent. At academic medical centers, trainees author the majority of progress notes. An assessment framework is needed to ensure that residents consistently write notes which are truthful, reasoned, succinct and updated. We developed a 24-item rubric to evaluate the progress notes of residents from any department. For feasibility, the rubric does not require that a rater be familiar with the patient; any physician can administer it after training. A passing score on this assessment would indicate that a trainee had generated a clear and responsible note and could represent a milestone toward competency in interpersonal and communication skills. Over the last two years, we have worked on construct validity, refining the note using the results of two focus groups of 5-6 medical educators and feedback from online distribution to a separate group of attending physicians. The goal of this study is to further develop a validity argument for the progress note evaluation instrument so that we may disseminate it nationally. In this consultation, we would like advising about several issues: 1) Criterion validity. Another assessment tool (Physician Documentation Quality Instrument -9) exists but has several disadvantages, most importantly that it demands significant knowledge of the patient by the assessor. How should we compare our tool to this tool? 2) Reliability. How should we demonstrate interrater (or intrarater) reliability of the instrument? 3) In general, what additional information and what quantity of evidence would the consultants recommend we collect before we disseminate the tool more widely?

*Funded by an Augusta Webster, MD Grant for Educational Innovation at the Feinberg School of Medicine, Northwestern University

Workshop
Let’s Teach and Work Together!: Incorporating Interprofessional Education and Patient Safety/QI Into Your Curriculum
Aaron Michelfelder, MD, Loyola University Chicago Stritch School of Medicine
Carla Dyer, MD, University of Missouri School of Medicine
Fran Vlasses, PhD, RN, Loyola University Chicago School of Nursing
Gretchen Gregory, MSN, RN, University of Missouri School of Nursing
Michael Koller, MD, Loyola University Chicago School of Medicine
William McGaghie, PhD, Loyola University Chicago School of Medicine

With ED-10 and 19A mandating that medical schools incorporate Patient Safety and Quality Improvement as well as Interprofessional Education into their curricula, it is helpful to find the best resources and work together to meet these requirements. This workshop will be a "hands on" experience where participants will hear about curricula at two medical schools, and then will work together in small groups to create,
build, or enhance their own school programs. This workshop is designed to personally help those with and without IPE or Patient Safety/QI programs. The wisdom of all involved will be pooled to solve our problems together!

**MESRE Oral Abstract Presentations Session**

**To Mentor or Not to Mentor?**  
*Mary Dereski, PhD, Oakland University William Beaumont School of Medicine*

**Purpose and significance of the study:** Many medical schools are incorporating a scholarly research program during undergraduate medical education. The Oakland University William Beaumont School of Medicine (OUWB) has chosen to incorporate a mandatory Capstone project. Medical students must complete an outcomes-based research project as a graduation requirement. The OUWB School of Medicine will graduate its first class in May of 2015. Instrumental to the success of the student-based Capstone project is the Student-Mentor working relationship. The inaugural class completed two years of working on their Capstone projects at the time the survey was given to their mentors. In an effort to gauge the successfulness of this pairing, the director of the Program (Dr. Mary Dereski) met face-to-face with 34 (77%) of the 44 mentors for this medical school class (49 students).

**Methods:** There were 15 questions asked of the mentors with the opportunity to provide additional comments and insights into their mentorship experience. Scheduling of individual meetings with the mentors spanned 5 months with the duration of each session lasting from 20 minutes to 1 hour.

**Results:** Eighteen clinical departments are represented for mentoring the majority (85%) of the students. Internal Medicine, Orthopedics, and Radiology have the largest number of students (6 students per department). All other clinical departments have 1-4 students each. Ten percent of the class is mentored by Biomedical Science Faculty. Mentors were asked: “Reasons for becoming a mentor.” “How the mentor-student pairing occurred.” “Level of mentor preparation.” “Understanding of mentor responsibilities.” “Suggested changes for the mentoring program.” “Willingness to mentor another Capstone student.” Over half (59%) of the mentors interviewed stressed a need for clearer understanding of project outcomes-based research requirements including expectations for the level of mentor involvement. They also expressed a desire for increased communication with their mentee throughout the duration of the project. Eighty-two percent of the mentors interviewed said they are currently or would be willing to mentor students from subsequent classes.

**Conclusions:** Focused efforts are needed to offer a better understanding of the Capstone research requirements for mentors. Additionally, students should recognize the necessity for increased project focused communication with their mentor. OUWB’s current efforts addressing these areas include online mentor training modules, written resources, departmental mentor orientation sessions and mentor directed communication requirements for students.

**Establishing a Conceptual Framework for Handoffs Utilizing Communication Theory**  
*Matthew Mohorek, BS, Medical College of Wisconsin*  
*Travis Webb, MD, MHPE, Medical College of Wisconsin*

**Background:** An unforeseen but significant consequence of the 2003 ACGME duty hour restrictions has been the 40% increase in the frequency of patient care handoffs. Ineffective handoffs have been identified as the third most common cause of medical error. However, appropriate research into methods to study and improve health care handoffs has been sporadic and lacking a unifying foundational structure. Therefore, we sought to identify an appropriate conceptual framework that could be used to understand and critically analyze handoffs.

**Methods:** A scholarly review focusing on communication theory as a possible conceptual framework for handoffs was conducted. Five communication theories were identified as potential frameworks. A Pubmed search of current published handoff research was performed. The communication theories were then matched to the handoff literature to identify the most relevant theory for healthcare handoff models.

**Results:** The Shannon/Weaver Linear Model of Communication was identified as the most appropriate conceptual framework for healthcare handoffs. The Linear Model describes communication as a linear process. A source encodes a message into a signal, the signal is sent through a channel, the signal is
decoded back into a message at the destination, all while being in the presence of internal and external noise. The Linear Model identifies three separate instances in handoff communication where error can occur: the transmitter (message encoding), channel, and receiver (signal decoding). The literature search produced 52 articles that could be categorized and subcategorized according to the Linear Model. Furthermore, the model allowed for an organized approach for understanding potential variables and future directions for research.

**Conclusions:** Communication theory, more specifically, the Linear Model of Communication, is a suitable conceptual framework for future handoff research and could be used as a foundation for further research into interventions to improve handoffs in healthcare setting.

**Resident Handover: A Need for Structured Curriculum and Quality Outcome Studies**
Justen Aprile, MD, Cleveland Clinic
Shankar Baskar, MD, Cleveland Clinic
Ben Reed, MD, Cleveland Clinic
Sangeeta Krishna, MD, Cleveland Clinic

**Background:** On July 1, 2011 the ACGME enacted new regulations regarding resident work hours. The predictable consequence of a reduction in shift length is the increase of patient care transitions between physicians. Numerous studies have investigated and supported the need for structured curriculum on physician handover, especially in light of its direct effect on patient outcomes.

**Objective:** The SAFETIPS mnemonic is aimed at identifying those patients most at risk of a clinical status change while providing the pertinent information necessary to avoid unanticipated events. We hypothesized that a structured handover curriculum would improve individual competency and efficiency at handoff, improve resident perception of handoff, and result in improved patient outcomes.

**Design/Methods:** Residents were assessed by staff physicians using an observation tool and a 5 question, 9 point Leikert scale measuring: organization/efficiency, communication skills, content, clinical judgment, and humanistic qualities/professionalism, before and after the implementation of a standardized verbal sign out tool coined SAFETIPS. Individual resident's pre and post scores were matched and statistically compared with paired t-tests. Patient outcome indicators were accessed using gross numbers of Pediatric Rapid Responses and Error Event Reporting both pre and post implementation.

**Results:** All Leikert scale ratings improved significantly, with mean changes ranging from 1.2 to 1.9 points (P<0.05 for all questions). Individual questions on the Leikert scale all showed significant improvements with p values of 0.005, 0.039, 0.026, 0.038, 0.034 respectively for each question.

**Conclusions:** Data demonstrate a statistically significant improvement in each category of our Liekert scale after the implementation of SAFETIPS. Data for Pediatric Rapid Responses and Error Event Reporting are still being collected through the end of the year. Resident handover is a crucial piece of Residency training, and this project has provided objective data to support the notion and necessity of structured handover curriculum within Residency training.

**Assessment of Medical Students' Proficiency in Dermatology: Are Medical Students Adequately Prepared to Diagnose and Treat Common Dermatologic Conditions?**
Catherine Ulman, BA, MS4, Wright State University Boonshoft School of Medicine
Bruce Binder, MD, PhD, Wright State University Boonshoft School of Medicine
Nicole Borges, PhD, Wright State University Boonshoft School of Medicine

**Background:** Numerous studies have concluded that primary care physicians (PCPs) receive insufficient education in dermatology [1]. One study found that half of the medical schools surveyed provided 10 or fewer hours of instruction in dermatology, and 8% of the schools required no instruction in dermatology [2]. The limited time allotted to dermatology in medical school runs counter to the increasing prevalence of dermatologic conditions in the primary care setting [3]. Additionally, many PCPs receive no additional training in dermatology after medical school [4]. However, PCPs are often the initial contact for patients with dermatologic conditions [4]. These studies raise the question of whether medical schools adequately prepare medical students to diagnose and treat common dermatologic conditions.
Methods: A 15-question anonymous survey tested students’ ability to diagnose and treat common dermatologic conditions. Fifteen diseases were tested on the quiz. All fourth-year students in the Wright State University Boonshoft School of Medicine (WSUBSOM) Class of 2014 (107 students) were invited to fill out the survey, and 85 students completed the survey (79% response rate). The survey was completed after an academic exercise at which attendance was required.

Results: On average, students scored 47% on the quiz. Proficiency is considered an overall score of greater than or equal to 70%. Examination of responses to individual questions revealed that students were proficient in the diagnosis of psoriasis, tinea versicolor, and melanoma, but were proficient in the treatment of only verruca vulgaris and melanoma. The majority of students reported that they did not feel confident in their ability to diagnose and treat common dermatologic conditions, and 88% of students believe that they received inadequate training in dermatology during medical school. Additionally, students almost unanimously agreed (95%) that there should be general dermatology lectures during third year. Lastly, students felt that additional training in dermatology should consist of interactive lectures. Many students indicated that the family medicine and internal medicine clerkships would be the best places to include additional dermatology lectures.

Conclusions: Fourth year medical students in this sample are being inadequately prepared to diagnose and treat common skin conditions. The students lack confidence and are interested in receiving additional training. In response to these findings, the internal medicine clerkship director has agreed to add additional interactive dermatology lectures during the third-year rotation. This increased exposure to dermatology should better prepare our medical students pursuing careers as PCPs to diagnose and treat common dermatological conditions.


The Potential of Community-Based Training in Promoting Generalist Specialization
Joel Goodin, PhD, Florida State University

Background: The effects of community-based training (CBT; i.e., ambulatory or regional training), an emerging trend in allopathic medical schools, on physician specialization are not yet fully understood or well-researched. Current healthcare reform highlights a need for training that facilitates growth in health provider shortage areas, rural/community practice, and generalist specializations in order to more successfully meet the healthcare needs of United States citizens. The current study sought to understand the usefulness of CBT for medical education policy with regard to the current undersupply of generalist providers in the United States that is projected to worsen under increased societal health demands (e.g., newly insured citizens). Specifically, the researchers aimed to evaluate CBT as a viable alternative to more traditional training environments (non-CBT; e.g., large academic medical center) in advancing the supply of generalist physicians and promoting a “social mission” among physicians that aligns with the emphases of the healthcare reform.

Methods: With IRB approval, researchers worked with 15 United States medical institutions to invite 1,482 students to participate in an online survey regarding their medical career goals. The researchers investigated differences between future physicians in CBT (N = 294) and those in non-CBT (N = 1,188) utilizing quasi-experimental, exact case-matching analyses.

Results: Results indicated that students in CBT were 9.3% more likely to be committed to generalist specialties and 3.6% less likely to be committed to non-generalist specialties. In comparison to their non-CBT counterparts, students in CBT showed substantially higher (greater than 3%) likelihood to commit to Family Medicine (9.7%), Obstetrics and Gynecology (7.4%), and Pediatrics (4.8%). Students showed substantially lower (greater than 3%) likelihood to commit to non-generalist specialties such as Anesthesiology (3.5%), Otolaryngology (3.4%), and Radiology (3.7%).
Conclusion: A training environment that has the potential to increase overall generalist specialization by over 9% presents an opportunity to supply a workforce that has fewer incentives in comparison to non-generalist specialties. Theoretical implications (Organismic Integration Theory) of the study suggest that, in contrast to non-CBT training, CBT may more effectively sustain or encourage the internalization of "social mission" values, such that intrinsic motivation (i.e., energized by the joy / opportunity of helping others) may be enhanced in these students through their own alignment with the goals and belief systems of the CBT culture. Medical education policy may benefit from further implementation of CBT to improve the supply of generalist providers.
Medical Education Scholarship, Research, & Evaluation Posters

1. Aspiring Health Professionals’ Career Goals and Healthcare Reform Orientations: A Qualitative Contextualization
Joel Goodin, PhD, Florida State University

Background: During a time of change in the United States healthcare landscape, promoting the supply of healthcare providers into areas of greatest need is of foremost concern. Undergraduate students who have decided to advance toward a career in various healthcare settings face increased uncertainty, but hold varying degrees of awareness, perceived importance, and knowledge regarding the Affordable Care Act and how it may influence their future careers. This qualitative study sought to understand the aspiring health provider’s reform-related cognitions and motivations prior to entering professional training. This study focuses on a sample that is potentially less invested and committed to their careers and may serve to better elucidate career-related cognitive and behavioral reactions to the reform.

Methods: Forty-four undergraduate health science students responded to an online survey that included demographic information and open response questions. Each students’ statements about the healthcare reform were analyzed through open coding and grounded theory. Major themes were derived from words and phrases that were used consistently by the majority of respondents until theoretical saturation was accomplished.

Results: Six healthcare reform orientations emerged that displayed varying degrees of career commitment and reform-related attention, knowledge, and reaction, operationalized as student reports of voting behaviors and career goal modifications. Groups supporting, opposing, promoting an alternative to the current reform, or undecided but attentive had differing degrees and directions of viewpoint toward the Affordable Care Act and ongoing reform. Over the past year, since the 2012 Presidential Election, these “decided/attentive” groups reported increasing levels of knowledge and perceived importance of the reform on their voting choices. Two undecided groups evidenced a relaxed and avoidant attitude, respectively, and showed minimal knowledge or reaction to the reform. Supporters of healthcare reform in its present structure showed increased likelihood to serve in health-related fields, while students that opposed the current reform or preferred an alternative displayed a trend away from health-related fields. Conclusion: Implications for the consideration of students’ future time perspective are discussed alongside support of the Theory of Activating Uncertainty in future research. Students are differentially reactive to uncertainty based on comfort levels and perceived relevance of the reform. Future-oriented students may have increased perceptions of relevance and investment by considering their future professions at earlier stages compared to their peers. Health Educators and Policy-makers may benefit from increased understanding of pre-health student orientations toward the current reform effort.

2. Curriculum for Student Run Free Clinics at CGEA Schools
Ashika Bains, MS, Wayne State University School of Medicine
Jennifer Mendez, PhD, Wayne State University School of Medicine
Janice L. Farlow, PhD Candidate, Indiana University School of Medicine
Stephen Kirchhoff, MHA, Indiana University School of Medicine
Ruth Margalit, MD, University of Nebraska
Katherine Cauley, PhD, Wright State University

A survey of Central Group of Educational Affairs Service Learning (SL) Special Interest Group (SIG) member medical schools explored program design and implementation strategies used to integrate SL opportunities into the formal and informal curriculum, as well as sustainability and organizational strategies used to support SL. As a by-product of this study, researchers learned that a significant number of medical schools were supporting student-run free clinics (SRFC), often identified as part of their SL activities. This finding generated a series of questions which led to a
survey to learn more about SRFCs, specifically investigating the extent to which SL principles of orientation and reflection are incorporated into the community service aspect of the clinics. The survey distributed to administrative directors overseeing the project and student participants allowed for the analysis of (1) administrative intention in providing training, community education, organization, and curricular connections; and (2) objective responses from students about opportunities for orientation and reflection during their SRFC experiences. Despite the variances between SRFCs across the nation, consistency of patient care and high quality education of medical student volunteers are common objectives. This study aims at cataloging different models and implementation strategies between clinics in order to gather a baseline framework to establish guidelines and best practices for realizing these common goals of SRFCs. SRFCs are present in over half of medical schools and are becoming an increasingly prevalent source of clinical training and professional development in undergraduate medical education. Thus, a review of effective models across the country is necessary to inform new SRFC development and improved integration of SL principles into existing clinics. Conference attendees will be given an opportunity to critique the results and provide feedback on the proposed standards and common practices suggested for SRFCs. Responses to survey questions are being compiled and will be reported during this small group discussion. During the discussion, a draft set of standards and best practices based on the findings of this study will be presented.

*Recipient of CGEA Collaborative Grant*

3. Learning Strategies Used by Medical Students in a Competency-Based Environment

Cecile Foshee, PhD, Cleveland Clinic
S. Beth Bierer, PhD, Cleveland Clinic Lerner College of Medicine of CWRU

**Background:** The explosion of medical advances in recent decades has encouraged medical educators to seek assessment strategies which instill in trainees the self-regulation skills essential to maintain competent clinical practice. We sought to explore the extent to which first-year Cleveland Clinic Lerner College of Medicine (CCLCM) medical students may have changed their approach to learning after participating in a portfolio-based assessment system. The CCLCM assessment system is a non-graded approach that revolves around feedback. Students receive frequent formative feedback on their performance and then generate narratives for their portfolios to demonstrate mastery. This system has been designed to help develop self-regulated learners and promote learning in a competency-based environment.

**Methods:** With IRB approval, data were examined from 248 first-year medical students in the Classes of 2010 - 2017 who responded to the following questionnaire item, "What changes have you made in your approach to learning based on the portfolio method for student assessment?" We explored these responses for evidence of how students' learning strategies may have been impacted by the assessment system and whether those strategies varied across gender. Two educators used a constant comparison analysis approach, which involved an iterative process of coding and recoding students' responses to identify themes. To ensure inferences were in alignment, these educators independently coded and, following discussion, agreed upon major themes.

**Results:** Data revealed that students engaged in reflective processes and learning strategies consistent with Zimmerman's three-phase self-regulation model (forethought, performance, and self-reflection). Students demonstrated forethought by accepting, internalizing and acting upon feedback through documentation and self-evaluations. The performance component took the form of students identifying and addressing targeted areas for improvement by utilizing goal-setting and task specific strategies. Self-reflection occurred when students spoke of affective and behavioral outcomes such as switching to learning for understanding, adopting a holistic approach to learning, gaining new perspectives, and improving interactions with others. There were no differences between male and female students in the types of strategies or approaches used.

**Conclusions:** Most students at CCLCM came from institutions where they were rewarded for memorizing information to excel on high-stakes examinations. This investigation provides evidence that CCLCM students were able to adapt to a non-graded, portfolio-driven, competency-based system by using self-appraisal and self-regulation processes. These results may prove
beneficial to students about to embark on a similar system and to medical educators who have adopted or are considering a portfolio-based assessment.

4. **Family Empowerment Actions During Patient and Family Centered Rounds**
   **Christabel Yamoah, BS, Medical College of Wisconsin**

   **Background:** Families play an essential role in patient and family-centered rounds (PFCR). The specific actions of families (family empowerment actions [FEAs]) that enable them to successfully participate during PFCRs have not previously been identified.

   **Objective:** To identify the most important FEAs that can be performed on PFCR.

   **Design/Methods:** Mixed qualitative (grounded theory) and quantitative methods were used to identify behaviors that parents use to optimize their role during rounds. Parents of children hospitalized in the pediatric intensive care unit, the neonatal intensive care unit, and acute care unit, and members of the Family Advisory Council participated in structured group interviews and completed a 2-item opened ended questionnaire to identify the four most important actions that families feel that they do to optimize their role during PFCR. Grounded theory methods were used to code responses into distinct themes. Similar themes were grouped into categories. An overarching theme for all categories was identified. Descriptive statistics were used to identify the most frequently cited behaviors by parents.

   **Results:** 23 questionnaires containing 95 responses were completed: 20 distinct themes (of behaviors) of responses were identified. Selected examples of some of the most frequently mentioned behaviors were: asking questions (14.7%), being an active listener and talk to the team (10.5%), being confident and not afraid (7.4%), and sharing information about your child (7.4%). Authors placed behaviors such as these into 4 distinct categories and calculated the frequency of responses in each category: asking questions (29.5%), sharing information (24.2%), having a strong presence on rounds (24.2%), and tasks to perform prior to rounds (16.8%).

   **Conclusions:** The most frequent behavior that families identified was "asking questions". The common themes identified can be used as a tool to empower families during PFCR.

   *Funded by a grant from the Elsa B. and Roger D. Cohen Fellowship.*

5. **Identifying Essential Elements of Effective Interprofessional Communication: An Evaluation of a Resident-led Team Huddle on an Inpatient Medicine Unit**
   **Lisa Royse, MEd, University of Missouri**
   **Kimberly Hoffman, PhD, University of Missouri**
   **Nathaniel Nolan, Year 2 Medical Student (M2), University of Missouri**

   **Background and Purpose:** The transformation of healthcare into a deliberately collaborative field requires team-based, interprofessional education. This project examined a daily "huddle" among residents, nurses, unit clerks and pharmacists working on a medicine in-patient unit at University Hospital. The huddle was a time-limited, resident-led interprofessional communication meeting with the purpose of improving the flow of information needed to provide exemplary patient care in an inpatient setting. We evaluated the huddle using direct observations and focus groups and then analyzed for congruence with the Core Competencies for Interprofessional Collaborative Practice set out by the Interprofessional Education Collaborative (IPEC).

   **Methods and Results:** A sociogram was used to document direct observations. Data were collected on the flow of communication, frequency, and nature of communication "indicating each type of interaction as a question, request, or information" among huddle participants. Three team huddles were observed each day for sixteen days for a total of forty-eight completed sociograms. Initial analysis of sociogram data suggested that resident physicians did most of the communicating. When controlled for the required resident initiation, data showed 1) more than 45% of the communication was the passing of information from nurses to physicians, 2) nurses and residents asked questions of one another almost an equal amount of time, 3) there was a good exchange of information, and 4) nurses were more likely to make requests of resident physicians. To triangulate our findings, we conducted focus groups with resident and nurse huddle
participants. Currently, we are saturating themes, and focus group data analyses demonstrate 1) improved communication and increased patient safety, 2) relationship building that decreased power differentials and increased trust, and 3) improved patient-care decision making because team members were better informed.

**Conclusion:** This evaluation allowed us to identify essential elements of effective interprofessional communication; the free exchange of information and flattened hierarchies promote mutual performance monitoring, team orientation, and adaptability. These data strongly align with many of the IPEC competencies. Future directions include evaluation of the next phase of intervention "interprofessional rounding" and the impact these interventions have on patient care.

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6. **Medical Student EMR Satisfaction Survey: Responses from MS3 and MS4 Students**
   **Valerie Hearns, MD, University of South Dakota Sanford School of Medicine**

   **Background:** Medical students are increasingly required to use electronic medical record (EMR) systems to effectively participate in patient care. Student access to and utilization of the EMR may vary from site to site. With formal training, our MS3 and MS4 students have been engaged in EMR use for the past two years. The authors' review of available literature revealed multiple concerns about the potential impact of the EMR on students' clinical experiences. Some areas of concern include how students learn, effect on clinical teaching, and note documentation with evaluation and feedback. This study looked at these and other issues surrounding EMR from the student's viewpoint.

   **Methods:** The authors conducted an EMR satisfaction survey of MS3 and MS4 students at the University Of South Dakota Sanford School Of Medicine from February 21, 2013 to April 30, 2013, at the three clinical campuses in Yankton, Rapid City and Sioux Falls. The survey covered issues that included documentation, chart review, remote access, and value to the health care team, professionalism, and effect on learning in the clinic.

   **Results:** 91 out of 100 recipients responded to the survey. The number of MS3 and MS4 respondents was almost equal. The students are exposed to no less than five different EMR systems at various clinical sites. 82.4% reported documenting notes in the system. 97.8 % reported that notes are reviewed with formative feedback by a preceptor. 56% of respondents felt that the EMR had a positive effect on their ability to learn in the clinic setting. Most students also perceived added value as a member of the health care team due to EMR use and chart documentation.

   **Conclusions:** Students have a positive view of EMR and its use in the clinical setting. They feel that quality of documentation is improved. This differs from medical student educators' concerns that EMR inhibits clinical reasoning and ability to construct a good narrative SOAP note. With adequate training and guided participation, the EMR can enrich the student's educational experience. A corollary study from the medical educator's perspective may support or repudiate the students' viewpoint. Further monitoring and study of EMR use in undergraduate medical education should continue to assure best practices by both students and educators in medical education and patient care.

7. **A Baseline Assessment of Obesity Counseling Skills and Attitudes of First Year Medical Students**
   **Victoria Lucia, PhD, Oakland University William Beaumont School of Medicine**

   **Introduction:** With obesity now officially recognized as a disease by the AMA, it is important for physicians in training to acquire weight management counseling skills in order to help patients change unhealthy behaviors. 1) Recent research has shown that the quality of counseling by medical residents receiving a 5-hour obesity counseling curriculum was as low as medical residents not receiving training, though training was associated with higher quality of counseling.
when controlling for patient, physician, and visit characteristics. 2) Introducing these skills during the undergraduate medical years and reinforcing them throughout the curriculum and into the postgraduate years may help students recognize their deficiencies early on and improve their counseling skills surrounding a sensitive topic.

**Methods:** M1 students were asked to complete a survey assessing self-habits, attitudes, and comfort counseling obese patients before and after receiving an instructional unit related to obesity. The instructional unit included information on nutritional assessment, diet, exercise, and behavior change/motivational interviewing. In addition, students interacted with a panel of patients who successfully lost weight via medical and surgical management. Students then completed a standardized patient (SP) encounter in which they were required to counsel an obese patient. Video recordings of the SP encounters were reviewed and coded by faculty for counseling on key instructional items and quality of counseling session based on the 5A framework.

**Results:** Most students reported moderate to high comfort levels counseling obese patients. Although most students were comfortable talking about diet and exercise, they performed poorly in discussing specific behavior changes, identifying barriers and goal setting with the patient.

**Discussion:** Students seem to have an inaccurate self-opinion of their abilities, often overestimating their capabilities. As students progress through medical school, it is important to give students feedback on their performance, but also provide role modeling and additional opportunities to practice and refine these counseling skills in order to graduate physicians competent in dealing with this global epidemic.


8. A Comparison of Attitudes Towards Influenza Vaccination in First-year Nursing and Medical Students

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**Objective:** Vaccination of health care workers reduces transmission of influenza among patients, yet uptake of vaccination remains low. The objectives of the study were to: 1) Determine influenza vaccination rates among entering medical and nursing students for the year 2013; 2) Compare the attitudes of medical and nursing students towards influenza vaccination; 3) Compare the attitudes of vaccinated versus non-vaccinated students towards influenza vaccination.

**Methods:** Ninety-nine first year medical and 66 first year nursing students were surveyed in September 2013. Information on influenza risk perception and attitudes towards vaccination was collected via an anonymous 18-question online survey that contained a mix of 5-point Likert scales, dichotomous (yes/no), and free text completion items.

**Results:** The survey revealed 85 (51.4%) of students had been previously vaccinated. Of the vaccinated students 91% had been recommended vaccination by their healthcare provider compared to 51% of non-vaccinated students. More positive attitudes were noted in the vaccinated students compared to non-vaccinated students, most notably: importance of vaccination (p<0.001); need for annual vaccination of healthcare workers (p<0.001); recommendation of vaccine to family and friends (p<0.001). No significant differences between nursing and medical students were noted on these same items. The perceived risks of both contracting influenza as a healthcare worker, and spreading it to patients were similar in medical and nursing students. However, the perception that the vaccine may cause influenza was somewhat higher among the medical students.
**Conclusion:** Although influenza vaccination is recommended, its coverage in entering medical and nursing students remains relatively low. Students from both groups who had been previously vaccinated showed more positive overall perceptions of the importance of vaccination as compared to non-vaccinated students. It is our belief that this perception of benefit is largely a result of greater knowledge augmented by personal experience. Additionally, the marked support shown by previously vaccinated students for recommending vaccination to friends and family is suggestive of an internalized and enduring confidence in the benefits of influenza vaccination. We believe that initiatives such as ours which target future healthcare providers early in their training offer far-reaching support for overall increased uptake of influenza vaccination.

9. **When do students make their career specialty decision and does clerkship format matter?**

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   **Lori Hansen, MD, University of South Dakota Sanford School of Medicine**
   **Edward Simanton, PhD, University of South Dakota Sanford School of Medicine**

   **Background:** Recent changes in NRMP residency application timelines and medical school graduate to residency slot ratios make it desirable for students to be able to make their career specialty decisions earlier in medical school. The purpose of this study is to determine when in medical school students make their career specialty decision and whether the format of the clinical clerkship, block clerkship vs. longitudinal integrated clerkship, influences the timing of students’ career decision.

   **Methods:** The University of South Dakota Sanford School of Medicine conducts its clinical clerkships on three campuses, two of which have been traditional block clerkships and the third a longitudinal integrated clerkship. An online survey was distributed to medical students in the fall of their 4th year asking, “When did you make your final decision about your career specialty?” Possible responses were: Prior to third year; During the first four months of third year (July-October 2012); During the second four months of third year (November 2012-February 2013); During the final four months of third year (March-June 2013); During the first four months of fourth year (July-October 2013); or, I have not yet made my final decision. In follow-up free text questions, respondents were asked to describe what aspects of the third year affected their decision and to describe how their final choice may be different from what they had initially planned.

   **Results:** Of the 54 eligible students, 42 (78%) responded. Thirty-four students did their third year in block clerkships and eight in a longitudinal integrated clerkship. By the end of February, eight months into the third year, 50% of students had made their decision. The percentage of students in the longitudinal integrated clerkship who had decided by the end of February was slightly higher 5/8 (63%) than those in the block clerkships 16/34 (47%). Four of the 42 students (10%) had decided prior to the third year, and three students (7%) had not yet decided four months into the fourth year. Free text comments indicate the necessity to experience all of the clerkships before deciding, the benefits of exposure to multiple clinical disciplines in the longitudinal integrated clerkship, and the importance of early elective opportunities.

   **Conclusions:** Half of third year medical students decide their career specialty choice eight months into the third year. The longitudinal integrated clerkship format may allow students to make their career specialty decision earlier in medical school.

10. **A Review of the Current Use of iPads in Graduate and Undergraduate Medical Education**

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    **John A. Davis, PhD, MD, The Ohio State University College of Medicine**

    **Background:** New technology is rapidly changing the face of contemporary medical education. In the last few years, there has been significant change due to the many new technologies available to students and teachers. One of the most popular tools being implemented into curriculums across the country is the use of iPads in education. The purpose of this study is to provide a comprehensive review of the current use of iPads in undergraduate and graduate medical education.
education, as well as to provide commentary on the usefulness of these efforts. This is an important topic to explore as more and more programs are considering implementing additional technology into their training programs and are therefore seeking evidence as to whether these changes will improve outcomes.

**Methods:** A thorough review of the current literature was conducted using Pubmed, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Educational Resources Information Center (ERIC) databases. A total of 11 articles were obtained pertaining to the use of iPads in medical education. The selected articles used surveys, small group discussions, and subjective self-reporting to obtain data.

**Results:** Overall, both undergraduate and graduate students responded positively to the implementation of iPads into educational curriculums. Initial attitudes towards iPads tended to be more positive, with a decrease in perceived usefulness throughout the trial period. In undergraduate education, students did not uniformly use the new technology to replace traditional study materials as expected. Participants in graduate medical education found many uses as personal education tools, but incorporation into clinical workflow was less pronounced.

**Conclusions:** The current use of iPads by students and educators is heterogeneous across medical training and fields. Further research must be completed to elucidate the most effective ways to implement the technology in personal and patient-centered fashions. Overall, the use of iPads in medical education is beneficial, and continued research will uncover more targeted uses for this technology.

11. Faculty Perceptions of Reflection in PBL Pre-Clerkship Medical Education

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*Kimberly Hoffman, PhD, University of Missouri-Columbia*

**Background:** Physicians deal with complex and ill-structured problems requiring the ability to reflect in order to frame those problems and address patients' needs. Although most would agree reflection is important, the complexity of the concept increases the possibility that colleagues talking about "reflection" may actually be talking about different things! This study explores faculty perceptions of the meaning of reflection, its relationship to practice, and the purpose of reflective activities in the training of physicians. Better understanding will help align curricular goals and assessments around this multifaceted construct.

**Methods:** This qualitative single case study examines faculty perspectives about the use of reflection in the first two years of a long-standing Problem-Based Learning curriculum. Semi-structured interviews were completed with seven pre-clerkship medical educators including basic scientists and clinicians. Codes were derived by identifying key words that seemed to represent important thoughts or concepts. The constant comparative method was used to identify emerging themes (Glaser & Strauss, 1967). Interpretations were presented to all interviewees, who were given an opportunity to provide feedback.

**Results:** Faculty discussed personal reflection (learning from experience) as often—if not more than—scientific and clinical reflection. They also tended to focus more on one aspect of the phases of reflection rather than looking at the entire process. Triggers of reflection and gaining a new perspective received the most attention. Some educators were uncomfortable with assessing reflection because it is an internal process. Learning is also an internal process which is regularly assessed, but reflection was viewed differently. Some assumed reflection to be essential to learning; if a student has learned, they must have reflected. For many, assessing reflection is really about assessing the students' new perspectives gained through reflection.

**Conclusions:** Assessing reflection in medical education is a complex problem. Using some of the available conceptions of reflection, such as Aukes et al.’s (2007) types of reflection in medicine (Clinical, Scientific, and Personal) and Atkins and Murphy's (1993) overarching phases of reflection, could provide a common language for faculties to be more precise about what they are trying to promote and assess. These types and phases could also be used as a starting point for the development of local definitions of reflection that can be shared among faculty and students.
These local conversations can also inform the national conversation about reflection in medical practice and its use and assessment in the preparation of future physicians.
12. Assessment of a New Curriculum to Teach Authorship Criteria to Medical Students

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**Background:** The 2013 AAMC Medical School Graduation Questionnaire reports that 68.2% of graduates participated in a research project with a faculty member, and 41.7% were authors on a paper submitted for publication. However, students are not often explicitly taught criteria for authorship (Karani et al, 2013). Such a curriculum exists for junior faculty (O’Sullivan et al, MedEdPORTAL 2013), but not for medical students.

**Program Description:** We created a discussion-based, one hour curriculum. We aimed to engage students in a discussion of scenarios similar to those that have caused our students concern, and to use this discussion as a springboard for presentation of the International Committee of Medical Journal Editors (ICMJE) authorship criteria. We created a PowerPoint presentation as a framework for the session. We created tools to evaluate students’ satisfaction, students’ understanding of authorship criteria before and after the session, and students’ intention to initiate authorship conversations with their mentors as a result of the curriculum.

**Results:** Learner satisfaction was high. All students (n=45) had a clear understanding of authorship criteria after the workshop, compared to 9% prior to the workshop. 86% agreed that the scenarios were engaging and provided useful tools for authorship discussions. 82% felt the workshop prepared them to approach their mentor about authorship, and 73% were more likely to initiate such a conversation because of the workshop. We evaluated the impact of the curriculum on student behavior. Several weeks after the workshop, 61% of participants had discussed authorship with their mentor and 25% were planning a discussion. Of these students (n=51), 62% reported that the workshop was important preparation for their conversation. We evaluated student retention of information learned during the session. Of six authorship scenarios, three were commonly answered incorrectly before discussion of the ICMJE criteria. When presented with the same scenarios several weeks after the session, the proportion of students (n=55) answering correctly increased for each (39% to 95%, 55% to 89%, 64% to 95%).

**Conclusions:** Students were very satisfied with the authorship curriculum. Delayed assessment found that most students had discussed authorship with their mentors, and were able to correctly apply authorship criteria to fictitious scenarios. Knowledge retention and impact on student behavior are both important: providing students with the confidence to navigate an oftentimes stressful topic is critical to empowering them to act in a professional and ethical manner.

13. Competency-based Education for Medical Educators: Implications and Implementation

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**Objective or purpose of innovation:** This project explores the implications and implementation of competency-based education in the context of an innovative Masters degree program in Health Professions Education.

**Need for innovation:** The growing interest in advanced training in medical education provides an opportunity to implement competency-based education (CBE) without being tied to legacy programs and curricula. This provides an opportunity to consider the implications of CBE from scratch. Instructional methods and materials used Entrustable Professional Activities (EPAs) serve as both the vehicles for learning, as program participants pursue these activities as part of their
regular educational work, and as the means for assessing competence. Illustrative EPAs include "Design and implement a curricular intervention" or "Design and implement an educational research study." Learning takes place in the context of daily work rather than formal courses, and is individualized and adapted to the circumstances, goals, and opportunities of the learner.

**Educational outcomes:** 12 key competencies for all Masters-level health professions educators are defined and linked to EPAs as a means for assembling evidence for competence. These competencies reflect a range of activities characteristic of health professions educators, such as "Demonstrates leadership to develop positive relationships and trust within the community," and "Selects and applies appropriate research method(s) for given research activity." Evidence for competence in each of these 12 competencies is provided by completion of relevant EPAs and review of this evidence by an independent Assessment Panel.

**Innovation’s strengths and areas for improvement:** Other innovative characteristics of the UM-MHPE include 1) Mentors to guide individual learners through the program and link them to Subject Matter Experts in specific domains and skills; 2) The opportunity to submit evidence of competence at entry to the program and, if it meets program standards, accelerate their progress through the program; 3) Defined standards applied to all learners in 12 key competencies; 4) Integration with the learner's regular professional education activities - their 'day job'; 5) Feasibility of maintaining program, and transfer to other schools or programs. This competency-based MHPE is very portable in the sense it does not depend on physical presence at the University of Michigan. The program faculty also do not need to be co-located; the program has faculty subject matter experts from other institutions, including India and South Africa.

14. A Novel Use of Simulation: Palliative Care Training

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**Introduction:** We describe the use of simulation techniques to create a palliative care based scenario that requires the learners to recognize that the simulated patient is “Do Not Resuscitate” status and communicate with family members along with providing comfort during the dying process. This type of simulation is described minimally in the emergency medicine literature and the techniques were significantly expounded upon as a form of curriculum development in an area that may not be well represented in most emergency medicine curricula. Additionally, learners are usually geared for an intensive resuscitation when high fidelity simulators are used, so this simulation provides a novel educational experience for learners.

**Methods:** Several planning meetings were held between the simulation directors and a multidisciplinary team. Our emergency medicine residents rotated through the case in groups of 3 to 4. A case was written involving "Frank Kopps," a retired 88 year old dentist which had previously experienced intubation. He has expressly told his physician and family that under no circumstances would he allow himself to be intubated again. In the high fidelity scenario, Mr. Kopps is portrayed by the high fidelity simulator as obtunded and in respiratory distress. An electronic medical record was created in a training environment so learners could access his record and find documentation of his resuscitation status. Standardized actors played the patients two adult daughters, who knew of the patient's wishes. The goal of the scenario was to recognize that the patient was critically ill and dying, recognize that his status was DNR, communicate effectively with the family, and follow his wishes. After the simulation, learners were given a video-assisted debriefing utilizing expert faculty from emergency medicine, palliative care, medical ethics, pastoral care, and social work.

**Reflection/Results:** Instant feedback regarding the simulation was overwhelmingly positive from both residents and faculty. Key learning points were that more education has to be focused on the different do not resuscitate statuses in Ohio along with the legal statutes regarding these. Residents expressed that this was a valuable learning experience, including a resident that had to use techniques used in this simulation on an actual palliative patient/family that very same day.

15. A Systems-Based Practice Curriculum for Pediatric Residents
Introduction: The Accreditation Council for Graduate Medical Education has established six core competencies to guide the training of residents. Residency programs must design, develop and evaluate educational interventions to ensure resident mastery of each competency. Systems-Based Practice is one of the competencies and within that core competency there are six sub-competencies. Coordination of care within the health care system is one of the six sub-competencies. This sub-competency was selected to address a deficit in our residency-training program The objective of this curriculum is that the resident will be capable of effectively coordinating care for their patients within the health care system.

Methods: Third-year pediatric residents are taught coordination of care through a series of instructional modules. Each module consists of exposure to ancillary health services, parents, or care coordinators and was guided by a set of learning objectives. Other instructional strategies including readings, standardized discharge plans for complex pediatric patients and a mnemonic to assist in appropriate communication with referral sources. Learners were evaluated by written evaluations from preceptors, post rotation debriefings, a review of written responses to objectives, and an assessment of the ability to coordinate the discharge of a complex patient based on a written discharge plan.

Outcomes: Three expert reviewers reported this curriculum was appropriately designed, practical and relevant. They reported learners should be able to achieve the stated curriculum goal of coordination of care. Curriculum pilot test results revealed that preceptors felt their objectives were easily understood and the curriculum helps the resident understand care coordination. Residents report they feel the experience has proved their understanding of services provided, improve their ability to communicate appropriate information, and improve their ability to coordinate care for their patients. Pre- and post-test results using a standardized discharge of a complicated patient from the hospital show an improvement in communication with specialty services.

Conclusions: This curriculum improves residents knowledge of available resources and ability to communicate with these resources. Strengths included real-life exposure to community resources and the services they provide. Communication with the services was improved through direct questioning of preceptors and use of a mnemonic developed for this rotation. Limitations include difficulty in coordinating time for each rotation around resident clinic schedules. Dedicated faculty is required to oversee the curriculum. This curriculum should be transferable to other primary care residency programs with appropriate changes in individual modules.

16. Is There a Right Way to Study for Medical Schools Exams?: How Medical Students' Personal and Academic Habits Affect Their Exam Performance

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Objective: This project aimed to identify the academic and personal habits associated with success on medical school exams and to provide medical students with a list of study habits that were shown statistically to improve medical school exam scores. Need for Innovation: Due to the significant increase in the difficulty and magnitude of work in medical school compared to undergraduate education, first-year medical students often must alter their personal and academic habits to keep up with the rigorous schedule. However, first-year medical students often receive conflicting advice from upper-level students, which is not only stressful and confusing but can also cause first-year students to employ study habits that may not help them succeed on exams. When we initiated this project, students at our medical school were not provided with research-based advice about academic and personal habits that are associated with exam performance or how to study effectively in medical school.

Instructional Methods: During the 2013-2014 orientation, first year medical students were given a handout summarizing the study findings, “10 Ways to Improve Your Medical School Exam Scores.”

Educational Outcomes: We collaborated with our school's newly appointed academic counselor, who presented the handout to the first-year students during the orientation session focused on
effective studying in medical school. The advice in the handout summarizes the results of a survey completed by 79 medical students from the Wright State University Boonshoft School of Medicine Class of 2014. The survey collected information about students’ academic study habits, personal habits, and exam performance. The advice on the handout reflects statistically significant findings.

**Innovation’s Strength and Areas for Improvement:** This study provides first-year medical students with research-based advice that outlines personal and academic habits that have been correlated with improved exam scores. Another strength of our innovation is its simplicity. The handout employs bullet points to clearly highlight the study habits that were associated with improved exam scores, and then succinctly suggests how students can incorporate the habits into their daily regimen. The main area for improvement would be to survey students from other schools. Currently, the handout is based on survey results from only one school.

**Feasibility of Maintaining Program, and Transfer to other Medical Schools:** This innovation would be appropriate to implement at other medical schools because the personal and academic habits studied in the survey are universally applicable. Additionally, the innovation is extremely inexpensive.

17. **Impact of LGBT Safe Space training on School Climate in Medical Education**

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Attitudes, behaviors, and training of administration, faculty, staff, and students in lesbian, bisexual, gay, and transgender (LGBT) education both on- and off-campus community, or lack thereof, contribute to the climate of a medical school. The Association of American Medical Colleges (AAMC) revealed in 2007 that medical students experience LGBT discrimination throughout their educational and clinical training. OUWB has developed a faculty and student driven LGBT Safe Space training program in response to the AAMC student survey and an investment in developing an inclusive climate. In medical education, LGBT medical students may encounter faculty and staff with limited knowledge in LGBT topics, lack of LGBT topics in the medical curriculum, as well as derogatory comments in the classroom, on campus, and in clinical settings. Safe Space training is a program that promotes inclusivity and is primarily used to establish a network of LGBT allies. While available at many undergraduate university settings, there remain limited opportunities in Safe Space training in medical education. Oakland University William Beaumont School of Medicine (OUWB) has developed an innovative training opportunity for a medically relevant Safe Space training for faculty, administration, staff, and students in medical education to promote an inclusive climate. With limited literature and research in Safe Space training in medical education, OUWB is using this program as a pilot study of such an outcome-driven training program to determine the impact of Safe Space training in both an inclusive medical school climate and promotion of LGBT health in healthcare. The timeliness of this training opportunity at OUWB will provide a model in collaboration and inclusion for other institutions. Methods and results of the study will be shared in the poster, as well as recommendations for implementation of a similar program in other medical school settings.

18. **The Professional Learning Plan: Using the Science of Continuous Quality Improvement to Develop a Reflective Practice and Self-directed Learning**

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Lynda Montgomery, MD, MEd, Case Western Reserve University School of Medicine
Mamta K. Singh, MD, MS, Case Western Reserve University School of Medicine

**Objective:** Students enter medical school with diverse range of experiences and varying comfort with self-directed learning. Case Western Reserve University School of Medicine’s (SOM) University Track has a robust learner-centered curriculum. Early on, students are introduced to the tools of Continuous Quality Improvement (CQI) to help build a strong foundation in reflection and
19. Developing Civically Engaged Physicians Through Nonprofit Board Governance Training: The Indiana University School of Medicine Community Leadership Mentor Program

Stephen Kirchhoff, MHA, Indiana University School of Medicine/Office of Medical Service Learning

The Community Leadership Mentor Program (CLMP) provides a curriculum that helps students understand nonprofit board roles and identify opportunities for community service. CLMP is a unique and groundbreaking collaboration between the Indiana University School of Medicine (IUSM) Office of Medical Service Learning (OMSL) and the United Way of Central Indiana (UWCI). Established in 1999, the goal of CLMP is to increase the number of physician leaders prepared to improve the health and welfare of the community through service on nonprofit boards. The traditional service-learning curriculum has focused on the development of civic mindedness in a structured classroom setting, with the goal of applying critical elements learned in the practice setting. CLMP strives to introduce medical students to new settings of service by introducing an alternative structure to service-learning. The CLMP experience is divided into three components: orientation/training; nonprofit agency site visits; and a more in-depth nonprofit board experience (i.e., active observation at board meetings). To evaluate the CLMP program, OMSL created and distributed a CLMP alumni survey, with a two-fold purpose: 1) to assess the degree to which CLMP has achieved its goals; and 2) to evaluate the influence that CLMP’s educational experiences have had on its graduates. The survey was sent to eighty-eight (88) CLMP alumni, and thirty-two (32) responses were received, a 36% response rate. The survey has yielded results that will enhance CLMP, as well as identify key factors that impact the service pipeline for medical student graduates nationwide. Survey results have identified a preliminary timeline for engaging in service for physicians. Leadership in service (i.e., nonprofit board membership) and volunteerism are delayed due to the intense demands, fiscal constraints, and professional development of residency and fellowships. Twenty-three percent (23%) of respondents had the desire to increase their service activities, but could not due to work demands. However, this does not mean that physicians are not actively engaged. Fifty-seven percent (57%) of respondents were active in professional leadership experiences such as chief residencies, alumni board participation, and staff council representative posts. CLMP is forging new ground in service-learning for future...
medical professionals. CLMP demonstrates that co-curricular experiences can positively influence and impact the development of civically engaged physicians. This program stands as a model to assist faculty, administrators, and engagement professionals in helping students transition into lifelong community engagement and service participation.

20. Use of Standardized Patients to Introduce PTSD Diagnostic Guidelines to Early Medical Learners
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Kimberly Tartaglia, MD, The Ohio State University College of Medicine

The number of returning veterans has been noted by the Veterans Administration (VA) to place an increased burden on public and private health systems, since many veterans first present with post-traumatic stress disorder (PTSD) several months after returning to the States. Thus, many present to a primary care provider in the private sector. An increased awareness of the physical and mental health complaints indicative of PTSD is required of our nation’s physicians, and an impetus to teach screening techniques to our undergraduate medical learners is reflected in national curriculum guidelines. At the OSU College of Medicine, we have developed case-based teaching based on a standardized patient (SP) presenting with PTSD and introduced to our first year medical students as part of the Longitudinal Group series of classroom experiences. In cooperation with our VA outpatient clinic in Columbus, we have equipped students with the VA screening tool for PTSD to be used in interviewing a SP returning from active duty with anxiety as well as palpitations and other common physical symptoms of PTSD. The SP is introduced during a detailed learning experience on psychiatric interviewing in the office setting and in the context of a patient presenting with anxiety and/or depression. Students learn experientially to differentiate PTSD from other forms of anxiety disorders given this opportunity in the context of additional subsequent instruction on PTSD and its protean effects on patients and families in military as well as multiple other traumatic (crime, natural disasters) situations. Satisfaction with this exercise as a form of instruction on PTSD, anxiety and depression was very high among medical students and reviews were mixed among the attending physicians facilitating the sessions, who indicated that they found the learning to require advanced skills for early learners and that they themselves were not familiar with the PTSD diagnostic criteria before preparing for the lesson. Thus, wider applicability of this teaching tool in resident and faculty education is being explored.

21. Learning about LEARN (Listen-Explain-Acknowledge-Recommend-Negotiate): Creating a Curriculum to Teach Culturally Sensitive Approaches in Primary Care
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Laura Clementz, MA, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine
Mary Dolansky, RN, PhD, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine
Renee H. Lawrence, PhD, Cleveland Veterans Affairs Medical Center/ Case Western Reserve University School of Medicine

Objectives: Use the LEARN model (“A Teaching Framework for Cross Cultural Care”) to 1) create an approach that is perceived as useful and improves confidence regarding skills/tools related to addressing cross-cultural issues; and 2) demonstrate utility of applying the model to clinical experiences. Need for innovation: Half of the Accreditation Council for Graduate Medical Education (ACGME)’s core competencies reflect cultural sensitivity and communication skills - underscoring their importance for successful care delivery. While all agree on the importance, fewer agree how to construct useful learning opportunities for skills to engage in culturally sensitive, productive communication.
**Instructional methods:** Internal medicine residents and nurse practitioner students from our academic affiliates' programs participating in the Center of Excellence (COE) for Primary Care curriculum at Cleveland Veterans Affairs Medical Center (CVAMC) attend two formal LEARN sessions. CVAMC is a CASE University affiliate and ACGME accredited training program. Between 1/2012 and 6/2013, four cohorts participated with an average of 6 learners per session. Learners were asked to read the article before session one. Case studies were created consistent with adult learning methods and presented in parts (aligned with "office visits" or "encounters") with each part generating discussion and suggestions based on applying the model. To gauge perceived usefulness and increased confidence, participants completed an assessment tool at the end of each session providing ratings on a 5-point Likert Scale about 1) usefulness of the session ("1: not at all useful" to "5: very useful") and 2) increased confidence about using the tools/skills ("1: not at all 2: to "very much"). At the last session they also completed an open-ended question about utility and insights about using the model in clinic.

**Educational outcomes:** 38 assessments were collected: average ratings supported perceiving usefulness (Mean = 4.0; Mode = 4.0) and increased confidence (Mean=3.9; Mode =5). Theme analysis of the responses about clinic utility indicated the lessons learned were used and helpful.

**Strengths and Needed improvement:** Strengths include engaging case scenarios and discussions which explore different ways to apply the model, and linked sessions that allowed discussions of experiences using the model in clinic. Improvement areas include keeping the discussions in the second session fresh, and generating wider range of case scenarios.

**Sustainability and Exportability:** Sustainability and exportability were integrated in creating the curriculum and the materials, both of which are exportable. We are working on a scoring system for the qualitative data which will also be exportable.

**22. Longitudinal Chief Resident Leadership Certificate Program**

*Jeffrey Pettit, PhD, Carver College of Medicine, University of Iowa*

*Mark Wilson, MD, MPH, University of Iowa Hospitals & Clinics*

**Purpose:** This poster describes the structure and outcomes for an eight-month leadership development program for chief residents conducted annually since 2010 at the University of Iowa Hospitals & Clinics.

**Need for Innovation:** Chief resident leadership development programs need to be more than a one/two day symposium to sustain leadership development. While national programs provide some formal leadership training, they tend to be of short duration and broad in their coverage.

**Instructional Methods & Materials Used:** Chiefs are solicited in August and required to formally apply with a letter of support from their program director. Sessions are held on the second Tuesday of each month for two hours in the evening (meal provided) and facilitated by the authors. Expectations and ground rules are covered at the first session to ensure lively discussions in a safe environment. The authors try to facilitate in such a manner that they do not dominate the conversations, provide opportunities for insight from other chiefs, and provoke deeper understanding of behaviors or thoughts. Eight topics are covered during the year (Leading vs. Managing, Conflict Management, Communications, Motivation, Team Development, Culture, Change Management, and Transitions) with intersession assignments. Chiefs are required to attend 75% of the sessions, develop a leadership philosophy, and conduct some type of leadership training within their own department.

**Educational Outcomes:** A mini-evaluation is conducted at the end of each session. An overall evaluation is conducted at the end. Data indicate a marked increase in before & after leadership knowledge and self-awareness. The overall program rating is extremely high and chiefs have highly recommended the program to other chiefs and are the best advertising source for the program.

**Innovation's Strengths & Areas for Improvement:** The leadership program continues to evolve based on feedback and the number of participants increases each year. Chiefs that participate indicate how instructive and supportive the program is and highly recommend it for future chiefs. Strengths include interaction with chiefs from other specialties, learning more about the GME efforts across the hospital, 360 leadership assessment, and discussion of issues common to all
chief residents. Improvements include keeping current on leadership literature, creating better ways to facilitate discussions, enrolling more chiefs from surgical specialties.

**Feasibility of Maintaining Program & Transference to Other Schools:** Guidelines for implementation at other institutions include cost to implement, time requirements for chiefs & facilitators, buy-in from program directors, formatting, and recognition will be presented in the poster.

23. Can a First Year Medical Student Drive a Quality Project?

*Kelly Klotz, M2, Medical College of Wisconsin*

*Julie L. Mitchell, MD, MS, Medical College of Wisconsin*

**Objectives:** At the end of a 10-week experience, the early medical student will be able to: 1. Define continuous quality improvement (CQI) 2. Use Lean tools and thinking to study patient experience and identify a problem amenable to a CQI intervention 3. Implement a countermeasure and study outcomes

**Need for Innovation:** The AAMC sponsors Best Practices for Better Care, focusing on teaching quality and practice improvement to the next generation of doctors. However, Teigland found that only 47% of medical students reported exposure to quality improvement (BMC Medical Education 2013). At our institution, little emphasis is placed on quality improvement in the formal curriculum. Pre-clerkship students may elect a quality improvement “pathway”; yet, only 32 students out of 400+ do.

**Instructional Methods and Materials Used:** In a 10-week summer experience, a rising second-year student (KK) worked closely with a Lean-trained physician in an internal medicine clinic. The student utilized Lean tools, frequent feedback from faculty and clinic staff, and collaboration with other students (also working on quality projects) to identify an appropriate problem and enact a suitable countermeasure. Learning was supplemented by reading and core student conferences.

**Educational Outcomes:** We found that Lean tools are intuitive; you just need a project to which to apply them. An early student was able to investigate root causes of patients waiting, build a case for trying out a potential solution, and set metrics for PDSA cycles. She made a change that reduced patient wait times.

**Strengths and Areas for Improvement:** This summer program advanced the knowledge of an early medical student such that she was nearly independent in studying and devising solutions to a problem in healthcare delivery. She became socialized into a clinic setting in a unique way, achieving advanced interactions with physicians, nurses, medical assistants and administrative staff. With only 10 weeks, we were not able to repeat PDSA cycles. We recommend that the student also receive education in change management.

**Feasibility of Maintaining Program and Transfer to Other Schools:** This program is easily adopted as a M1-M2 summer experience if led by faculty experienced in quality improvement and embedded in a clinic where management embraces CQI. Our student was funded by an institutional grant and participated alongside a group of summer research students studying both traditional research and quality projects—this was adjunctive but not necessary to achieving educational objectives.

24. Collaborative Clinical Skills: Embedding Interprofessional Team Skills Education into the Year 1 Physical Diagnosis Curriculum.

*Ellen Luebbers, MD, Case Western Reserve University School of Medicine*

*Gayle Petty, DNP,RN, CWRU Frances Payne Bolton School of Nursing*

Learning to work effectively in interprofessional teams has been identified as a critical component of medical school education (LCME standard 19a) and is a required Case Western Reserve University (CWRU) School of Medicine competency. Teaching and assessing these skills is an ongoing challenge. The purpose of this innovation is to give students the opportunity to learn and practice interprofessional team skills while practicing clinical skills together in a public health setting. Nursing students from The Frances Payne Bolton School of Nursing have been
participating in a program within the Cleveland Public Schools to identify children at risk for obesity or hypertension and refer them to appropriate resources, supported by the Elizabeth Severance Prentiss Foundation. This year faculty restructured the program to create an opportunity for interprofessional learning. Students from both schools have been exposed to team skills and basic physical diagnosis independently. Students complete an extensive orientation and pass a skills test for taking an accurate blood pressure, and height/weight measurements to determine the child's BMI. Each session at a grade school has a coached nursing student serving as the leader. Other nursing students serve as station leaders while medical students move into an existing team structure using specific skills such as situation monitoring, communication, and mutual support as an active participant of the team. Emphasis is placed on the fact that this is "real clinical work" and that the team functioning impacts the process. The students are assessed with 1) a validated survey (Interprofessional Collaborative Competencies Attainment Survey), 2) a standard tool used within our interprofessional education program at CWRU, the Interprofessional Learning Exchange and Development (I-LEAD), supported by the Josiah Macy Jr. Foundation and 3) reflections with feedback concerning the use of team skills and learning from students from another profession. The strength of the program lies within its ability to feel like real work to the students. They are exposed and learn skills from several areas at once: Interprofessional education, teamwork skills, public health and physical diagnosis. Incorporation into the curriculum makes it easily sustainable. Physical diagnosis is a common learning point for both professions and a natural spot for interprofessional education.

*Funded by the Josiah Macy Jr. Foundation and is a part of the Interprofessional Learning Exchange and Development (ILEAD) project at CWRU. The screenings at the schools are supported by the Elisabeth Severence Foundation.

25. Promoting the Applying Learning Phase of Evaluative Inquiry: The IUSM Schematic for Program Evaluation
Tony Ribera, PhD, Indiana University School of Medicine
Alison Banta, Indiana University School of Medicine

Objective: Medical education programs are called to not only collect outcome and evaluation data but also have formal processes in place to use this data. During the Applying Learning phase of the evaluative inquiry process, organizational members develop and implement action plans to address the findings from data sources and monitor the progress of these action plans (Preskill & Torres, 1999). While this is fundamental to evaluative inquiry, this phase of the process often goes neglected by evaluators. The purpose of this poster is to describe the IUSM schematic for program evaluation and highlight the accomplishments and areas for improvement from applying learning during systematic reviews of curricular components and phases and the entire curriculum.

Need for innovation: This innovation emerged from calls from the LCME (2013) as well as scholars in the field (e.g., Frye & Hemmer, 2012). An emphasis on the application of data also aligns with Patton's (2000) notion of utilization-focused evaluation where evaluators design and implement the collection of data mindful of how findings will be used to inform change. Instructional methods and materials used. Each phase of the evaluative inquiry process should promote dialogue, reflection, asking questions, and identifying and clarifying beliefs and knowledge (Preskill & Torres, 1999). As a result, reviews were designed to allow for these behaviors. Various data sources were used during the reviews. This includes, but is not limited to: (a) AAMC GQ; (b) NBME Shelf Exams; (c) OSCE results; (d) PGY-1 Surveys; and (e) student evaluations of instructors, courses, clerkships, and electives.

Outcomes: Multiple action plans stemmed from these systematic reviews to improve the curriculum. Policies and processes were established and new instruments were designed and administered in an effort to collect more meaningful data for curricular improvements. This includes companion instruments to our PGY-1 Surveys that will be administered to third-year students and preceptors as well as third-year residents and program directors.

Innovations strengths and area for improvement: In addition to promoting collaboration and ownership among faculty, staff, and students, the systematic reviews of the curriculum successfully reinforced the institution's emphasis on continuous improvement. While this
innovation was successful in many ways, an area of improvement that emerged was monitoring the implementation of action plans.

**Feasibility of maintaining program:** Reviews are part of faculty committees' charges. Reviews of curricular components occur on a monthly basis while curricular phases and the entire curriculum are reviewed during annual committee retreats.

### 26. Impacting Medical Students' Team-based Competencies through Geriatrics Education

*Diane Brown, MS, Medical College of Wisconsin*

*Gretchen Wagner, Medical Student (M2), Medical College of Wisconsin*

*Olivia Mac, Medical Student (M2), Medical College of Wisconsin*

*Kathryne Barbieri, Medical Student (M3), Medical College of Wisconsin*

*Yana Thaker, Medical Student (M4), Medical College of Wisconsin*

*Nick Dreg, Medical Student (M3), Medical College of Wisconsin*

*Deborah Simpson, PhD, Aurora HealthCare*

**Purpose:** Today's healthcare system requires an interprofessional team approach to assure high quality and safe patient care. Therefore physicians in training must develop competencies associated with high quality teams: effective communication, ability to define interprofessional team member roles and responsibilities, and shared accountability for outcomes. And yet structured opportunities for students to work longitudinally on a team are limited.

**Methods:** Interprofessional teams Geriatrics Education Teams (GETs) were established to develop geriatrics-focused instruction and evaluation units to meet gaps identified through needs assessments. GETs must work collaboratively across disciplines as team members include: geriatricians (content experts), subspecialty residency/fellowship program director/faculty and residents (topic experts), medical educators, a librarian, and unique to the team, the inclusion of medical students (M1-M4). Team members assume dual roles as: (1) a medical educator to support the curriculum design process from needs assessment to implementation and evaluation and (2) as a co-author Geriatrics Fast Facts (http://www.mcw.edu/Geriatric-Fast-Facts.htm). Students' role specific responsibilities on each GET are defined (e.g., educator - needs assessment data gathering; Geriatric Fast Facts - first draft for review with geriatrician). In these roles, students help to identify team goals and assist in identifying an effective communication method to share pertinent information amongst the team, attend team meetings, and define timelines and other mechanisms to assure that specific plans/outcomes are achieved.

**Results:** To date, 8 medical students have participated on different specialty-specific GETs. Recruited early during their first-year of medical school, each medical student has co-authored > 3 Geriatrics Fast Facts, helped facilitate curricular sessions, assumed the role of co-author for scholarly dissemination, and actively participated locally/nationally at educational conferences. Overall, competency performance levels (impact on curriculum development/education pre = 2.3 and post = 3.3 (1 = Not competent to 5=independent). Students report: "The opportunity to work on a GET team increased my confidence as a medical student to collaborate with all levels of medical professionals" and "It is a skill that is critical to develop as both a clinician and an educator".

**Conclusion:** The opportunity for M1-2 medical students to begin participating on interprofessional geriatric education teams early in their training contributes to: (1) a deepened understanding of the strengths each team member brings to the table; (2) recognition that mutual trust, open communication and a shared vision within the team are essential for effective team functioning; and (3) the opportunity to network with senior and junior faculty early in one's training.

*Funded by a grant from the Donald W. Reynolds Foundation and the Wisconsin Geriatrics Education Center (HRSA grant)*

### 27. Creating Interactive Medical Student Courses for Large Groups Can be Challenging and Rewarding

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*Gary Cohen, MD, Medical College of Wisconsin*
Kurt Pfeifer, MD, Medical College of Wisconsin
Bert Forster, PhD, Medical College of Wisconsin

Background: Active educational strategies enhance learning and retention. Moving to more active strategies may be impeded by large class size, the expected educational experience and faculty willingness and ability to use new methods. With classes of > 200 students/year, a long-standing lecture based curriculum, and faculty with little time or incentive to learn new methods, our objective was to dynamically develop an interactive educational offering, using integrating clinical cases in a new M1 and M2 basic science curriculum.

Methods: Following a 2 year pilot, using predominantly team based learning (TBL) techniques for a small cohort of students, a new course, Bench to Bedside, was created to focus on the use of basic science concepts in clinical decision making. A component of the course, Basic Science Integrating Cases (BASIC), was designed to align specific basic science concepts with clinical practice. Clinicians and basic scientists assisted in creation and review of materials. Initial offerings were designed as TBL exercises. Student feedback and perceived conflicts with other components of the new M1 curriculum, resulted in switching to concept mapping combined with the use of "board type" questions using an audience response system (ARS). Students completed weekly and end of course evaluations. Feedback-driven changes were incorporated when possible. A meeting with volunteer students to obtain more specific feedback was used to design subsequent M2 sessions.

Results: 215 M1 spring students and 203 M2 fall students completed the course. The first 5 of 9 M1 sessions were designed as TBL sessions; the last 4 M1 and all 5 M2 sessions utilized concept mapping and ARS questions. The transition from TBL to concept mapping was driven by student concerns about "added work" and faculty issues with both development time needed and lack of student engagement in TBL sessions. Concept mapping with follow up ARS questions were positively and enthusiastically received by the majority of students. Concept mapping was specifically cited as a feature that enhanced learning in the course. Student also commented on its importance in aiding understanding of difficult concepts.

Conclusions: Active learning methods can be introduced, even for large classes who continue to request more passive methods. The ability to change in response to feedback was vital to maintaining student buy-in and achieved the objectives for the session/course component. Engaging more basic science faculty will strengthen these sessions and may be feasible as success of the involved faculty in using new methods is recognized.

28. Mentoring at Professional Meetings: The Pairing with Colleagues Program
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Objective or purpose of innovation and need: It is often difficult for junior faculty and learners attending professional meetings to connect directly with experts in their areas of interests as more experienced colleagues are busy presenting their own projects and networking with other senior colleagues. The "Pairing with Colleagues" (PWC) program was developed to address this challenge and integrate new attendees into professional organizations, PWC matches less experienced professionals with more experienced colleagues and facilitates them meeting during professional conferences.

Instructional methods and materials used: The PWC program has been used at the annual International Conference on Communication in Healthcare since 2007. Initially, a web-based survey gathered information on research, teaching and career interests of less and more experienced professionals and then intensive qualitative analysis allowed for matching pairs based on common interests. In 2011, a more streamlined system was developed to facilitate the matching process which included a Qualtrics survey used to solicit senior colleague information, MySQL databases used to organize the survey and matching data, and a PHP/HTML web display application to allow junior colleagues to choose their own senior match online. Guidelines for discussion and dedicated time and rooms for pair meetings at the conference are provided.

Educational outcomes: At annual meetings over the last 6 years, more than 600 meeting
attendees have participated in the PWC. The program has been highly rated by both junior and senior participants and evaluation comments indicate that many short and longer term collaborative relationships have resulted from the program.

**Innovation’s strengths and areas for improvement:** Noted strengths of the program include making it easy for junior colleagues to approach senior colleagues at professional meetings within this conference sanctioned program, designated times and places for pairing meetings and better orientation and networking with additional colleagues during the meeting. Main improvements suggested include encouraging pairs to meet more than once and photo exchange to find each other more easily.

**Feasibility of maintaining program, and transfer to other schools or programs:** This program is easy to maintain because the bulk of the effort comes from participants’ responding to information surveys, selecting a match and arranging for an appropriate meeting time. Programmatic oversight is limited to recruiting participants, procuring and facilitating designated meeting space and times for pairs during conferences and maintaining the web-based system and reminders. The matching system could provide similar benefits for mentoring systems at individual institutions, professional meetings and organizations.

29. Scholarly Productivity of Medical Students Enrolled in a Clinician Educator Scholarly Pathway Program

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**Background:** A growing number of medical schools are incorporating required “scholarly concentrations”, designed to promote in-depth learning on a topic of the student’s choice through creating a scholarly project. While most academic clinical faculty view themselves as clinician educators, most schools have developed more research oriented concentrations. This report describes the development and early outcomes of the Clinician Educator (CE) Pathway, our version of scholarly concentrations. Our goal is to prepare our future colleagues to use the principles of medical education and to promote educational scholarship.

**Methods:** The Clinician Educator pathway curriculum was designed and introduced in 2009. Following an Introduction to Pathways course, students enrolled in the Clinician Educator Pathway, one of 5 available pathways. Scholarly projects were encouraged but not required before 2011. In addition to participating in a structured curriculum on Curriculum Development, Learner Assessment, Teaching and Learning, Program Evaluation, Advising/Mentoring and Leadership and Administration, students identified a project and mentor to assist with project completion. Local presentation of student work occurred each year in a “scholarship forum”. Types of projects created and other scholarly outcomes are presented.

**Results:** Between 9 and 15 students (of ~ 204 M1s/year) enrolled in the Clinician Educator Pathway each year. Evaluations of the structured curriculum were, in general positive, providing constructive feedback used to improve subsequent sessions. Though not required, 14 of 15 members of the first group of completers presented projects including tutor training program, several educational resources for use in the curriculum and an assessment of feedback. The most recent group of completers produced 3 educational resources (available on-line), 1 OSCE, an ultrasound curriculum, and a training module on advocacy. External dissemination from this group included 4 posters, 2 presentations and 1 paper. Currently enrolled students are in the midst of developing curricula, assessment tools and educational resources for a range of audiences. Several students have submitted abstracts of their work to the 2014 CGEA meeting.

**Conclusions:** A curriculum designed to allow in depth learning about the knowledge and skills of clinician educators was successfully implemented. Students have been involved in a wide variety of scholarly projects with significant dissemination both locally and nationally. As students have
easily identified projects of interest, sustainability will depend on sufficient faculty to mentor students.

30. Unified Care Curriculum: Integration of Team-based Patient Aligned Care
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Anne Rusterholtz, NP, Louis Stokes Cleveland Department of Veteran Affairs
Simran Singh, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine
Todd Smith, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine
Mamta Singh, MD, Louis Stokes Cleveland Department of Veteran Affairs, Case Western Reserve University School of Medicine

Objectives: As part of the VA Transforming Outpatient Care - Center for Excellence integrated MD and NP learner program curriculum, the Unified Care Team sought to develop a curriculum that supports improved patient care and is useful to the learners while recognizing the need to achieve true integration of team-based patient aligned care throughout outpatient care and intersections with inpatient care.

Need for Innovation: Over the last decade discussions about interdisciplinary, multidisciplinary, trans-disciplinary and interprofessional care have become common, and efforts to create or promote team-based care more numerous. However, it is less clear that consistent or sustainable cultural transformations have taken place. Rather than focus only on the coordination of different silos, we conceptually emphasize a unified health care model where all participants, including the patient, have common goals and shared understanding.

Instructional Methods: Learning sessions in a variety of formats have been implemented to match the objectives from January 2012 thru June 2013. Four cohorts have completed Year 1 curriculum while sessions for Year 2 cohorts are ongoing. Participatory action research methodology was implemented and a brief evaluation was administered after each session. Sessions for the final curriculum include: Exploring Primary Care Resources, Women's Health Series, Transitions of Care Series, Cost Comparisons and Guideline Development, Team STEPPS, Non Face-to-Face Communication, Pre-Operative and Peri-Operative Care, and Resource Recognition and Utilization.

Educational Outcomes: For Year 1 each of the sessions averaged 13 learner evaluations for a total of 91 evaluations collected and every session was observed by the curriculum manager. Evaluations from the four cohorts of learners show on a 1 to 5 scale, an average rating of 4.6 (Median 5; Mode 5) for usefulness of the session and average rating of 4.4 (Median 5; Mode 5) in increased confidence regarding use of tools/skills from the session.

Strengths and Improvements: Using a novel approach that addresses a current need in healthcare and upcoming health industry trends, the curriculum is successful in providing tools/skills applicable to patient care and is found useful by the learners. Improvements of Year 2 Curriculum in both content and delivery based upon learner feedback continue.

Maintaining Program and Transferability: The curriculum as integrated in the VA Center of Excellence Program will continue to be maintained. Session planners have been created with learning objectives, methods and assignments that allow for ease of portability to other programs.

*Funded through a grant from the VA Office of Academic Affiliations, Cleveland VAMC.

31. The Proactive Care Dimension: An Interprofessional Approach to Physician and Nurse Practitioner Education
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Preparing health professionals and leaders who support interprofessional, patient-centered, primary care transformation remains a VA priority. Five Centers of Excellence in Primary Care Education (COE) are implementing and testing approaches to preparing physician and nurse practitioner learners for collaborative, patient-centered practices that provide coordinated longitudinal care in the 21st century.

**Question:** Can systems-based practice requirements be translated into empowerment of physician and nurse practitioner learners to improve healthcare systems in an interdisciplinary fashion?

**Objectives:** Upon completion of the Proactive Care Dimension (PCD), learners will be able to 1) Skillfully employ Motivational Interviewing techniques. 2) Guide patients to become proficient in self-management skills; concentrating on 9 Health Choices. 3) Differentiate interprofessional team roles. 4) Incorporate culturally sensitive plans of care exploring cultural beliefs, food choices, and relationships. 5) Differentiate between educational modalities and choose those appropriate for each patient encounter. 6) Examine patient health literacy and appropriately tailor patient encounters, utilizing “teach back” skills. 7) Demonstrate mastery of listening skills, MI, and rapport building within provider-patient communication and provider-staff communication.

**Program Description:** The COE consists of 6 dimensions, PCD, Virtual Health, Real Time-Real Patient, Quality Care Improvement, Culture & Health, & Unified Care. The PCD is patient and team centered guided by rapport building, listening skills, and motivational interviewing. Through 79 educational sessions the PCD objectives are met via 5-7 didactic sessions per 12 week block. Learners complete a "Minute Paper" to evaluate each session which measures a) "Session Usefulness" and b) "Clinical Confidence" on a 5 point Likert Scale with 1 = not at all and 5 = very much. "Session Usefulness" and "Clinical Confidence” ratings were averaged for each session resulting in a "Session Usefulness" and "Clinical Confidence” score for each session.

**Findings to Date:** "Session Usefulness" range was 3-5; averaging 4.09. "Clinical Confidence" range was 2.67 - 5; averaging 4.19.

**Key Lessons Learned:** Lower scoring sessions were those focusing on less clinical topics. Higher scoring sessions were those that were highly clinical.

**Unanswered Questions:** Will learners prepared with this method be able to effect greater patient behavioral change than those conventionally prepared? Will learners prepared with this method have better team-learner relationships than those conventionally prepared?

32. Early Clinical Experience, Common Patient Concerns and Competencies: Evaluation of a Curriculum Pilot Test

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*Francesca Dwamena, MD, Michigan State University*
*Brian Mavis, PhD, Michigan State University*

**Purpose of innovation:** A six-week pilot study of a new Early Clinical Experience (ECE) curriculum was conducted. Twenty-one students were hired and worked in small groups in an integrated experience involving apprenticeships in clinical settings complemented with a variety of instructional approaches. Our purpose is to describe the evaluation model of the ECE and discuss how the findings were used by decision-makers.

**Need for Innovation:** Curriculum change is a constant in medical education. Vincelette reports curriculum change may follow different explicit strategies to accomplish revision. There is little documentation about how institutions evaluate curricular pilot efforts and how the evaluation will inform subsequent implementation of a new curriculum.

**Methods and Materials:** The ECE evaluation addressed three key questions: A) Do students feel that the clinical experiences and learning experiences were complementary? B) How do students and faculty rate the quality of the learning experiences? C) How do clinic personnel perceive the impact of training novice medical students on clinic operations? An evaluation logic
model was developed integrating the three key questions, the three stakeholder groups and using multiple data collection strategies.

**Outcomes:** Students reported feeling overwhelmed and adult learning ideals "go out the window" in the face of deadlines. Students and faculty most valued simulation and post-clinic groups as instructional approaches. Students favored problem-based learning whereas faculty favored team-based learning. Clinic staff viewed the ECE through a Business Lens whereas faculty viewed it through an Educational Lens, leading to different expectations of students. Initially fully engaged with their medical assistant tasks, by Week 6 many students requested more advanced tasks and physician supervision. The evaluation results were the focus of a half-day retreat with the curriculum design group to identify lessons learned and provide direction for ongoing curriculum innovation.

**Innovation's Strengths and Areas for Improvement:** The evaluation used a multimethod model and multisource feedback. Students were oriented from beginning of their role as informants. The curriculum design team participated in the ECE for firsthand experience, however they were likely not representative of faculty overall as to their investment and educators skills. Feasibility and Generalizability The goal was to determine the extent to which this ECE was scalable to a class of 200 students in a multi-campus system. Everything tried during the ECE achieved its educational goals and was deemed feasible. However some components were more readily scalable than others, leaving open the question of generalizability.

### 33. Implementation of a Novel Global Health Lecture Series to Teach International Health in an Academic Medical Setting

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A common forum to share experiences and engage in discussions is needed to promote collective problem-solving and to share opportunities for global health engagement with a larger audience. An innovative curriculum built on Cleveland's own global health community can be adapted to address our students' needs.

**Methods:** We created the Global Health Seminar Series with the following goals: 1) To create a local network of healthcare workers and researchers with an interest in global health to share ideas, experiences, and opportunities; 2) to help prepare international healthcare workers and researchers to cope with challenges in the field. A seminar format was chosen to encourage discussion after brief presentations by speakers. Participants were: medical students, residents, fellows, physician staff and allied healthcare personnel. Qualified speakers were chosen among staff, trainees and university professors. Seminar topics were selected to accommodate varying levels of medical and international experience, as outlined in the flyer below. Seminar highlights included a firsthand account from an international adoptee and international food tasting event. Feedback was sought from participants via regular surveys and incorporated into subsequent sessions.

**Results:** Six seminars were presented in 2012-2013, attracting 25-50 participants per session. Eighty-three percent of attendees found the sessions valuable. Descriptive feedback immediately upon seminar completion was overwhelmingly positive:- "Thought-provoking speakers." - "Challenging topics." - "Bioethics case study was great." - "Hearing people's experiences is really helpful in planning my trips abroad." A survey conducted 3 months after completion of seminars showed that overall, participants felt better prepared to provide medical care on subsequent trips abroad. Introductory seminars were deemed less useful than those that delved deeper into global health topics, especially ethics and nutrition.

**Conclusion:** A growing number of medical students with interests in global health go overseas and participate in international electives. Engaging in global healthcare delivery and research poses unique challenges that the student must be prepared to navigate. Ethical dilemmas and cultural barriers can become obstacles to the volunteer or indigent community. Many members of
Cleveland’s healthcare community are deeply involved in global health initiatives that have endowed them with rich experiences and perspectives. Nevertheless, these individuals and organizations largely operate independently of one another. The Global Health Seminar Series is an interactive way to engage the Cleveland healthcare community in helpful dialogue about global health issues. An in-depth discussion of advanced global health topics can help prepare individuals for participation in medical trips abroad.

34. Value-Added Tasks for Early Clinical Learners (ECL) on a Continuity Rotation in the Patient Centered Medical Home
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Objective: This project is intended to assist primary care physicians who precept early clinical learners (ECLs) by developing a robust list of level-appropriate clinical tasks for ECLs that concurrently contribute to high quality patient care in a PCMH and advance ECLs knowledge and skills.

Need: The historically challenging task of preceptor recruitment is now increasingly difficult due to increases in medical school enrollment and required clinical experiences in all four years of medical school. Our primary care physician preceptors also face challenges in learning to function within the PCMH model of healthcare delivery. Together these challenges present an opportunity for ECLs to contribute meaningfully to patient care as physicians and trainees learn together.

Methods: Three audiences generated value-added tasks for ECLs as part of facilitated faculty development sessions. First, master clinician-educators, from internal medicine, family medicine, and pediatrics, generated value-added tasks for ECLs. Second, local workshops targeted to potential and existing ECL preceptors generated additional value-added tasks. Third, academic general internists and internal medicine residents attending a regional workshop contributed additional tasks to the list. Master educators then mapped the individual tasks from these three sources to the six standards associated with 2011 NCQA PCMH recognition. Consensus was achieved through an iterative process.

Educational Outcomes: A total of 67 participants made up of master educators, physicians, medical students, and residents attended 4 workshops in internal medicine, pediatrics and family medicine. After removing duplicates and combining related ideas, 37 tasks were generated and categorized within the PCMH Standards: Enhance Access and Continuity, Identify and Manage Patient Populations, Plan and Manage Care, Provide Self-Care and Community Support, Track and Coordinate Care, Measure and Improve Performance.

Innovation’s strengths and areas for improvement: Our value-added ECL task list is generated from all primary care specialties, inclusive of patient age, and from both junior and experienced preceptors of ECLs. To our knowledge, this is the first list of PCMH-related tasks for ECLs. Our list provides a menu from which to individualize teaching and add value for the teacher, learner and patient. Next steps include (1) surveying learners to ascertain current and additional value-added tasks to determine concordance between preceptor and student perspectives and (2) the development of preceptor tools to enhance teaching and assessment.

Feasibility of maintaining program, and transfer to other schools or programs: We anticipate wide generalizability based on the broad range of contributors.

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35. "Flipping" a Medical Education Fellowship Program: Pilot Project of Instructional Videos (Screencasts) to Enhance Faculty Development Workshops

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Background and need: Medical education fellowships are longitudinal faculty development programs designed to prepare faculty for their roles as teachers and educators. During a medical education fellowship, participants learn the language and conceptual constructs of education, while at the same time that they are expected to develop and apply new educational skills. In the flipped-classroom model (Prober and Khan 2013), learners build the requisite knowledge framework from preparatory materials, including videos, which allows for application, practice, and feedback during face-to-face sessions. We describe the development and use of instructional videos (screencasts) used as preparation for and reinforcement after classroom sessions.

Setting: The Scholars for Teaching Excellence faculty Fellowship is an 8-month long program available to faculty in health professions education at UIC. The participants typically include both junior and senior faculty. The program includes classroom sessions on topics in instructional design and methods, and curriculum development. Reading assignments are required for classroom sessions. Each participant completes an educational project that demonstrates application of the knowledge and skills learned during the program. Instructional materials: Instructional videos were created on an iPad using Explain Everything™, a screencasting app. Files from presentation software were imported into Explain Everything™. Narration and annotation were added through the app’s interactive whiteboard tools. The screencasts were saved in mp4 format and uploaded to a cloud-based file-sharing site.

Outcomes: Each of the screencasts is 4-15 minutes long. Fellowship participants reported using the videos for review and reinforcement of key concepts. Participants valued the flexibility of the screencasts. Many viewed them on a smart phone. One participant reported accessing a video during down time while on call. These videos allowed the course instructors to introduce key concepts and ideas, as well as to comment on in-class discussion and to engage in reflection-on-action.

Strengths: These screencasts conform to principles of effective multimedia instruction (Clark and Mayer 2007). Each of the videos allow for auditory and visual processing. Cues or critical aspects are highlighted through annotation. The screencasts are designed to be an optimal length for learning. They afford flexibility and portability - participants can access the videos easily on their smartphones, so that they are able to learn in locations and times that best suit their needs.

Feasibility: Explain Everything™ is an inexpensive app that is available for both Apple and Android devices. Presentations are created using file formats in a whiteboard environment, both of which are familiar to educators.

36. Becoming a Better PBL Facilitator: iPad App Shows Promise

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Purpose: Mobile devices are starting to have a major impact on the way learners and teachers access and record information. Mobile applications (“Apps”) on these devices have emerged as a new opportunity for many fields in education including curricula for health professionals. In an effort to enhance small group learning at the CWRU SOM, we developed a custom iPad App that can be utilized by faculty facilitators within our pre-clerkship small learning groups to streamline required administrative and student assessment tasks. The specific goals of creating a small group facilitator app were to 1) improve quality of facilitator feedback to students by developing an effective approach for facilitators to record and disseminate student feedback and 2) reduce burden on faculty time by improving workflow efficiency.

Methods: Small learning group faculty facilitators who had access to an iPad and consented to use it to facilitate their small learning groups were provided with a custom, in-house Facilitator App. They utilized the App for 3-4 weeks encompassing approximately 18-36 hours of small group sessions. Faculty members using the iPad App completed a survey at the end of the
Results: Preliminary results indicate that 57% of the facilitators surveyed felt that they performed their small group facilitation functions more efficiently utilizing the Facilitator App while 43% responded that utilization of the App made it easier to provide feedback to students (as compared to whatever their usual and customary approach was to recording and providing feedback to students). Increased satisfaction in having access to needed tools to most effectively accomplish their facilitation work was indicated by 71% of the survey participants. Interestingly, utilization of the iPad App did not seem to improve confidence in or enjoyment of their role as small group facilitator. Relative quality of feedback provided to students and the role the Facilitator App plays in improving quality is currently being evaluated.

Conclusions: Customized Apps are relatively easy to develop and deploy to support medical education. While still preliminary, the results of this study encourage an interpretation that the use of mobile technology and a custom designed App can improve faculty perceptions of teaching efficiency and ability to provide feedback to students in the small learning group setting. In a time when faculty engagement in the medical education classroom is challenged by multiple external pressures, the introduction of mobile technology and applications aimed at improving teaching efficiency and effectiveness is particularly important.

37. Using the PPPC for Brief, Clinically Relevant, Formative Feedback for Medical Trainees: A Single Institution Experience
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Background & Significance of the Study: Traditionally, medical residents do not get "on the spot" patient-centered care training in a busy out-patient clinical practice where there is limited time for formative feedback. This abstract describes the implementation of a simple, effective assessment approach to developing and enhancing trainees' patient-centered communication in the ambulatory setting.

Methods: The Cleveland Veteran's Affairs Medical Center (VAMC) was awarded a three year grant from the Office of Academic Affiliations and the Office of Specialty Care Services to prepare interdisciplinary trainees, including surgical and family medicine residents and medical oncology fellows, to work in an interprofessional specialty care clinic for veterans with a diagnosis of cancer. The grant-funded project supports an educator (trainer) to assist the trainees in enhancing communication and listening skills. A formative evaluation of the trainees' skills is completed weekly using the Patient's Perspective of Patient-Centered Care (PPPC) Instrument (Stewart, Meredith, Ryan, & Brown, 2004). The PPPC Instrument is contains nine items, scored on a Likert scale, and takes about three to five minutes to complete. It is designed to be administered to the patient and the trainee. The project has added the perspective of the trainer, who can evaluate the patient-trainee interaction in "real time", on multiple occasions, rather than a one time, every six months, "high stakes" evaluation of clinical performance.

Results: Thirty-six PPPC evaluations have been analyzed. Of the 36 trainee PPPCs, 27 have been completed by both the trainees and the patients. The fifteen most recent evaluations have included an educator (trainer) evaluation as well to address the concern that nearly all patient evaluations were consistently positive, with little variability. Nine encounters have all three evaluations completed. Overall total scores range from 6-24; the lower the score, the better the clinical performance. Mean PPPC scores of patient, trainee, and trainer are 6.1(.316), 10.3 (3.388), and 8.7 (2.685) respectively, with trainees scoring themselves the most critically.

Conclusions: The medical residents and fellows rotating through this specialty clinic have found the formative feedback from the PPPC instruments very helpful in identifying strengths and areas of improvement that trainees can work on throughout the clinical rotation. Patients' positive evaluations helped trainees' feel more confident in their care. The PPPC can be used for continuity of training across rotations and/or as part of the six month evaluation of clinical expertise. It has broad applicability across all levels of training and is clinically relevant.
38. Advanced Care Planning: From Knowledge to Implementation Curriculum Package
Mary Corrigan, MD, MetroHealth Medical Center

**Background:** End-of-life care is one of the seven essential domains identified for IM/FM geriatric competency. An educational intervention for residents that addresses necessary communication skills in End of Life Care in an ambulatory senior health clinic embodies this initiative. Novel teaching modalities are necessary to educate all residents in End of Life communication. A geriatric curriculum that addresses the need of learners, the demands of the patient and healthcare system will have the greatest impact.

**Attitudes-Knowledge-Skills:** Residents should be able to realize the importance of, describe the need for and Acquire a Living Will and Advanced Directives.

**Implementation:** This is a milestone-based curriculum with direct observation of an entrustable professional activity in line with the NAS next accreditation system. Why Advanced Care Planning Discussions regarding patient's advanced care planning (ACP) wishes often do not occur until a patient is incapable of sharing their directives. Less than 50 percent of the terminally ill patients studied have an advance directive. Only 12 percent with advance directives received input from physicians.

**Intended Improvement:** Improve medical knowledge and communication skills of trainees in EOL discussions with Geriatric ambulatory patients. Methods Utilizing, Miller's Pyramid of Clinical Competence, the trainee will KNOW the information, KNOW HOW to utilize it, SHOW HOW it's implemented and DO IT.

**Instructional Methods:** Family Medicine residents, in a 6/6/6, county hospital, have a two year longitudinal rotation in geriatrics. They are paired with a geriatrician in an ambulatory clinic. A necessary milestone in Geriatrics is EOL care communication. The need is ubiquitous, the skills are lacking and this curriculum innovation addresses this deficit.

Advanced Care Planning: From Knowledge to Implementation Curriculum Package
I. Pre-test online ACP knowledge base
II. Teaching Modalities: Didactic Talks:
   A. Overview of End of Life Care
   B. Prognostication: Life's trajectory
   C. Communication Skills
III. Role Play: EOL care discussion
IV. Implementation: EOL discussion with Geriatric ambulatory patients
V. Post Test acquired knowledge

Educational Outcomes.
Residents will skillfully discuss and document goals of care and advance care planning with individuals in an ambulatory geriatric clinic after learning the topic and practicing through role play.

**Assessment/Evaluation:** Online Pre and post testing knowledge. Formative: Entrustable Patient Activity: Communicate and document EOL wishes on 5 outpatient geriatric patients. Direct observation tool to assess skills. Innovation's Strengths Comprehensive learning module that moves from knowledge to practice The learning curriculum established as webinars make it portable and user friendly across training programs.

39. Integration of Students' Perceptions of the Electronic Health Record into a Relationship-Centered Communication Skills Curriculum
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The electronic health record (EHR) can improve the quality, safety, and efficiency of care, but several concerns remain regarding its impact on the physician-patient relationship. The need for specific education in how to properly utilize the EHR in a patient encounter has been recognized nationally. We performed a needs assessment of our medical students (55% responded) to determine their perceptions of how the EHR impacts patient-doctor communication and the potential utility of educational sessions. Over 90% of surveyed students thought that using the
EHR during a patient encounter positively affected patient education, the review of systems, and health maintenance tasks. However, a majority of students believed the EHR negatively impacted non-verbal communication (84%), developing rapport (59%), and demonstrating empathy (55%). Additionally, 93% of students thought this topic required formal teaching, and 85% of students thought this should occur in medical school. Based on these results, we revised a year-2 communication skills session that focused on patient education to incorporate skills that could help maintain relationship-centered communication while using the EHR. Students prepared by reading a specially prepared handout and reviewing a newly designed skills checklist. Students then practiced these skills in a standardized patient session and received feedback from peers and course facilitators. The following week students could then apply their knowledge in authentic patient encounters in their longitudinal clinics. During this pilot implementation, our outcome was students’ self-reported behavior changes and their use of the newly learned knowledge, skills, and attitudes into their communication skills session and longitudinal clinic experiences. Over 50% of students surveyed stated that they focused on these skills in their communication skills sessions and received feedback. Additionally, 50% of students incorporated their newly learned skills into patient encounters in longitudinal clinic. A strength of this curricular implementation was its acceptance into an already established course. The instructional material had a natural home in our patient education session. The amount of material presented was not viewed as overwhelming by the majority of surveyed students. Based on survey comments, the greatest area for improvement was to create an authentic experience with a functional version of our EHR during the communication skills session, as opposed to the static computer screen used in the session. Teaching relationship-centered use of the EHR is a rapidly growing area of design, development, and implementation. Incorporating such sessions into already created curricula requires thoughtful planning and is an opportunity for innovation.

40. A Health Care Interprofessional Blood Glucose Laboratory Patient Centered Learning Experience

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Objectives: We designed an Interprofessional blood glucose laboratory to provide first year medical students and dietetic interns with an active, patient-centered learning experience that integrated basic science principles and medical nutrition therapy guidelines for patients diagnosed with Diabetes. The goals were to motivate learners and to instill in them an appreciation of interprofessional teamwork and science based clinical problem solving. Need for the Innovation: Studies have shown that explicit connections between biomedical knowledge and clinical facts facilitate the ability of healthcare professional students to develop a coherent and stable understanding of clinical disease states. Moreover, experiential patient-centered activities facilitate other life-long learning skills, such as empathy. Interprofessional Education (IPE) allows students from various programs to participate together in classes designed to promote an understanding, appreciation and application of the roles, talents and responsibilities of health care team members.

Materials and Methods: Seventy-five first-year medical students and eight dietetic interns completed informed consent. Learners arrived in a fasted state, determined and recorded their baseline blood glucose level using a glucometer and then consumed their randomly assigned test breakfast (either a high glycemic or high protein/low carbohydrate). Learners continued to monitor their postprandial blood glucose levels at specified times (30 minutes, 1 hour, 2 hours, 3 hours). Group results of blood glucose responses were plotted according to breakfast consumed and displayed on monitors visible to all participants. Learners were divided into interprofessional groups for Diabetes patient centered case discussion and presentation. Nutrition medical therapy guidelines and glucose results were reviewed and a game based learning activity was completed which incorporated basic science concepts associated with glucose regulation.
Strength/Areas for Improvement: Overall, the blood glucose lab appeared to have been a successful patient-centered IPE experience from the facilitator's and student's perspectives. Due to the length (4½ hours) and nature (no coffee, eating a prescribed meal) of the laboratory, we found that it is essential to keep learners engaged in meaningful activities throughout the morning. We will present blood glucose profiles, evaluation questionnaire results, and lessons learned. We plan to further assess the learner's feedback to identify any areas for improvement that we could incorporate into future pre-laboratory training sessions.

Feasibility: Diabetes is a chronic disease with systemic co-morbidities, which is well-suited for an interprofessional approach to patient care. We believe that this interprofessional glucose laboratory exercise is a useful learning experience which could easily be incorporated into other medical schools curricula.

41. End of Year 2 OSCE Integration Within a Portfolio-Driven Reflective Practice Cycle
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The objective of the innovation was to create a summative clinical skills assessment for the end of second year that engaged students in both reflective practice, and self and peer evaluation. Faculty reviewers of student portfolios indicated that they were often unable to determine if students met our Patient Care competency based on the evidence provided from existing assessments. Thus the goal of the intervention was to create a rigorous Observed Structured Clinical Exam (OSCE) that better measured students' clinical skills. The innovative element was to place the summative OSCE within the context of the portfolio. The OSCE and Portfolio process contains several reflective practice cycles within it. Students are prepared in an introductory session and asked to start thinking about clinical skills they need to improve, based on feedback from preceptors in their curricular activities. They are then offered a series of workshops to practice skills in Physical Diagnosis and Communication. Shortly after, they are required to submit the first part of their Patient Care competency portfolio essay, reflecting on their skills and providing a plan for improvement. During the OSCE itself, there are 2 opportunities for reflection. Students receive specific feedback about their skills in Communication, Physical Diagnosis, Oral Presentation, and Clinical Reasoning after one long station. At the conclusion of the exam, they watch the videotape of their performance and must complete a self-evaluation. This includes choosing short clips of themselves performing skills well and not so well. They review these clips with 3 peers and a faculty evaluator and receive more feedback. Finally, they must complete the second part of their Patient Care portfolio essay within 1 day of completing the OSCE. They are instructed to reflect on the effectiveness of their clinical skills preparation and on how their self-evaluation compared with peer and expert evaluation. They are also required to make a plan for continued improvement. Students' portfolio essays demonstrate the effectiveness of this process in guiding students through a reflective practice cycle. Quotes will be included on the poster. Strengths of the intervention include successful integration of a clinical skills exam within a portfolio-driven reflective practice cycle. Areas for improvement include faculty development for improved feedback. The innovation is in its 3rd year of implementation and has not been a challenge to maintain once the initial development was complete. The innovation could easily be transferred to schools with existing OSCEs and portfolios.

42. Multi-Faceted Approach to Mistreatment and Improving the Learning Environment
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**Background and Objectives:** For the past decades, medical student mistreatment has been a growing concern. As a result, the AAMC added items related to student mistreatment to its Graduation Questionnaire (GQ) in 1990 with recent major revisions. Further, the Liaison Committee on Medical Education (LCME) monitors the learning environment. This proposal describes a multi-faceted Innovation, implemented over the past 2 years, designed to address mistreatment and improve the learning environment for medical students.

**Methods:** The school used multiple approaches: 1) Development and dissemination of rigorous mistreatment / learning environment statements and policies. 2) Creation of an anonymous mistreatment reporting website with reports going directly to the highest position overseeing all educational activities (Senior Associate Dean for Education). 3) Development, dissemination, and discussion of mistreatment scenarios to encourage conversations among students, residents, and faculty. 4) Portrayal of mistreatment scenarios by teams of actors, to trigger small group discussion by medical students as they enter the clinical years. 5) Administration of components of the GQ- mistreatment questions directly to third-year medical students during their clerkships to help identify problematic sites. 6) Addition of "respect" questions on faculty and resident teaching evaluations, with systematic review of all student comments.

**Outcomes:** 1) 96.7% of students reported on GQ awareness of policy in 2012 (improved from 52.9% in 2010, 73.4% in 2011. 2) 11 students reported using website and these issues were addressed. 3 & 4) Dialogue between cohorts of students, faculty and staff resulted in good evaluations of these sessions. 5 & 6) Identification of pockets of learning environment issues, which were fed back to clerkship directors and department chairs. These resulted in collaborative interventions including implementation of mistreatment retreats and specific discussions with identified faculty. As a result of this multi-faceted approach, the GQ results on mistreatment and the learning environment have improved in some areas.

**Discussion:** A multi-faceted program to decrease mistreatment and improve the learning environment is key to addressing this complicated problem. While the interventions have improved dialogue between the departments, the Dean’s office, and the students, continued challenges remain to address the underlying culture in order to improve the learning environment. While we believe that this approach has had some effect, we know that this type of initiative requires constant monitoring and attention, and direct collaboration with the Health System. We believe that our interventions can serve as a roadmap for medical schools are addressing this critical set of issues.

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**43. Developing Teaching Skills of Clinical Preceptors through a Self-Directed Certificate Program**

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_Jeffrey A. Morzinski, PhD, Medical College of Wisconsin_  
_Craig C. Porter, MD, Medical College of Wisconsin_  
_Sarah DiPadova, Medical College of Wisconsin_

**Objective of innovation:** Our medical school's primary care faculty development program is piloting a self-directed, certificate-earning course for community-based clinical teachers, combining online and in-person activities. The course's dual objectives are to orient new preceptors to teaching roles and tools efficiently and asynchronously, and award a certificate for preceptors who demonstrate effective teaching and reflection. The details of current certificate-earning activities emphasize the value that first and second year medical students bring to their clinics, and then prepare preceptors and their clinic staff to effectively engage them.

**Need for innovation:** Our institution is facing an extreme preceptor shortage due to two initiatives: our main campus curriculum transformation, requiring clinical apprenticeships for first and second year medical students (approximately 210 students yearly); in 2014 our medical school will begin recruiting students for branch campuses in two rural parts of our state, enrolling 30-50 annually. Success of these initiatives depends on successful preceptor recruitment, development and recognition. Time limitations and widely distributed locations - especially as branch campuses come alive - make a self-directed course an attractive option for preceptors - particularly those in rural and medically underserved areas. Instructional methods and materials used: In this certificate program...
program, preceptors choose from options, including: in-person workshops, phone / email consultations with experienced faculty developers, online teaching resources, and professional conference discounts. On-line, resources include quick learning modules with quizzes, Teaching Toolbox links, educational videos, academic society and professional association links offering conferences / webinars. For certificate completion, preceptors are guided to apply their learning, then reflect and comment in an online forum.

**Educational outcomes:** The certificate course design is complete and has been peer reviewed by four, cross-specialty educational experts. The first of our initial cohort of preceptor enrollees (n=12) is now engaged and scheduled for completion early 2014. Outcome data collection includes quiz results, time on tasks, consultation questions and narrative descriptions / comments on new skill application.

**Innovation’s strengths and areas for improvement:** The strengths of this certificate program include its on-line, asynchronous features which increase its likelihood of adoption. Its emphasis on early clinical learners matches an emerging medical education need and is critically important for our institution. Areas for improvement are marketing and assessing long-term skill retention of certificate completers.

**Feasibility / transfer:** We are confident in feasibility as this initiative has institutional and financial support. Transfer is likely via certificate re-design - as new preceptor needs will call for course updates.

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44. Quantifying Academic Productivity during Fellowship Training with the Pulmonary Academic Scoring System: PASS.

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**Background:** The ACGME has specific core, detail and outcome requirements for GME in Pulmonary Disease and Critical Care medicine, including core competencies in 6 different areas, defined and updated on a yearly basis. This categorization report also mentions the need for fellows to participate in scholarly activity and demonstrate evidence of the projects conducted but does not provide clear standards to gauge the academic productivity of trainees. Fellowship programs have specific requirements for this, often based on anecdotal experience from faculty and graduates, but few have a way to effectively translate these achievements into objective and measurable evidence.

**Methods:** The score was created by current fellow in collaboration with the Program Director. A survey was administered to faculty and three domains were selected in the areas considered critical for academic progress, including creation, dissemination of knowledge and personal development. Mandatory and optional activities related with each area were included in the system and were given a weight based on relevance within the training program and the general medical community. Points in each category were multiplied according to the impact factor of the intervention. An minimum required score was proposed considering the academic requirements the program used before. Data was obtained for 8 graduates from the Pulmonary and Critical Care training program of an academic community-based, safety net hospital. A review of the prior semi annual evaluations and records of 6 fellows was performed. 2 fellows submitted their own scores to the program administration and the information was cross-checked with their files. 6 of the fellows had no knowledge of the existence of the PASS during their training.

**Results:** A score was obtained for each of the prior fellows, ranging from 79 to 158 points with a mean of 116.9 and a standard deviation of 22. Seven fellows were above the ideal proposed score. Research and Quality Improvement projects represented the highest percentage of points followed by oral presentations and medical certifications.

**Conclusions:** Most graduated fellows had results above the ideal score by the end of training. The scores were not uniformly higher for fellows who actively used the score before graduating. With the proposed measurement tool there was better documentation of scholarly activities and adherence to the minimum requirements from the program. Although designed considering a
45. Improving the Timeliness of Clerkship Grade Submission
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Objective or Purpose of Innovation: Providing students with timely feedback on their academic and clinical skills performance during clerkships is an LCME expectation that many medical schools struggle with. Making final clerkship grades available to students in a timely manner is particularly challenging for community-based schools that offer clerkships at multiple hospitals, NEOMED included. Staff at NEOMED’s Office of Academic Services devised a way improve the process of collecting clerkship grades in attempt to address recognized inefficiencies.

Need for Innovation: The institution had been using paper forms for grades that had to be shipped between clinical sites and the main campus via courier. Staff support were needed to enter the data from the paper forms to spreadsheets. This was a very time-consuming and inefficient process. The biggest need for innovation, however, was the LCME requirement that students receive their grades within 42 days of the end of the clerkship, which was sometimes not being met.

Instructional Methods and Materials Used: Clerkship grade forms are now located online, having been built using survey software. Completed grade information including narrative evaluation of the student is downloaded as Excel, and through a mail merge, the grade reports are converted to PDF format. They are then reviewed and signed digitally by the clinical curriculum directors, and forwarded to the Registrar’s office for posting.

Educational Outcomes: The timeliness of grade submission has improved dramatically. In the last two years, there has been no instance of a clerkship grade report taking more than 42 days to be posted. In AY 2012-13, the minimum average number of days between end of clerkship and posting was 21.9 (Family Medicine) and the maximum was 29.5 (Psychiatry).

Innovation’s Strengths and Areas for Improvement: The system is now paperless, thus eliminating the cost for paper and printing. Site directors complete their students’ evaluations online, which eliminates the need for data entry by staff, thus no chance of data entry errors. The site directors can re-access their submitted grade reports, for instance, to review their comments when students ask for letters of reference.

Feasibility of Maintaining Program and Transfer to Other Schools or Programs: Because the process uses easily available applications (survey software, Excel, Word and Adobe Acrobat), other institutions could reproduce it. The next step for NEOMED is to create a system for M4 elective grade submission similar to that of M3.

46. Real Time Real Patient: A Training Model for Bridging Patient-centered Care and Reflective Practice
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Need: Reflection is widely recognized as critical for developing mindful practitioners who engage in lifelong learning (Irby, Cooke, 2010). Effective teaching approaches for integrating reflection in daily clinical practice are not as clear, and little is known about whether trainees view such activities as useful or confidence-building.

Objectives: The Louis Stokes Cleveland Veterans Affairs Medical Center is one of five Centers of Excellence (COE) in Primary Care Education funded to develop innovative models for training health care professionals in the ambulatory setting. Our program, launched in January 2012,
brings together internal medicine residents and nurse practitioner trainees in a Patient Centered Medical Home model. "Real Time Real Patient" (RTRP), a longitudinal interprofessional curriculum within the COE program, integrates reflection in the workplace by recognizing the patient as a valuable mentor.

**Methods:** The RTRP curriculum consists of two components for workplace learning: Patient Journeys and Patient Video Recordings. During the Patient Journey component, trainees accompany their patients to the lab, pharmacy or radiology, visit them while they are admitted, and accompany them to a community event. During the Patient Video Recordings component, trainees use FLIP recorders to capture new and follow up patient encounters following proper consent protocols. For both components, trainees complete summary and reflection forms and present their reflections and video clips in peer and faculty interprofessional group sessions.

**Outcomes:** Trainees complete a Minute Paper (Angelo and Cross, 1993) evaluation after each session that provides ratings on usefulness and confidence-building. Patient Journey sessions have received an average rating of 4.17 out of 5 (1-5; 5=high; n=41) for usefulness and average rating of 4.05 for increased confidence. Patient Video Recording sessions have received an average rating of 4.57 out of 5 (1-5; 5=high; n=226) for usefulness and average rating of 4.40 for increased confidence.

**Conclusion:** Curriculum can effectively integrate reflective practice in daily clinical practice and help set the foundation for mindful practice. The RTRP curriculum not only provides trainees a real-time learning opportunity with individual patients, but also a developmental repository that they may refer to and reflect on during and at the end of training. Portability to other institutions would be relatively easy with the curriculum's developed session planners, but implementation would need tailoring to specific clinical infrastructures.

47. **emrU: The Electronic Medical Record as a Tool for Delivering Curricular Content**

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**Objective/Purpose:** To utilize an electronic medical record (EMR) software system as a tool to deliver curricular content to medical students with the associated purpose of allowing students to learn how to employ and navigate an EMR.

**Need for Innovation:** Without prior exposure to EMR software, health science students are subject to an abrupt transition from pre-clinical education to expected EMR competence during their clinical clerkships. Just prior to beginning their clerkships, students are typically trained on hospital's EMR in a half-day instructional session. Students gain further EMR exposure and sophistication as a user throughout their clerkships. A need exists for presentation of the EMR in multiple small sessions over time prior to beginning the clinical clerkship phase. Utilizing an EMR in the classroom prior to clinical exposure accomplishes this goal.

**Instructional Methods and Materials Utilized:** We used a copy of the Epic EMR dedicated to education. This system was used for the delivery of curricular content to first year students via case-based small group instruction. Each small group reviews case content and generates learning issues and simulates the diagnostic reasoning process.

**Educational Outcomes:** Students effectively learned curricular content and gained basic competency of the electronic medical record. Survey instruments were designed and administered to students and faculty at the conclusion of each semester. Survey results and analysis will be presented.

**Innovations Strengths and Areas for Improvement:** Strengths: "Introduces students to the EMR earlier in their education." "Provides a creative and innovative way to deliver curricular content (patient cases in the EMR)." "Clinical facilitators require little preparation to navigate the system." "Enables multiple learners to access content concurrently and asynchronously."
Areas for Improvement: "EMRs were not designed as teaching tools and require modification by technical staff for this use." "Work is needed to develop systems to smoothly deliver time-released content in sync with classroom sessions." "Gathering requirements for patient cases to be created in the system from curriculum designers can be time and labor intensive." "Mechanisms to ensure academic integrity need to be in place.

Feasibility of Maintaining Program and/or Transfer to Other Schools or Programs: Once the system is modified for classroom use and staff are educated on the idiosyncrasies, creating additional patient cases is a relatively easy task - and easily transferrable to other institutions.

48. Evaluating the Implementation of a Toolkit used in an Inter-professional Education (IPE) Program

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The proposed LCME accreditation standard ED 19-A requires medical schools to prepare students to function collaboratively on inter-professional healthcare teams. Not only are inter-professional teams fundamental to patient-centered care; they are also associated with improved clinical outcomes. An experiential program was created in 2011 that provided opportunities for medical and nursing students to conduct home visits with seniors living in the community. Upon completion of the home visits, facilitated debriefings were conducted to promote group reflection and provide feedback. Based on the data from the facilitated debriefings, a toolkit was developed and incorporated into the 2012 program that included information on how to plan and conduct the home visit with emphasis on roles, responsibilities, and inter-professional teamwork. During the debriefings following the 2012 program, the students were invited to comment on the effectiveness of the toolkit in addition to the program itself. Domains included communication, environmental context, interdisciplinary teamwork, reflective practice, and programmatic issues. Recordings were transcribed and coded using a grounded approach. Content analysis revealed that the toolkit was effective by providing clear roles and responsibilities to participants. Although students expressed some similar concerns as in the previous year, they were able to gain a better understanding of their partners’ program and scope of practice and the importance of interacting with patients in the home. The program was successful and better received after implementation of the toolkit. One very positive aspect is that medical and nursing students did not perceive a hierarchy when working with one another; they felt comfortable working as peers. One of the challenges of the program is that students in consecutive years mentioned that they often had trouble working out the logistics of setting the visit with the three individuals involved. Also, students were reminded of the forgetfulness and confusion that can sometimes occur when working with older patients. Lastly, students also noticed in both years that patients were very independent and healthy, which made students feel somewhat ineffective. In the future, the toolkit could include instructions to assist students in structuring the visits to be more focused on health prevention and maintenance. The framework of the toolkit provides novice learners with guidance on the process of working as a team and conducting the home visit and is designed to promote inter-professional communication. Overall, the structured toolkit proved very helpful in preparing both students and faculty and can easily be adapted for other educational environments.

49. Promoting Faculty Goal Setting in the Center of Faculty Advancement, Mentoring and Engagement (FAME) in the Ohio State University College of Medicine (OSUCOM): Developing Your Professional Mission Statement Workshops as Part of New Faculty School.

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Aubre M Green, BA, The Ohio State University College of Medicine
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**Purpose:** FAME is a comprehensive career development center devoted to elevating the ability and engagement of faculty in the OSUCOM. FAME creates programming to help all faculty attain knowledge, build skills and learn behavior that will help them develop in the areas of career emphasis as a basic scientist, a clinician, an educator, and as a leader. Faculty development (FD) is an important method employed by FAME to promote faculty advancement and engagement in the University’s mission. Several FD programs have been launched over the last 2 years. To best engage new faculty in the OSU College of Medicine (approximately 130 new faculty per year), FAME implemented Faculty School (FS) as a series of workshops that orient new faculty to essential OSUCOM FD efforts. A major effort is in challenging new faculty to develop a personalized Professional Mission Statement and learn how to utilize this statement to promote academic success.

**Methods:** Developing Your Professional Mission Statement (PMS) is a workshop developed by the authors from work pioneered by Deb Simpson PhD and Ed Zalneritis MD. This 75 minute workshop covers 1) understanding keys to academic success, 2) developing your own PMS, 3) Creating your Personal Projects/Responsibilities List, and 4) the Habits of Successful Academic Faculty. Participants create their own PMS in an iterative process with several other participants. Faculty complete personal worksheets (sections 3 and 4). A post workshop evaluation is also completed. Faculty are directed to share their PMS with their supervisor (Department/Division) as well as with their mentor at the end of the session.

**Results:** A total of 45 faculty have completed the workshop (60% assistant professors; 20% associate professors; 20% professors) and average overall satisfaction was 8.25 (scale 0-10). In reference to whether the faculty member was able to develop new professional strategies/skills, 95% of the faculty participants agreed or strongly agreed with this statement (Mean = 4.375 (scale 0-5). Qualitative comments reflect the value of this approach in furthering faculty career planning and success. Follow up interviews reveal that the majority of faculty do discuss their PMS with their supervisor and/or mentor.

**Conclusion:** Developing Your Own Professional Mission Statement is an important activity that new faculty in the OSUCOM value as foundational in career development. Faculty participants particularly rate the PMS activity. Participants also value the Personal Projects/Responsibilities List and Habits of Successful Academic Faculty worksheets and share their PMS with their supervisors and mentors.

50. The Chronic Illness Project: Evaluating the impact of service learning on medical student - education and the efficacy of community-based health classes

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We aim to demonstrate that medical students participating in a community-partnering project based on the precede-proceed model prefer this method of developing cultural competence to solely participating in a traditional classroom-based medical curriculum. We also evaluate the efficacy of a community-based health curriculum regarding increased knowledge and attitudes about chronic illness and healthy lifestyle changes. Given current health care disparities in the United States, it is crucial that physicians understand their patients’ social barriers to health and ways to eliminate them. Simultaneously, patients must be empowered to take charge of their health. The precede-proceed model is used to design, implement and evaluate health interventions with active involvement of the intended target population. Focus groups were conducted in a medically underserved St. Louis community to determine perceived health problems in the community, and how these problems should be addressed. Lack of information about metabolic syndrome, asthma, and depression was a major concern. Together, community members and students developed a curriculum. Community volunteers were trained to teach, and class participants were recruited from community gatherings. Based on surveys administered to
participating medical students, preliminary outcomes (n=15) show that they prefer this service-learning activity to a traditional classroom-based curriculum in four major categories: identifying community beliefs and health practices, describing community-partnering strategies, collaborating with communities to address needs, and using participant assessment tools. Preliminary pre- and post-test results from the first class (n=5) demonstrate enhanced understanding of importance of blood sugar testing in diabetes and improved identification of BMI categories. Furthermore, 40% reported a modest improvement in access to information. All were motivated to make lifestyle changes at baseline. The poster will include updated comprehensive results based on further data collection.

This project provides a unique venue for students to directly learn about health barriers and gain a concrete understanding of community partnering strategies. Community members have taken ownership of the project by volunteering to be trained and teach the curriculum to their peers. Areas for improvement include altering class recruitment to include those less motivated to make lifestyle changes. Replication is required on a larger scale to judge effectiveness in the broader St Louis population and other cities. The program has demonstrated sustainability both at Washington University and in the community; some of the teachers have independently taught the curriculum. With sufficient student interest and university support, community needs assessment and health intervention projects can easily be disseminated to other medical schools.

51. Leveraging Online Faculty Development in Support of Curricular Change: Faculty Development for Medical Educators (FD4ME) in the Ohio State University (OSU) College of Medicine.

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John Davis, MD, PhD, The Ohio State University College of Medicine
Daniel Clinchot, MD, The Ohio State University College of Medicine

**Purpose:** Faculty development (FD) is essential in facilitating curricular change since new teaching and learning methods (TLM) and instructional technology (IT) integrated into these curricular reforms is often new to the faculty. FD is a challenge for busy teachers, including clinical faculty, as complex demands complicate efforts to provide in person FD development via workshops and presentations. Online FD was chosen to meet our faculty's desire for individualized FD, available when convenient to the faculty, and linked to specific roles in the new Lead Serve Inspire curriculum at OSU.

**Methods:** FD4ME was developed to address faculty's needs in developing understanding and applications of specific TLMs integral to the new curriculum. From October 2011 to Sept 2013 16 interactive FD4ME online modules were authored by OSU and other national topic experts in conjunction with the Office of Geriatrics and Gerontology Web Development Group at OSU and made available at http://fd4me.osu.edu. Faculty were informed via online directory of the specific FD4ME modules relevant to the 23 different faculty roles in the new curriculum. Registration was available to all OSU faculty as well as any non-OSU interested medical educators/teachers. Module completion was free; certificates of completion ($10 per CME hour) and CME credits ($25 per CME credit hour) were provided free to OSU faculty. Module completion included specific feedback on each module by the participant.

**Results:** A total of 350 OSU affiliated faculty and 125 non-OSU faculty completed modules. 12 of the 16 modules were directly applicable to specific TLMs in the new curriculum. The 5 most frequently completed modules number completed in parentheses) were Teaching Students in the Ambulatory Setting I: Getting Started (57), Patient Care Skills (35), Evaluation and Feedback (52); Dealing with Difficult Students: The Slow, the Rude and the Uncaring (60); Facilitating Small Group Instruction (54). Faculty satisfaction was high (92% satisfied or very satisfied) and most planned to change the way they interacted with learners (82% agree or strongly agree) as a result of the interactive module.

**Conclusion:** Online FD offers faculty opportunities for individualized FD available anywhere and anytime. For some faculty this is a superior method of FD. Faculty who complete these modules
are very satisfied with this approach. The linkage of specific modules to faculty roles in the new curriculum has been well received by faculty and offers a process for faculty to tailor their FD to their needs in the new curriculum.

52. Using the CI Process to Improve a Curriculum in Systems-Based Practice
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Objective or purpose of Innovation: As medical schools consider what Systems Based Practice (SBP) curriculum to include within their program, it is essential to use a guided approach to define what is already present and identify gaps. We describe a process, using the outcomes from our Curriculum Inventory (CI) initiative, to inform changes to our SBP curriculum.

Need for innovation: Similar timing of our school's curriculum transformation planning with the AAMC's CI initiative was serendipitous. Since the CI is designed to serve as a benchmarking and reporting tool on content, structure, delivery, and assessment of medical school curricula, it has helped us better understand existing curriculum and consider changes.

Methods and materials used: Pre-clerkship course directors reported event-based curricular objectives that were mapped to school competencies. In addition to reporting event-based objectives for well-defined lectures or small groups, clerkship directors worked together to reach consensus about unified reporting of objectives for events such as patient care activities and rounds which were also linked to school competencies. A curriculum transformation subcommittee on SBP reviewed the CI work product related to SBP and carefully established a shared meaning of the word "systems" to include the breadth of systems from clinical microsystems to global health systems. We then identified gaps in content.

Educational outcomes: The unique challenges in reaching consensus across clerkship curricula have accelerated the desire to connect other data processes with continuous improvement. This process built a cross-curricular understanding of content and opportunities for further collaboration. The curriculum transformation subcommittee on SBP has identified a list of curriculum gaps that include knowledge of the US healthcare system, concepts of value of care, definitions and functions of microsystems.

Innovation's strengths and areas for improvement: The CI captured the curriculum as a whole, and identified topics of insufficient teaching in areas like SBP. While the CI process is robust in mapping the curriculum, identifying linkages and specific content, it is only as good as the written objectives. Greater understanding of the level and depth of the already reported objectives will assist in further determining what is needed in SBP curriculum moving forward.

Feasibility for other institutions: It is feasible to use CI information to improve the content of a curriculum so that established school competencies can be met. Our process can easily be adopted by other institutions within specific domains of interest.

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53. A Quality Improvement/Patient Safety Curriculum for Medical Students at the University of Missouri-Kansas City School of Medicine (UMKCSOM)
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Louise Arnold, PhD, UMKC
Jennifer Quaintance, PhD, UMKC

This poster describes a new Quality Improvement/Patient Safety (QIPS) curriculum designed for learning communities called "Docent Teams" that function in the longitudinal continuity care clinic (CCC) clerkship at UMKCSOM. Responding to a national call to address patient safety, the curriculum strives to enable medical students to provide patient-centered team-based quality care
by using QIPS attitudes, knowledge, and skills -- vital skills for entering residencies. The curriculum occurs in the CCC learning communities because they constitute the clinical classroom for applying QIPS to the care of outpatients with chronic diseases and their prevention, and they cultivate learning among peers. All students participate over four years in a weekly CCC as part of a multi-year level 12-student Docent Team directed by their "Docent," a physician scholar. The Team learns to care for outpatients from the urban core by working as a group and in pairs of younger and more seasoned peers collaborating with various allied health professionals. Delivery of the QIPS curriculum occurs through online Institute for Healthcare Improvement (IHI) Open School modules, introduction to quality measures databases, team problem-based learning, presentations, reflective writing, QIPS projects that care issues in CCCs prompt, and Docent and team feedback. To prepare Docents complete the IHI.org QIPS certificate to prepare for the curriculum. Effectiveness of the curriculum awaits further implementation and evaluation of learner outcomes measured through a pre-post knowledge survey of QIPS, reflective exercises, examinations, presentations, Docent assessment of student performance, and student and Docent reactions.

Lessons Learned. Successful implementation of this curriculum requires faculty development and engagement, access to real-time data for QIPS projects, and creation of innovative learning modalities that support QIPS education of over 400 students at various year levels.

54. Teaching Preclinical Evidence Based Medicine in a Flipped Classroom
Rahul Patwari, MD, Rush Medical College

**Objective of innovation:** Utilize a flipped classroom approach to deliver an evidence-based medicine course to second year medical students.

**Need for innovation:** Prior to this year, evidence based medicine (EBM) was taught to second year medical students at Rush Medical College using a traditional lecture format. Evaluations suggested two major limitations. Students came to the class with varying levels of experience, and they did not perceive the material to be clinically relevant.

**Instructional methods:** To address these limitations, we adopted an inverted-classroom approach where content is taught in ten-minute videos accompanied by problem sets (http://theEBMproject.wordpress.com). In addition, in small group sessions led by a clinician and a PhD researcher, students read a series of landmark papers selected by clerkship directors and applied epidemiologic and biostatistical concepts to clinical scenarios. The videos allow for asynchronous learning. Students can watch them whenever they like and review more difficult content as needed. Peer-to-peer learning is promoted by allowing students to communicate on the site.

**Educational outcomes:** Student opinion was measured midway through the video curriculum. Acquisition of EBM knowledge will be assessed using multiple choice exams throughout the second year. Ability to incorporate evidence in clinical decision making will be assessed during third year rotations and with a formal Clinical Skills Assessment at the end of the third year.

**Innovation's strengths and areas for improvement:** A majority of students endorsed a preference for the video format over the traditional lecture style of teaching for this course. They reported high satisfaction with the content on the website and felt that it provided sufficient information to prepare for the exam. Moreover, the time previously allocated to lectures was better utilized by having students practice using research literature to inform clinical decisions. Due to scheduling constraints, the video portion and small group application sections were taught in separate semesters. In the future, we would like to perform both simultaneously so students can have more timely application of the material.

**Feasibility of maintaining program, and transfer to other schools or programs:** One of the most important benefits of this curricular innovation is transportability. As all material are available online, the curriculum is accessible to other classes, as well as residents and faculty at our own and other institutions.